

NLA-0.01-15000-12-60

0.00001~15GHz, 12dB, 6dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	0.00001~15GHz
Small Signal Gain:	12dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	10dBm min.
Noise Figure:	6dB typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+12V DC typ.
Current:	120mA typ.
Impedance:	50Ω

Mechanical

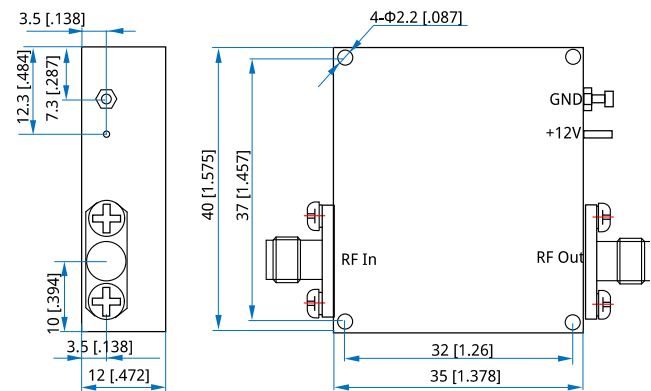
Size ^{*1} :	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-0.01-15000-12-60

Customization is available upon request.

NLA-0.1-500-24-30

0.1~500MHz, 24dB, 3dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	0.1~500MHz
Gain:	24dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+5dBm min.
Noise Figure:	3dB max.
IP3:	+15dBm min.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+15V DC max.
Current:	120mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

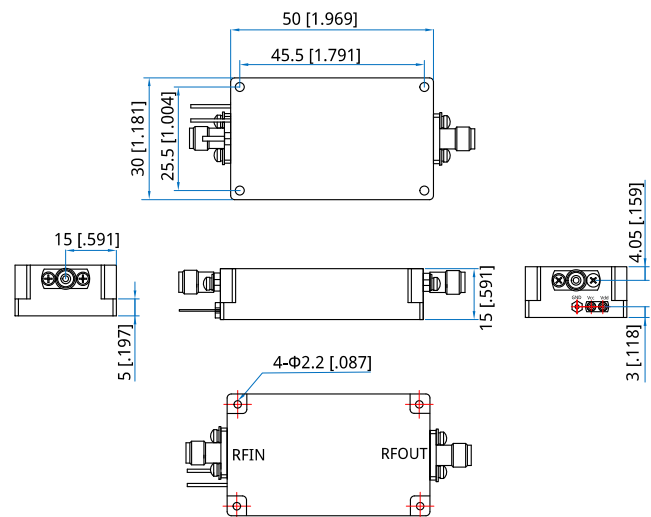
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
 Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-0.1-500-24-30

Customization is available upon request.

NLA-0.1-500-30-30

0.1~500MHz, 30dB, 3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	0.1~500MHz
Gain:	30dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+5dBm min.
Noise Figure:	3dB max.
IP3:	+15dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	250mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

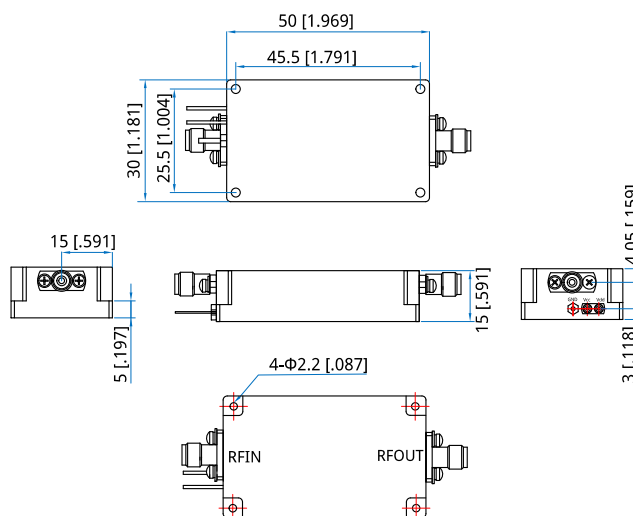
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-0.1-500-30-30

Customization is available upon request.

NLA-0.05-20000-35-30

50KHz~20GHz, 35dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	50KHz~40GHz
Gain:	35dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+15dBm typ.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
VSWR:	2 max.
Voltage:	+12V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

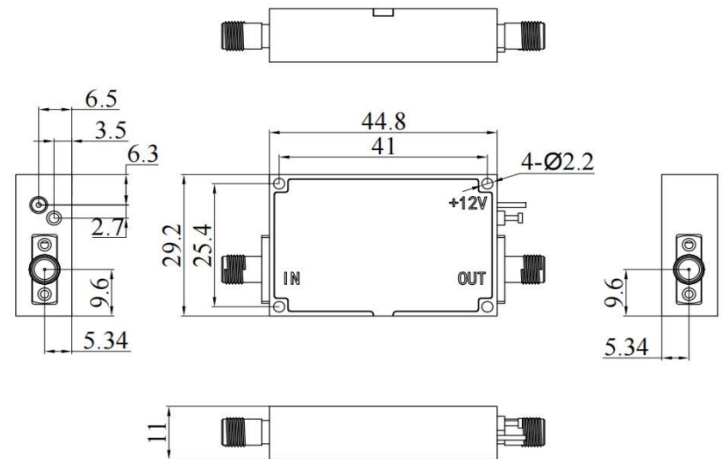
Size ^{*1} :	44.8*29.2*11mm 1.764*1.149*0.433in
Weight:	60g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-0.05-20000-35-30

Customization is available upon request.

NLA-0.5-1000-23-12

0.5~1000MHz, 23dB, 1.2dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test



Electrical

Frequency:	0.5~1000MHz
Gain:	23dB typ.
Noise Figure:	1.2dB typ.
Output Power (P1dB):	23dBm typ.
Input VSWR:	1.6 typ.
Output VSWR:	1.8 typ.
Voltage/Current:	+5V/300mA
Impedance:	50Ω

Absolute Maximum Ratings*1

RF Input Power:	+6dBm
Voltage:	+7V
Limiting Temperature:	-45~+80°C

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

Size*2:	32*30*12mm 1.26*1.181*0.472in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[2] Exclude connectors.

Environmental

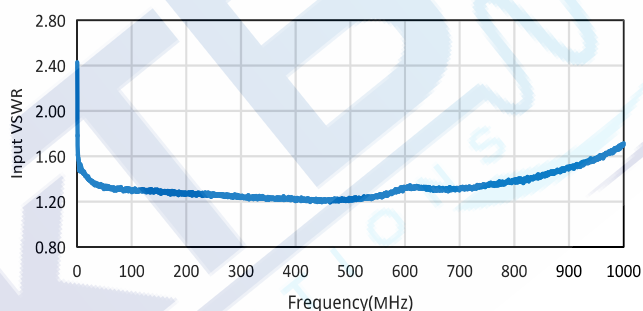
Operating Temperature:	-35~+75°C
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How To Order

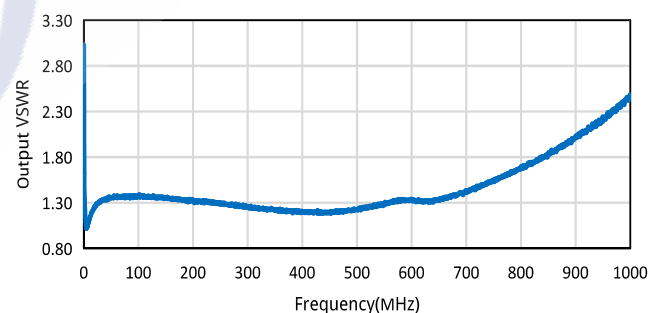
NLA-0.5-1000-23-12

Typical Performance Curves

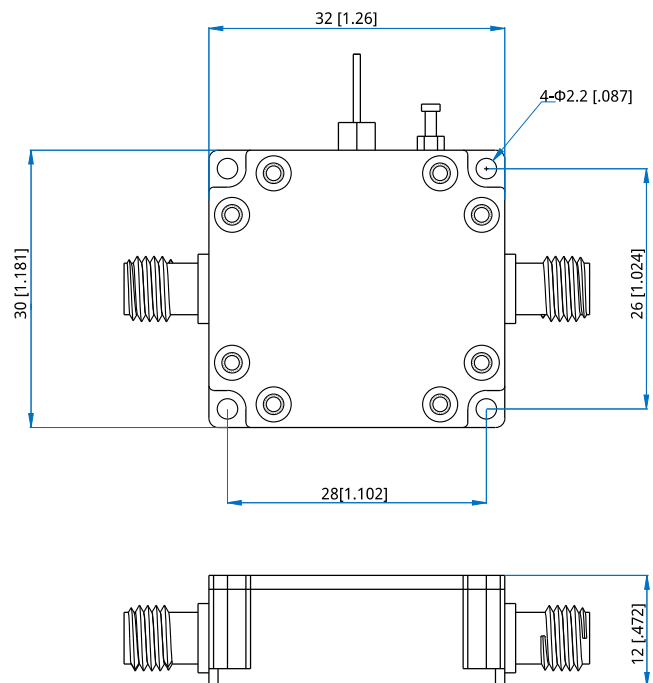
Input VSWR vs. Frequency



Output VSWR vs. Frequency



Outline Drawings



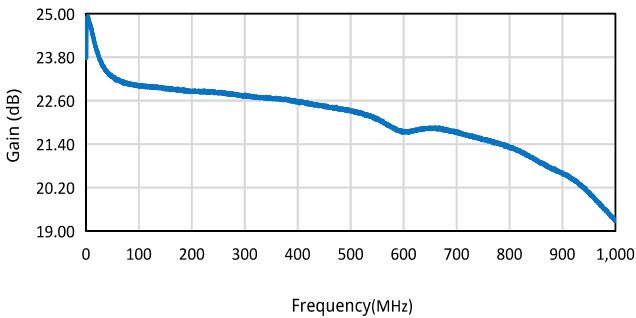
Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

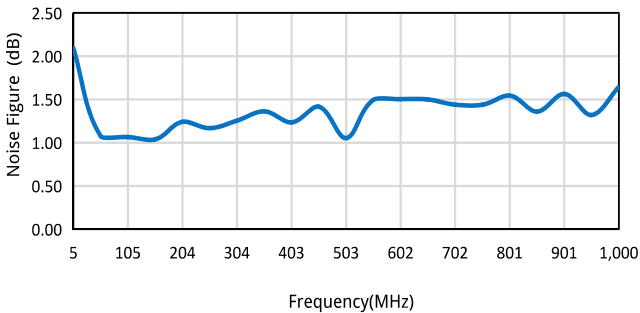
Customization is available upon request.

Low Noise Amplifier

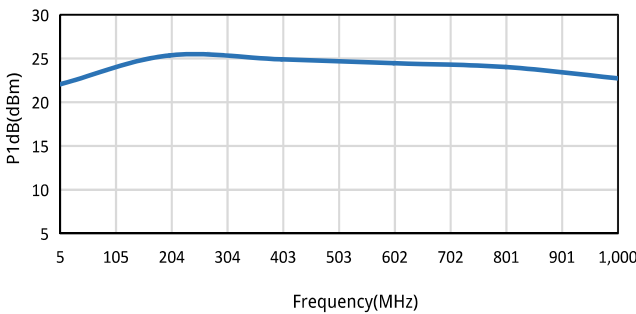
Gain vs. Frequency



Noise Figure vs. Frequency



P1dB vs. Frequency



NLA-0.09-2000-42-30

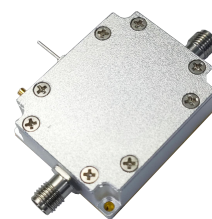
0.09~2000MHz, 42dB, 3dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test



Electrical

Frequency:	0.09~2000MHz
Gain:	42dB typ.
Noise Figure:	3dB typ.
Output Power (P1dB):	15dBm typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage/Current:	+12V/300mA
Impedance:	50Ω

Absolute Maximum Ratings^{*1}

RF Input Power:	-15dBm
Voltage:	+12.5V
Limiting Temperature:	-45~+80°C

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

Size ^{*2} :	40*32*12mm 1.575*1.26*0.087in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[2] Exclude connectors.

Environmental

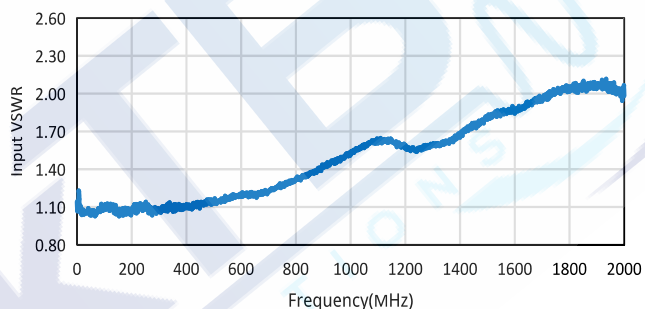
Operating Temperature:	-35~+75°C
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How To Order

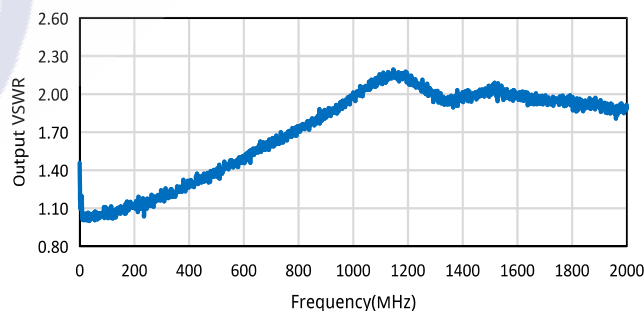
NLA-0.09-2000-42-30

Typical Performance Curves

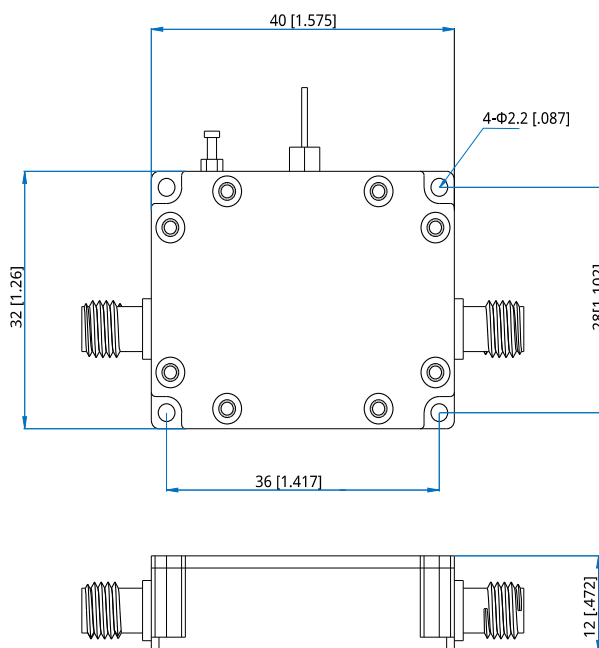
Input VSWR vs. Frequency



Output VSWR vs. Frequency



Outline Drawings

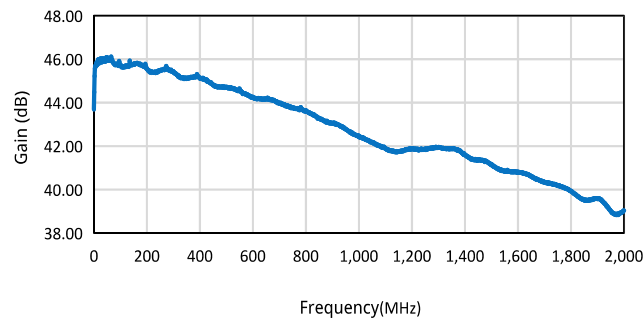


Unit: mm [in]

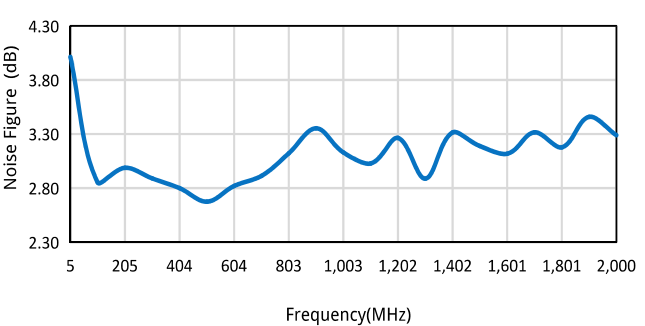
Tolerance: ±0.2mm [±0.008in]

Customization is available upon request.

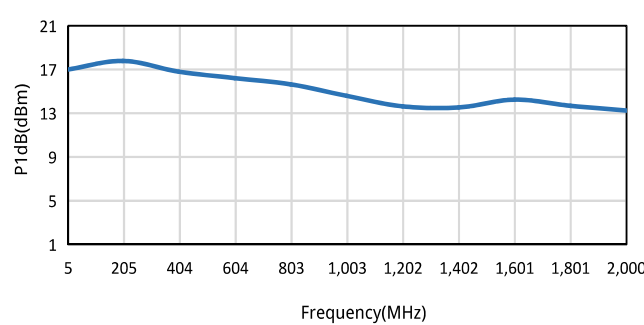
Gain vs. Frequency



Noise Figure vs. Frequency



P1dB vs. Frequency



NLA-1.6-30-13.5-42

1.6~30MHz, 13.5dB, 4.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1.6~30MHz
Gain:	13.5±0.25dB
Noise Figure:	4.2dB max.
Output Power (P1dB):	26dBm min.
OIP3	42dBm min.
OIP2	84dBm min.
VSWR:	1.2 max.
Voltage:	+15V DC
Current:	300mA max.
Impedance:	50Ω

Mechanical

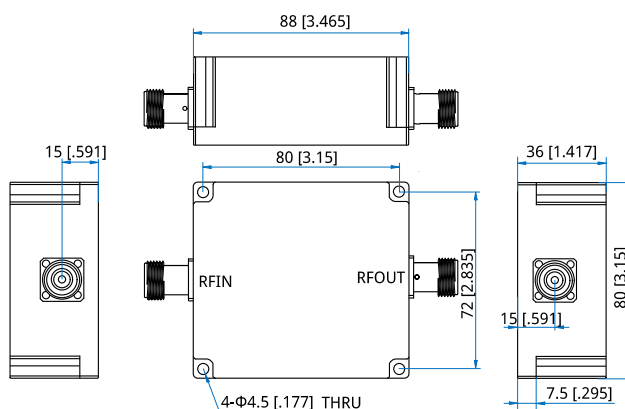
Size ^{*1} :	88*80*36mm 3.465*3.15*1.417in
RF Connectors:	N Female
Mounting:	4-Φ4.5mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1.6-30-13.5-42

Customization is available upon request.

NLA-1-400-50-20

1~400MHz, 50dB, 2dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	1~400MHz
Gain:	50dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	20dBm min.
Noise Figure:	2.0dB max.@10~400MHz
VSWR:	2.0 max.
Voltage:	+15V DC typ.
Current:	150mA typ.
Impedance:	50Ω

Mechanical

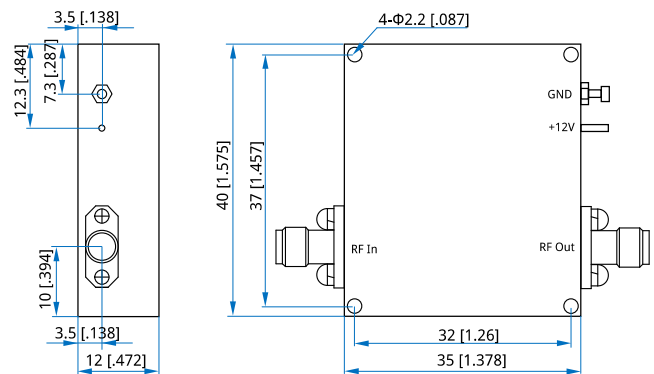
Size ^{*1} :	35*40*12mm 1.378*1.575*0.472in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1-400-50-20

Customization is available upon request.

NLA-1-12000-30-55

0.001~12GHz, 30dB, 5.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.001~12GHz
Small Signal Gain:	30dB min.
Gain Flatness:	±2.5dB typ..
Output Power (P1dB):	15dBm min.
Noise Figure:	5.5dB typ.
Input VSWR:	2.5 max.
Output VSWR:	2.5 max.
Voltage:	+12V DC typ.
Current:	400mA typ.
Impedance:	50Ω

Mechanical

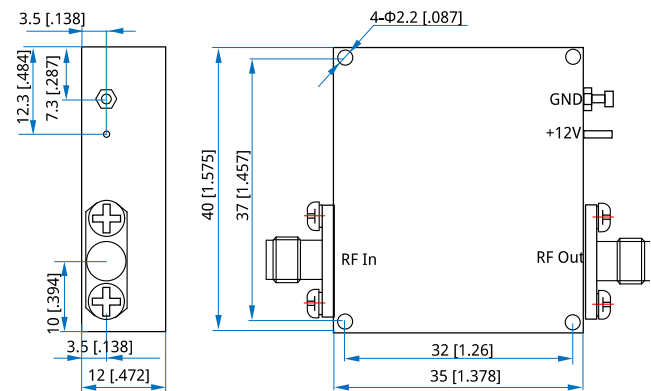
Size ^{*1} :	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1-12000-30-55

Customization is available upon request.

NLA-1-26500-17-55

0.001~26.5GHz, 17dB, 5.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.001~26.5GHz
Small Signal Gain:	17dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	10dBm min.
Noise Figure:	5.5dB typ.
VSWR:	2.5 max.
Voltage:	+12V DC typ.
Current:	320mA typ.
Impedance:	50Ω

Mechanical

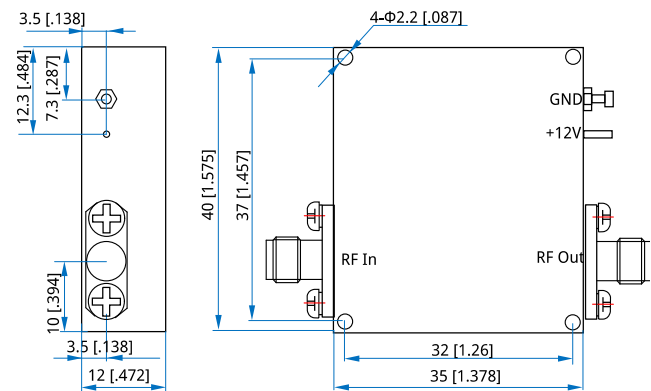
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1-26500-17-55

Customization is available upon request.

NLA-2-1100-22-15

2~1100MHz, 22dB, 1.5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar



Electrical

Frequency:	2~1100MHz
Gain:	22dB typ.
Noise Figure:	1.5dB typ.
Output Power (P1dB):	26dBm typ.
Input VSWR:	1.4 typ.
Output VSWR:	1.4 typ.
Voltage/Current:	+8V/300mA
Impedance:	50Ω

Absolute Maximum Ratings*1

RF Input Power:	+10dBm
Voltage:	+10V
Limiting Temperature:	-40~+85°C

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

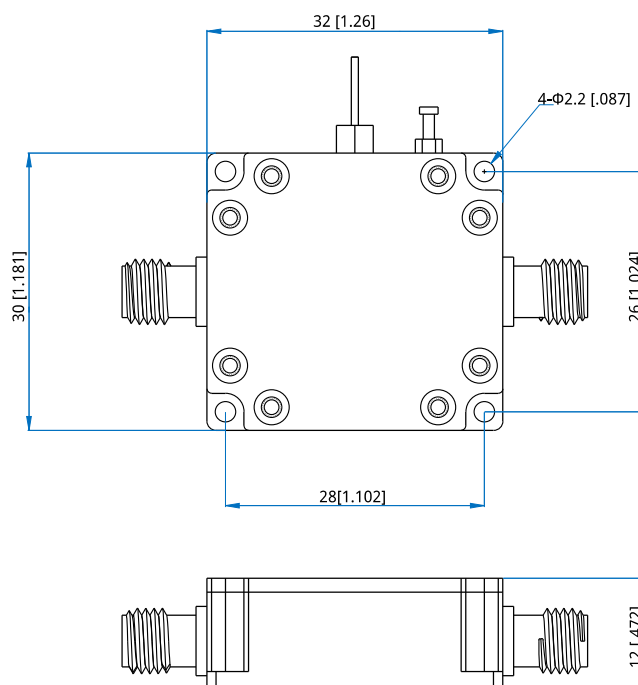
Size*2:	32*30*12mm 1.26*1.181*0.472in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[2] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

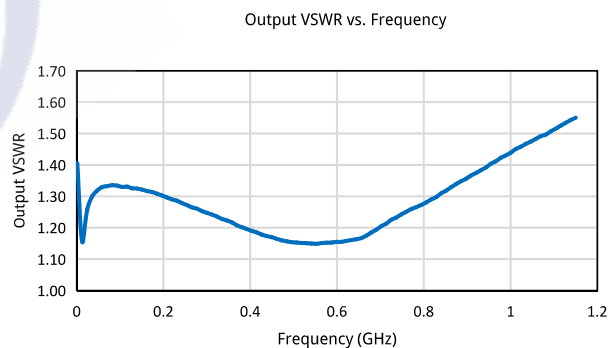
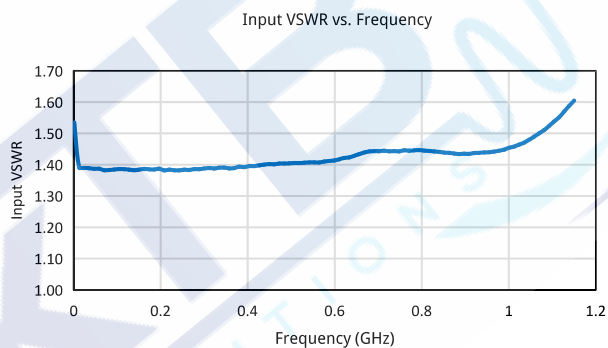
Tolerance: ±0.2mm [±0.008in]

How To Order

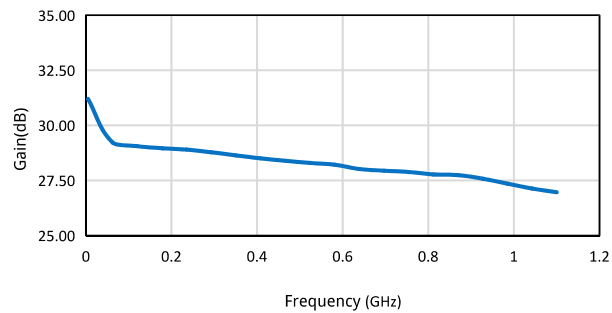
NLA-2-1100-22-15

Customization is available upon request.

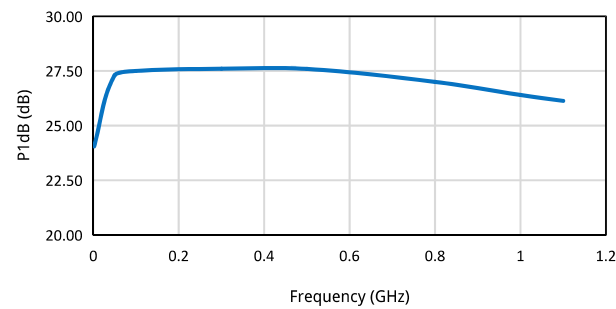
Typical Performance Curves



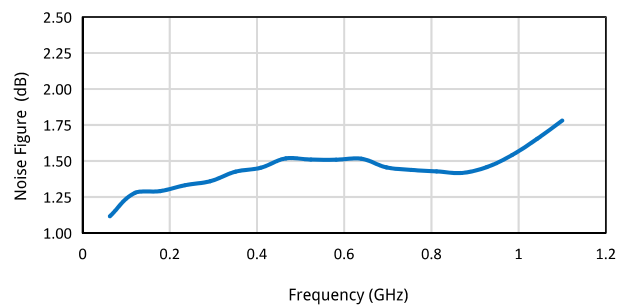
Gain vs. Frequency



P1dB vs. Frequency @Input Power=6dBm



Noise Figure vs. Frequency



NLA-5-1000-46-15

5~1000MHz, 46dB, 1.5dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test



Electrical

Frequency:	5~1000MHz
Gain:	46dB typ.
Noise Figure:	1.5dB typ.
Output Power (P1dB):	20dBm typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Impedance:	50Ω

Absolute Maximum Ratings^{*1}

RF Input Power:	-20dBm
Voltage:	+7V

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

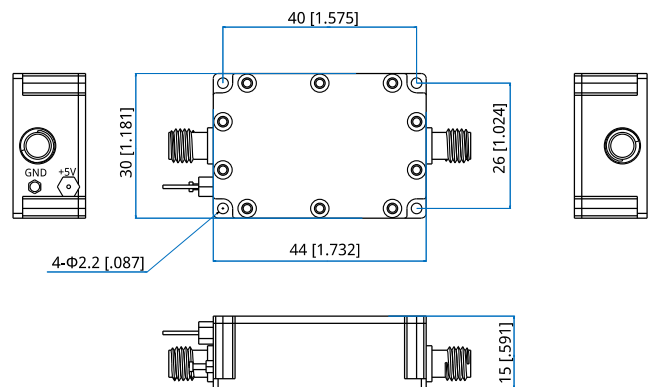
Size ^{*2} :	44*30*15mm 1.732*1.181*0.591in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[2] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings



Unit: mm [in]

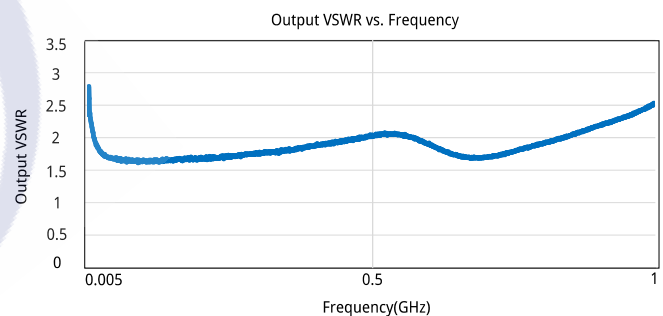
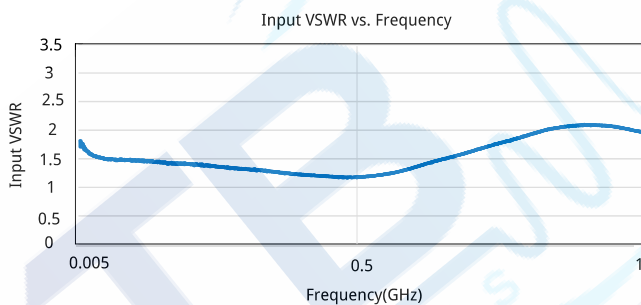
Tolerance: ±0.2mm [±0.008in]

How To Order

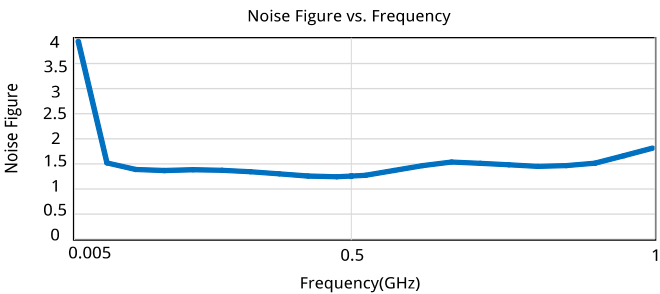
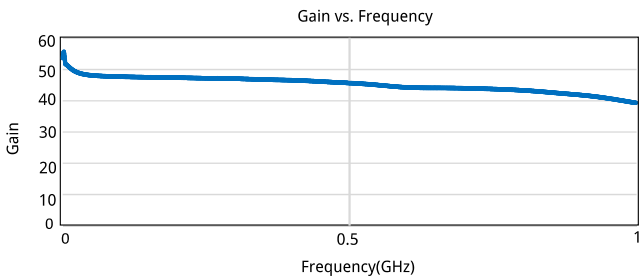
NLA-5-1000-46-15

Customization is available upon request.

Typical Performance Curves



Low Noise Amplifier



NLA-9K-3000-43-30

9K~3000MHz, 43dB, 3dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	9K~3000MHz
Gain:	43dB typ..
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	16dBm typ.
Noise Figure:	3dB max.
Reverse Isolation:	60dB min.
Spurious:	-60 dBc max.
Input VSWR:	1.6 typ.
Output VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	140mA typ.
Input Power:	+5dBm max.

Mechanical

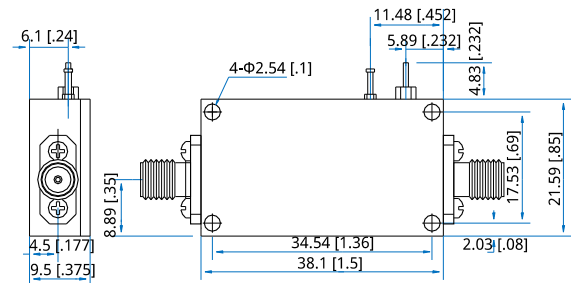
Size*1:	38.1*21.59*9.5mm 1.5*0.85*0.375in
RF Connectors:	SMA female
Mounting:	4-Φ2.54mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+75°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-9K-3000-43-30

Customization is available upon request.

NLA-10-60-15-50

10~60MHz, 15dB, 5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	10~60MHz
Gain:	15dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	23dBm min.
Noise Figure:	5dB max.
Spurious:	-60dBc max.
VSWR:	1.5 max.
Voltage:	+12V DC
Current:	120mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

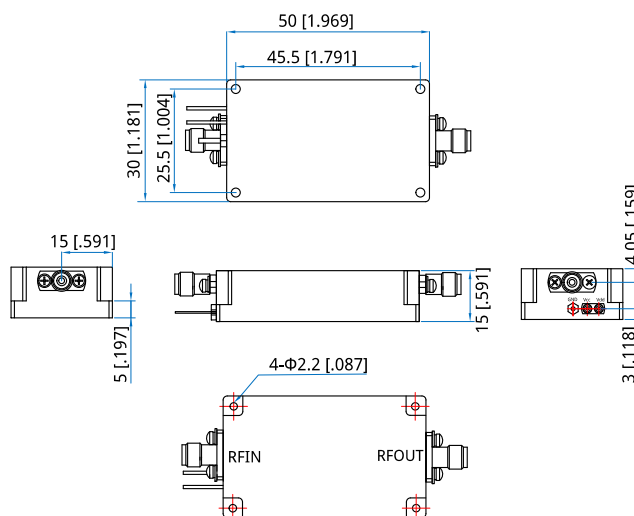
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-10-60-15-50

Customization is available upon request.

NLA-10-60-16-50

10~60MHz, 16dB, 5dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	10~60MHz
Gain:	16dB min.
Gain Flatness:	±1.5dB
Output Power (P1dB):	23dBm
Noise Figure:	5dB max.
Spurious:	-60dBc max.
Voltage:	+5V DC

Mechanical

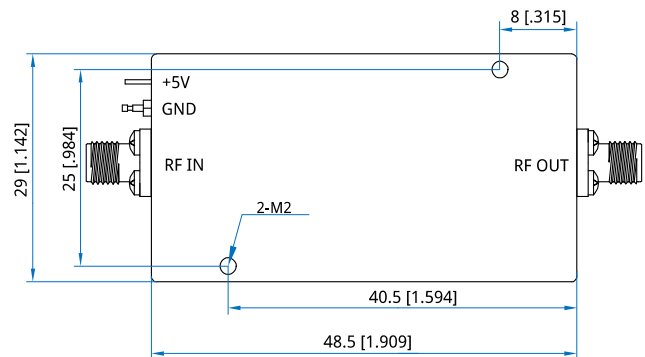
Size*1:	48.5*29mm 1.909*1.142in
RF Connectors:	SMA Female
Mounting:	4-M2 through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-10-60-16-50

Customization is available upon request.

NLA-10-2500-30-40

0.01~2.5GHz, 30dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.01~2.5GHz
Gain:	30dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	4dB typ.
VSWR:	2 max.
Voltage:	+12V DC typ.
Current:	120mA typ.
Impedance:	50Ω

Mechanical

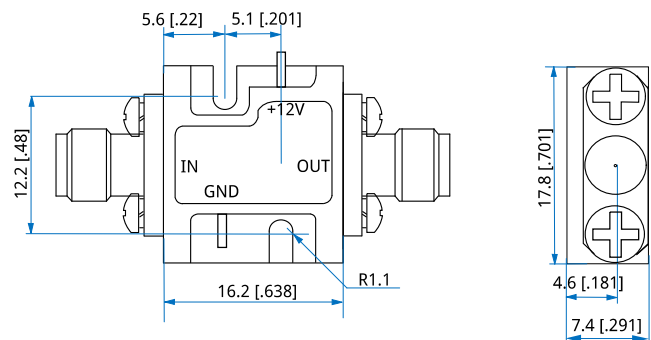
Size*1:	16.2*12.2*7.4mm 0.638*0.48*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

How To Order

NLA-10-2500-30-40

Customization is available upon request.

NLA-10-18000-25-50

0.01~18GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.01~18GHz
Gain:	25dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	10dBm min.
Noise Figure:	5.0dB max.
Spurious:	-60dBc max.
VSWR:	2.2 max.
Voltage:	+12V typ.
Current:	150mA typ.
Impedance:	50Ω

Mechanical

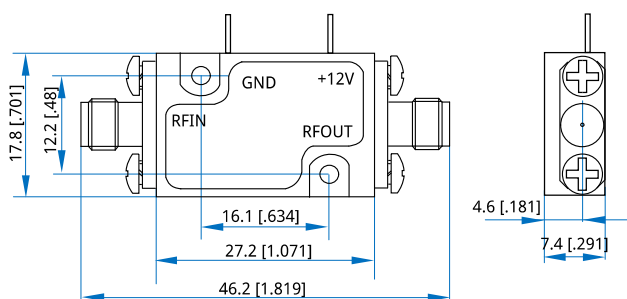
Size*1:	27.2*17.8*7.4mm 1.071*0.701*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-10-18000-25-50

Customization is available upon request.

NLA-20-3000-30-35

0.02~3GHz, 30dB, 3.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.02~3GHz
Power Gain:	30dB typ.
Gain Flatness:	±2.5dB typ.(Within any 60MHz bandwidth)
Output Power (P1dB):	+15dBm typ.
Noise Figure:	3.5dB typ.
Spurious:	-60dBc typ.
Harmonic:	-10dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+15V DC
Impedance:	50Ω
Input Power:	-14dBm max.

Mechanical

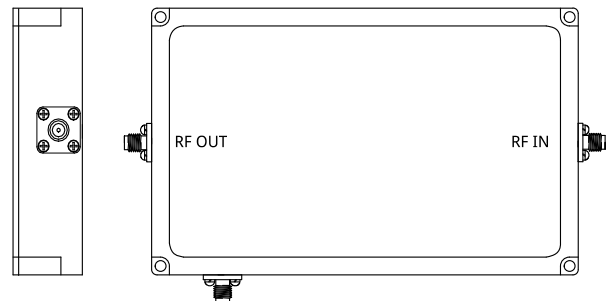
Size ^{*1} :	50*30*20mm 1.969*1.181*0.591in
Weight:	500g max.
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-20-3000-30-35

Customization is available upon request.

NLA-20-6000-32-15

0.02~6GHz, 32dB, 1.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.02~6GHz
Small Signal Gain:	32dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	12dBm min.
Noise Figure:	1.5dB typ.
Input VSWR:	2 max.@20MHz~50MHz 2.5 max.@50MHz~6GHz
Output VSWR:	2 max.
Input Power before Damage:	13dBm max.
Voltage:	5V DC typ.
Current:	80mA typ.
Impedance:	50Ω

Mechanical

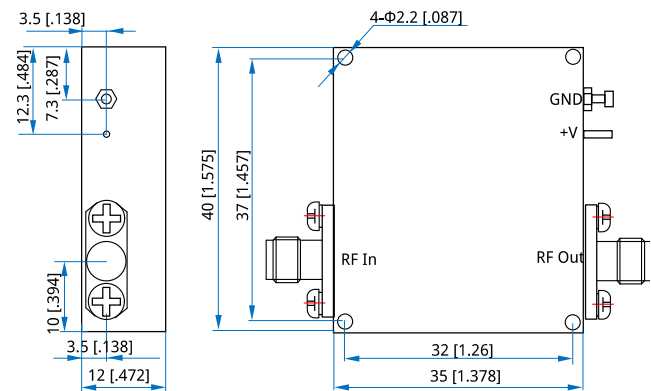
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-20-6000-32-15

Customization is available upon request.

NLA-20-8000-20-30

0.02~8GHz, 20dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.02~8GHz
Small Signal Gain:	20dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	+12dBm min.
Noise Figure:	3dB typ.
	4dB max.@1~8GHz
	5.5dB max.@0.1~1GHz
	7dB max.@0.02~0.1GHz
VSWR:	2 typ.
Voltage:	+12V DC typ.
Current:	150mA typ.
Impedance:	50Ω

Mechanical

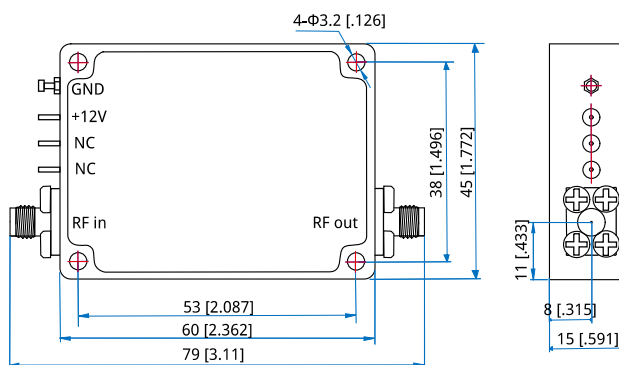
Size*1:	60*45*15mm
	2.362*1.772*0.591in
RF Connectors:	SMA Female
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-20-8000-20-30

Customization is available upon request.

NLA-25-1000-50-13

25~1000MHz, 50dB, 1.3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	25~1000MHz
Gain:	50dB min.
Output Power (P1dB):	14dBm typ.
Noise Figure:	1.3dB max.
VSWR:	2.5 max.
Voltage:	5~20V DC
Current:	200mA max.
Impedance:	50Ω

Mechanical

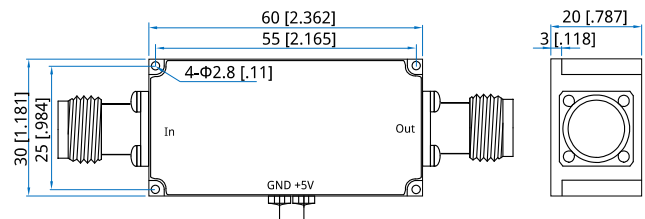
Size*1:	60*30*20mm 2.362*1.181*0.787in
RF Connectors:	N Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.8mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-25-1000-50-13

Customization is available upon request.

NLA-30-1000-15-20

30~1000MHz, 15dB, 2dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	30~1000MHz
Power Gain:	15dB typ.
Gain Flatness:	±3dB typ.
Noise Figure:	2dB typ.
Output Power (P1dB):	18dBm typ.
Spurious:	-60dBc typ. @12dBm
2 th Harmonic:	-8dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+5.5V DC
Impedance:	50Ω
Input Power:	5dBm max.

Mechanical

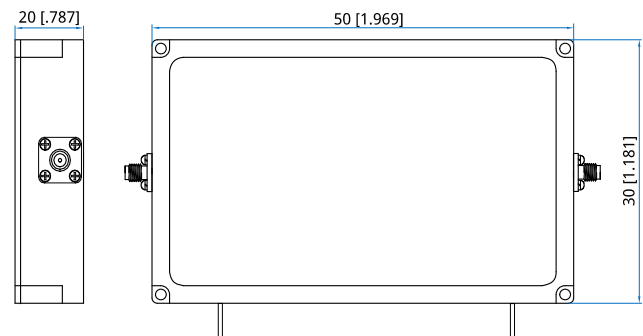
Size*1:	50*30*20mm 1.969*1.181*0.787in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-30-1000-15-20

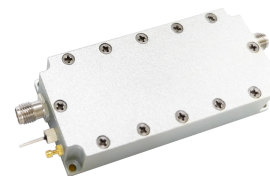
Customization is available upon request.

NLA-30-1000-55-13

0.03~1GHz, 55dB, 1.3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar



Electrical

Frequency:	0.03~1GHz
Gain:	55dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	+25dBm typ.
Noise Figure:	1.3dB typ.
VSWR:	1.8 typ.
Voltage:	+5V DC
Current:	400mA typ.
Impedance:	50Ω

Absolute Maximum Ratings*1

RF Input Power:	-33dBm
Voltage:	+6V

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

Size*2:	68*32*15mm 2.677*1.102*0.591in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

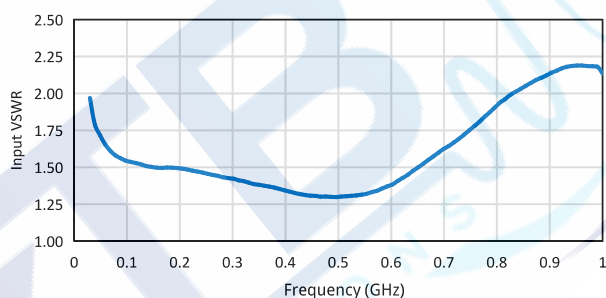
[2] Exclude connectors.

Environmental

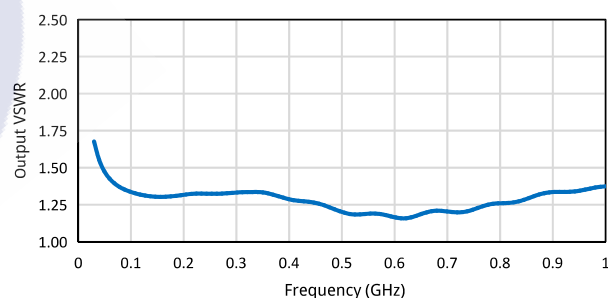
Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Typical Performance Curves

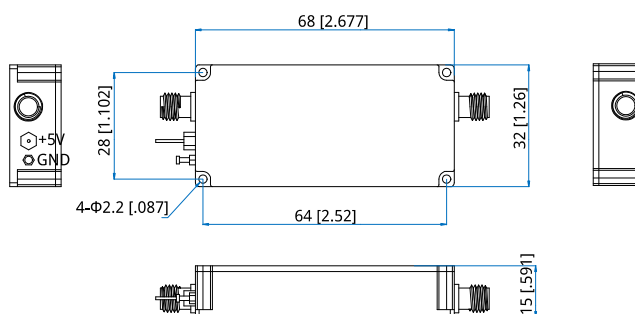
Input VSWR vs. Frequency



Output VSWR vs. Frequency



Outline Drawings



Unit: mm [in]

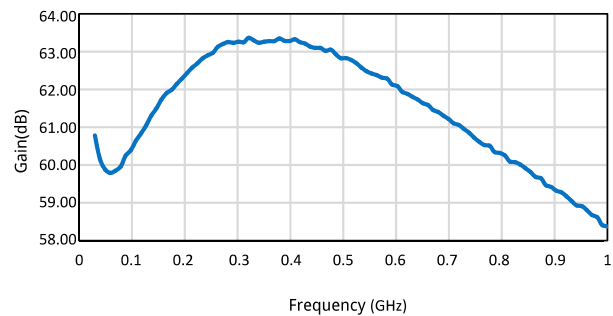
Tolerance: ±0.5mm [±0.02in]

How To Order

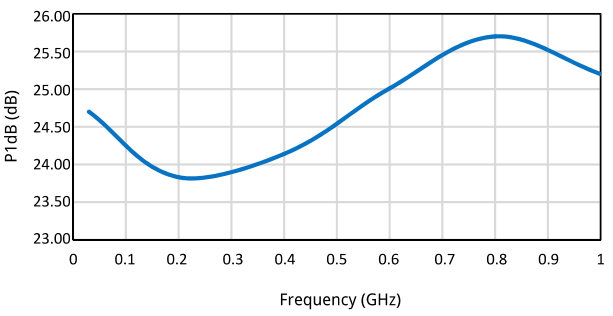
NLA-30-1000-55-13

Customization is available upon request.

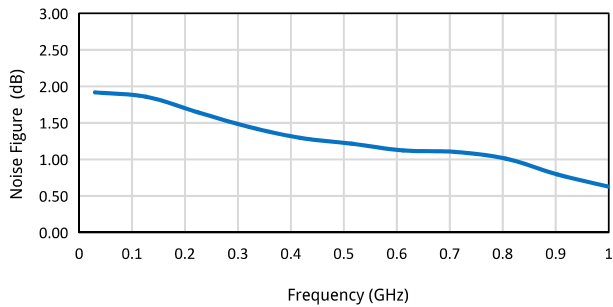
Gain vs. Frequency



P1dB vs. Frequency



Noise Figure vs. Frequency



NLA-30-3000-40-30

30~3000MHz, 40dB, 3dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	30~3000MHz
Power Gain:	40dB typ.
Gain Flatness:	±2dB typ.
Gain Stability:	±0.2dB typ.
Noise Figure:	3dB typ.
Output Power (P1dB):	12dBm typ.
Spurious:	-60dBc typ. @12dBm
2 th Harmonic:	-10dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+15V DC
Impedance:	50Ω
Input Power:	35dBm max.

Mechanical

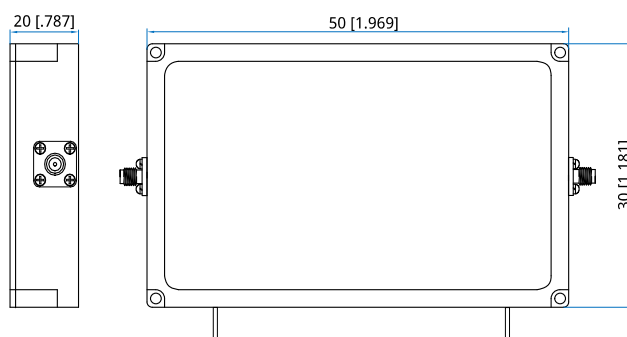
Size*1:	50*30*20mm 1.969*1.181*0.787in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-30-3000-40-30

Customization is available upon request.

NLA-30-6000-25-50

0.03~6GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.03~6GHz
Gain:	25dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	5dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

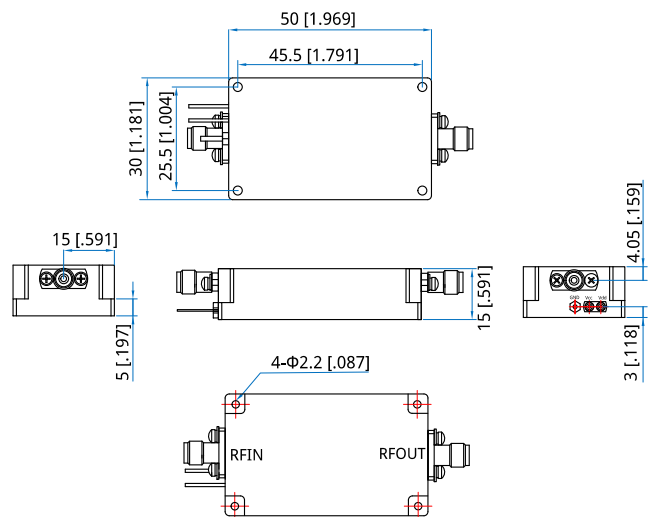
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-30-6000-25-50

Customization is available upon request.

NLA-30-18000-15-25

0.03~18GHz, 15dB, 2.5dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	0.03~18GHz
Gain:	15dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	2.5dB typ.
VSWR:	1.8 max.
Voltage:	+12V DC typ.
Current:	80mA typ.
Impedance:	50Ω

Mechanical

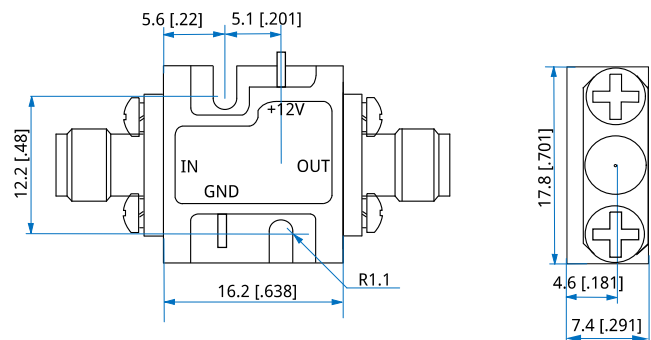
Size*1:	16.2*12.2*7.4mm 0.638*0.48*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
 Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-30-18000-15-25

Customization is available upon request.

NLA-50-90-15-32

50~90MHz, 15dB, 3.2dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	50~90MHz
Gain:	15dB min.
Gain Flatness:	±0.2dB max.
Output Power (P1dB):	+10dBm min.
Noise Figure:	3.2dB max.
IP3:	+25dBm min.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+15V DC
Current:	0.04mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

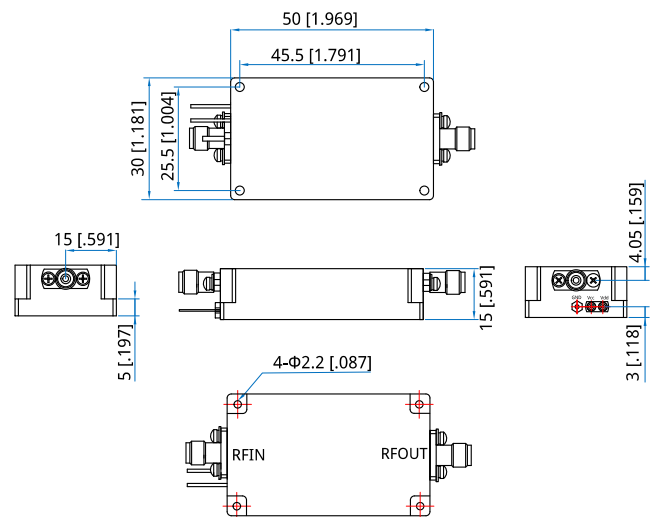
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50-90-15-32

Customization is available upon request.

NLA-50-3000-17-15

0.05~3GHz, 17dB, 1.5dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	0.05~3GHz
Small Signal Gain:	17dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	+15dBm min.
IP3:	32dBm typ.
Noise Figure:	1.5dB typ.@0.1~3GHz
Input VSWR:	2.0 max.@0.1~3GHz
output VSWR:	2.0 max.@0.1~3GHz
Voltage:	+5V DC typ.
Current:	70mA typ.
Impedance:	50Ω
Input Power(no damage):	15dBm

Mechanical

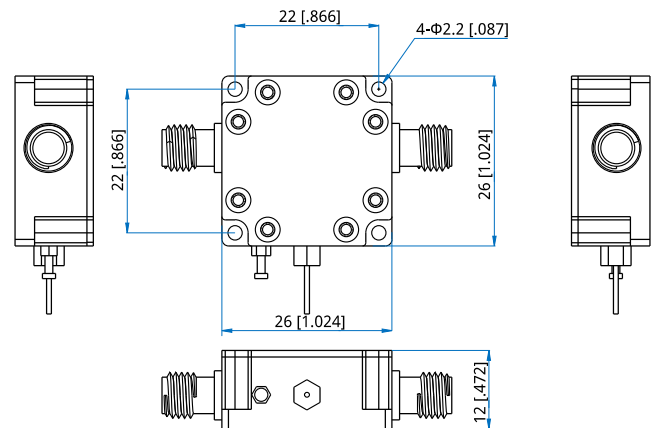
Size*1:	26*26*12mm 1.024*1.024*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50-3000-17-15

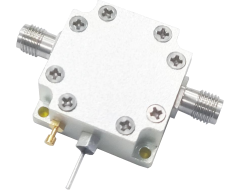
Customization is available upon request.

NLA-50-4000-20-15

0.05~4GHz, 20dB, 1.5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar



Electrical

Frequency:	0.05~4GHz
Small Signal Gain:	20dB typ.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	20dBm typ.
IP3:	32dBm typ.@0.05~3GHz 28dBm typ.@3~4GHz
Noise Figure:	1.5dB typ.
Input VSWR:	1.5 typ.
output VSWR:	1.5 typ.
Voltage:	+5V DC typ.
Current:	70mA typ.
Impedance:	50Ω

Absolute Maximum Ratings

RF Input Power:	20dBm
Voltage:	+10V
Current:	120mA

Mechanical

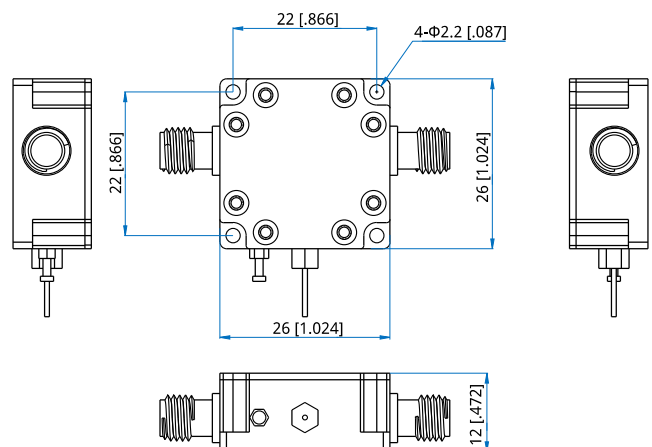
Size*1:	26*26*12mm 1.024*1.024*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

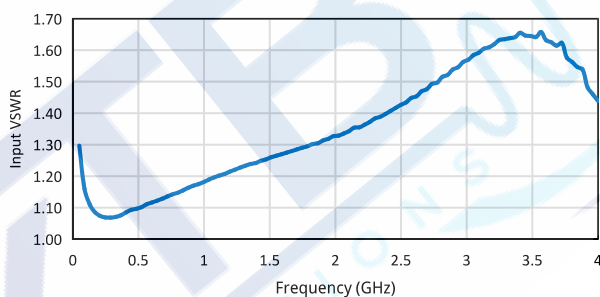
How To Order

NLA-50-4000-20-15

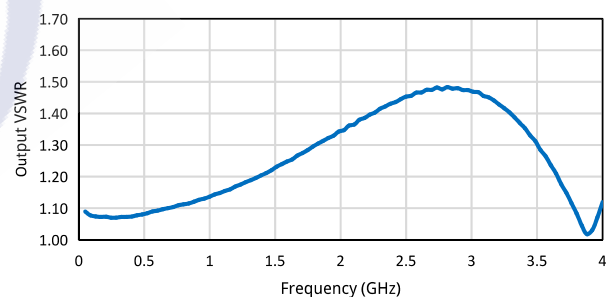
Customization is available upon request.

Typical Performance Curves

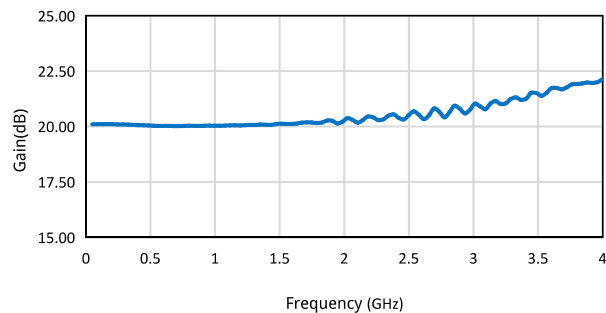
Input VSWR vs. Frequency



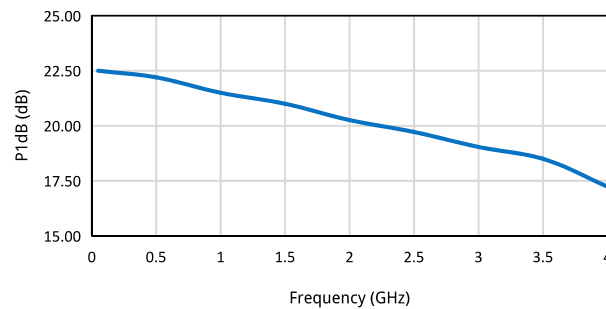
Output VSWR vs. Frequency



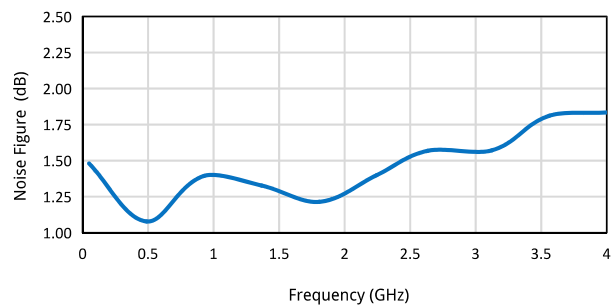
Gain vs. Frequency



P1dB vs. Frequency



Noise Figure vs. Frequency



NLA-50-6000-25-40

0.05~6GHz, 25dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.05~6GHz
Gain:	25dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	+22dBm min.
Noise Figure:	4dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	450mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

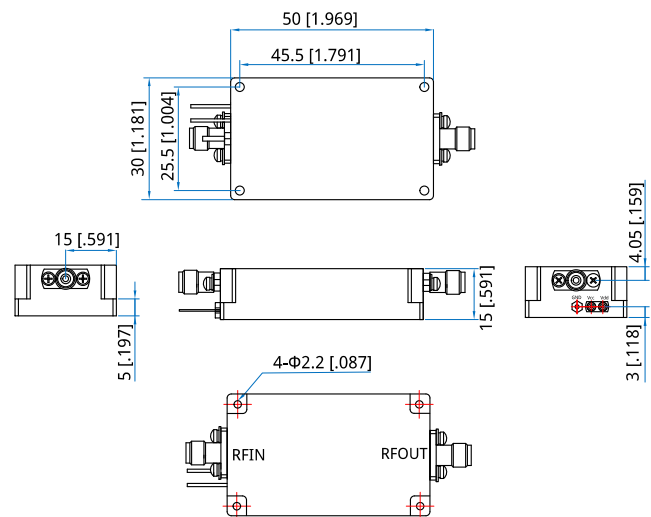
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50-6000-25-40

Customization is available upon request.

NLA-50K-50000-15-80

50kHz~50GHz, 15dB, 10dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:50kHz~50GHz
Gain	:15dB min.
Gain Flatness	:3dB max.
Output Power P1dB	:20dBm min.
OIP3	:30dBm typ.
Noise Figure	:4dB @20GHz
	:7dB @40GHz
	:10dB@50GHz
Input VSWR	:2,5 max.
Output VSWR	:2,5 max.
Voltage	:12V DC typ.
RF Input Power*	:10dBm
Current	:200mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

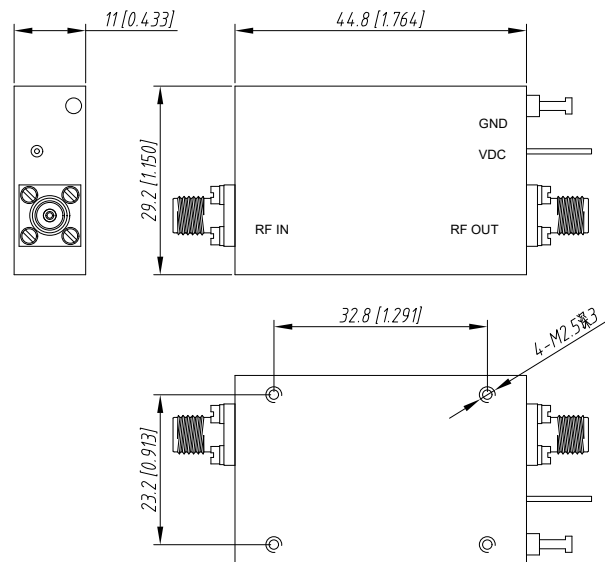
Size ^[1] :	44.8*29.2*11 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50K-50000-15-80

Customization is available upon request.

NLA-50K-50000-32-60

50kHz~50GHz, 32dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:50k~50GHz
Gain	:32dB min.
Gain Flatness	:3.5dB max.
Output Power P1dB	:19dBm min.
OIP3	:29dBm typ.
Noise Figure	:6dB typ.
Input VSWR	:2,5 max.
Output VSWR	:2,5 max.
Voltage	:12V DC typ.
RF Input Power*	:-5dBm
Current	:400mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

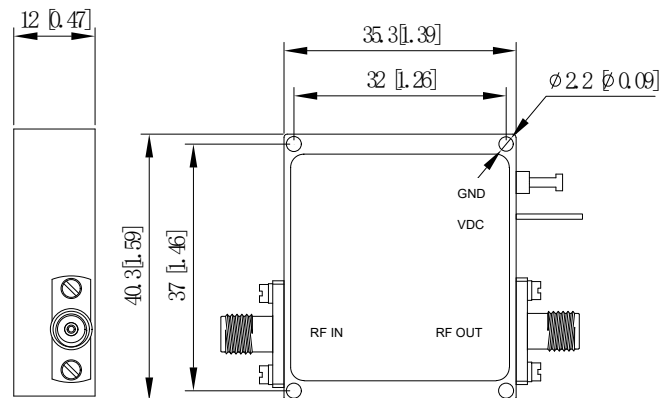
Size ^[1] :	35.3*40.3*12 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	48g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50K-50000-32-60

Customization is available upon request.

NLA-50K-53000-12-50

50kHz~53GHz, 12dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:50kHz~53GHz
Gain	:12dB min.
Gain Flatness	:2,5dB max.
Output Power P1dB	:15dBm min.
OIP3	:22dBm typ.
Noise Figure	:6dB typ
Input VSWR	:2,5 max.
Output VSWR	:2,5 max.
Voltage	:8V DC typ.
RF Input Power*	:10dBm
Current	:160mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

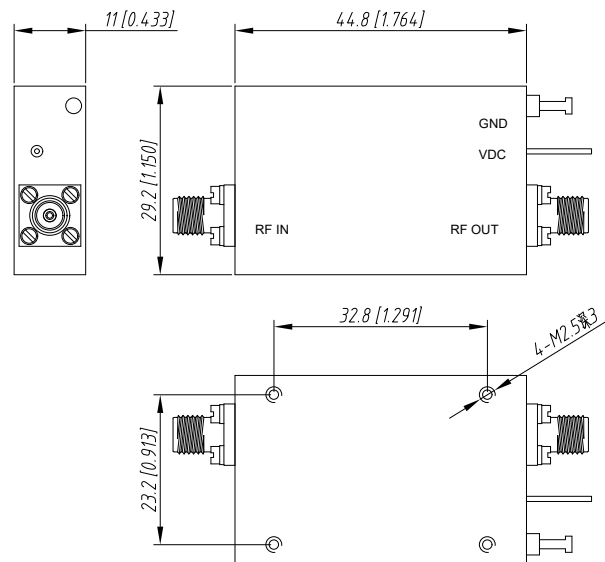
Size ^[1] :	44.8*29.2*11 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50K-53000-12-50

Customization is available upon request.

NLA-50K-67000-12-50

50kHz~67GHz, 12dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:50kHz~67GHz
Gain	:12dB min.
Gain Flatness	:2,5dB max.
Output Power P1dB	:15dBm min.
OIP3	:22dBm typ.
Noise Figure	:6dB typ
Input VSWR	:2,5 max.
Output VSWR	:2,5 max.
Voltage	:8V DC typ.
RF Input Power*	:10dBm
Current	:100mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

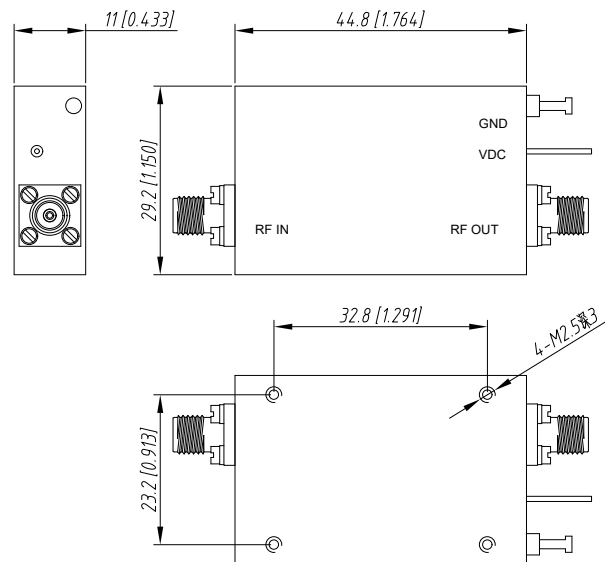
Size ^[1] :	44.8*29.2*11 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50K-67000-12-50

Customization is available upon request.

NLA-50K-67000-25-50

50kHz~67GHz, 25dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:50kHz~67GHz
Gain	:25dB min.
Gain Flatness	:2,5dB max.
Output Power P1dB	:15dBm min.
OIP3	:22dBm typ.
Noise Figure	:6dB typ
Input VSWR	:2,5 max.
Output VSWR	:2,5 max.
Voltage	:12VDC typ.
RF Input Power*	:10dBm
Current	:100mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

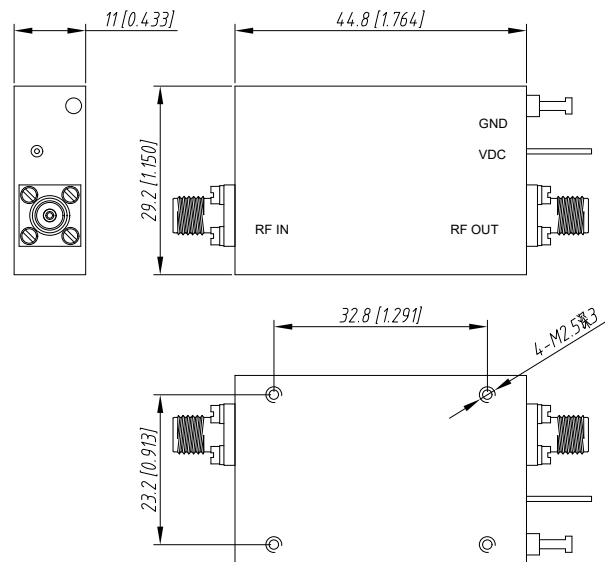
Size ^[1] :	44.8*29.2*11 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+85C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50K-67000-25-50

Customization is available upon request.

NLA-87-108-30-25

0.087~0.108GHz, 30dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

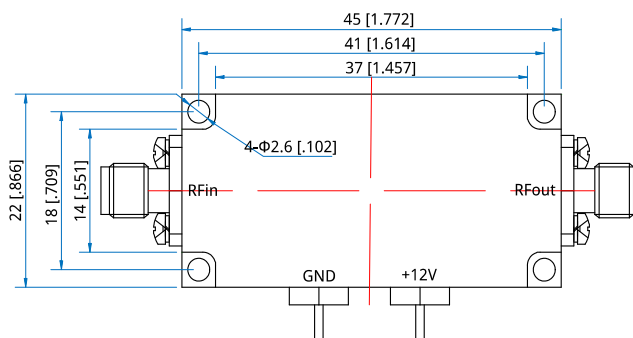
Frequency:	0.087~0.108GHz
Small Signal Gain:	30dB min.
Gain Flatness:	±1dB max.
Output Power (P1dB):	18dBm min.
Noise Figure:	2.5dB max.
VSWR:	1.6 max.
Voltage:	+12V DC
Current:	250mA
Impedance:	50Ω

Mechanical

Size ^{*1} :	45*22*13mm 1.772*0.866*0.512in
RF Connectors:	SMA
Mounting:	4-Φ2.6mm through-hole

[1] Exclude connectors.

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-87-108-30-25

Customization is available upon request.

NLA-100-6000-16-10

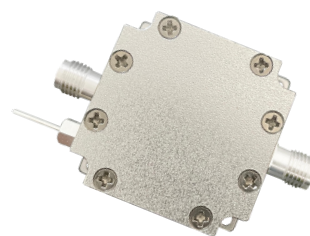
100~6000MHz, 16dB, 1dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test



Electrical

Frequency:	100~6000MHz
Gain:	16dB typ.
Gain Flatness:	±8dB typ.
Noise Figure:	1dB typ.
Output Power (P1dB):	21dBm typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Impedance:	50Ω

Absolute Maximum Ratings^{*1}

RF Input Power:	22dBm
Voltage:	+7V

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

Size ^{*2} :	30*30*15mm 1.181*1.181*0.591in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

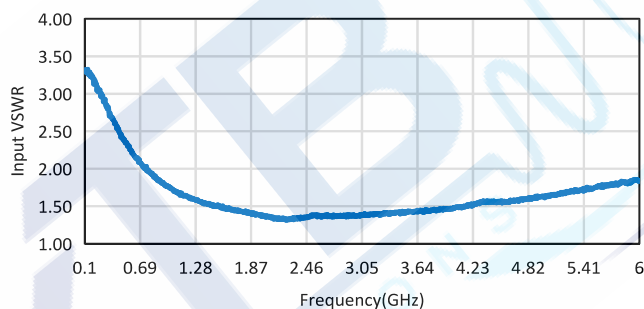
[2] Exclude connectors.

Environmental

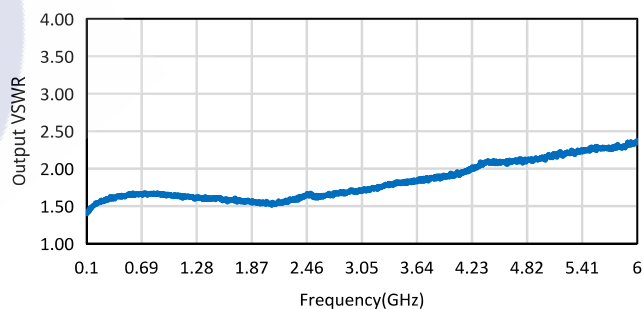
Operating Temperature: -40~+85°C

Typical Performance Curves

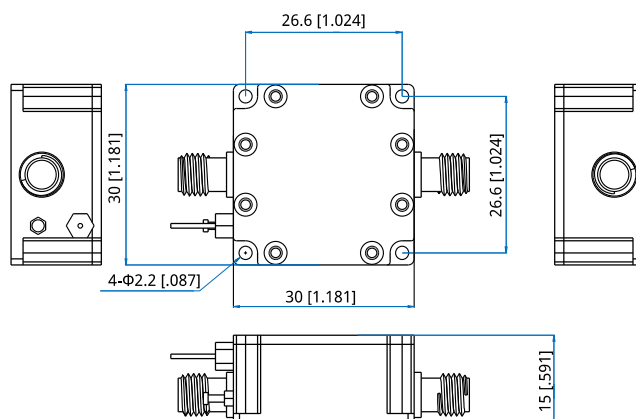
Input VSWR vs. Frequency



Output VSWR vs. Frequency



Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

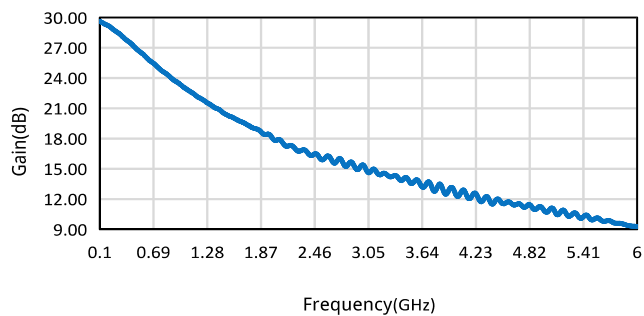
How To Order

NLA-100-6000-16-10

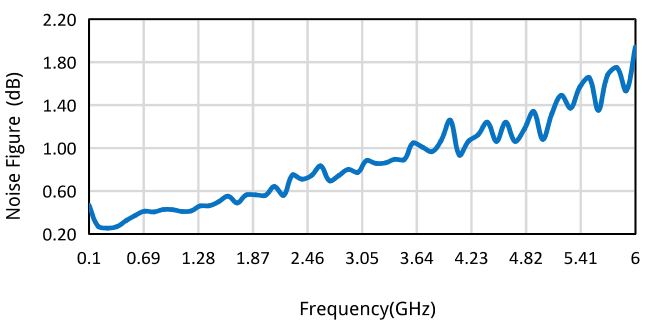
Customization is available upon request.

Low Noise Amplifier

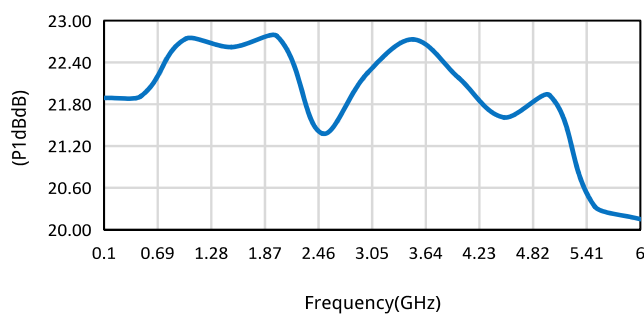
Gain vs. Frequency



Noise Figure vs. Frequency



P1dB vs. Frequency



NLA-100-6000-25-25

0.1~6GHz, 25dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~6GHz
Gain:	25dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	2.5dB max.
Spurious:	-60dBc max.
VSWR:	1.5 max.
Voltage:	+12V DC
Current:	120mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

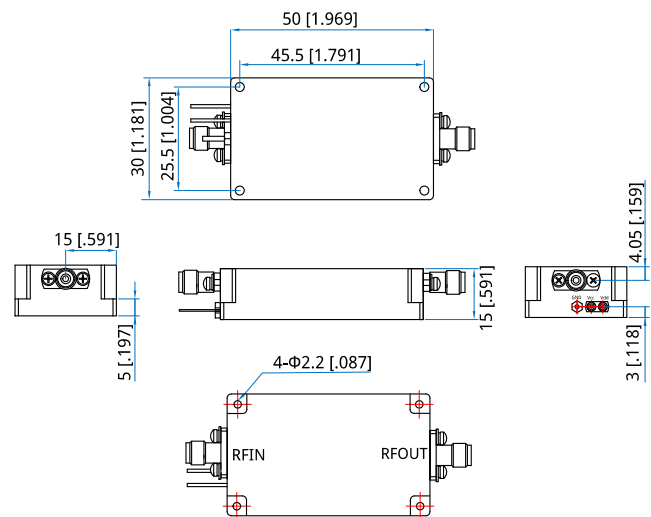
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-6000-25-25

Customization is available upon request.

NLA-100-12000-25-25

0.1~12GHz, 25dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~12GHz
Gain:	25dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	2.5dB max.
Spurious:	-60dBc max.
VSWR:	1.5 max.
Voltage:	+12V DC
Current:	120mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

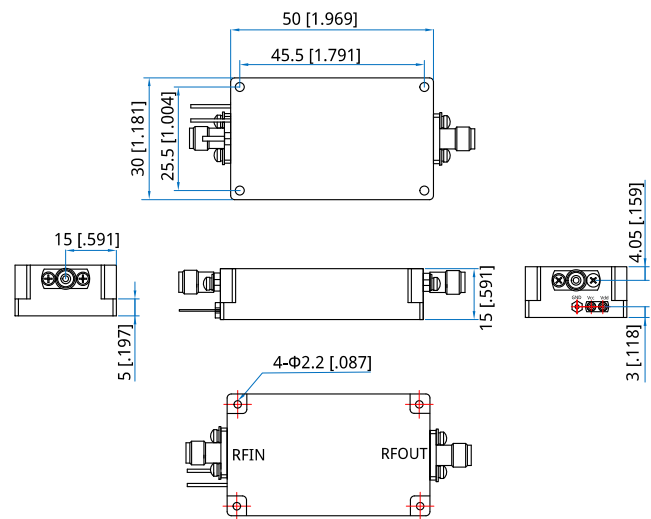
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-12000-25-25

Customization is available upon request.

NLA-100-15000-45-22

0.1~15GHz, 45dB, 2.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~15GHz
Gain:	45dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+5dBm typ.
Noise Figure:	2.2dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+12V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

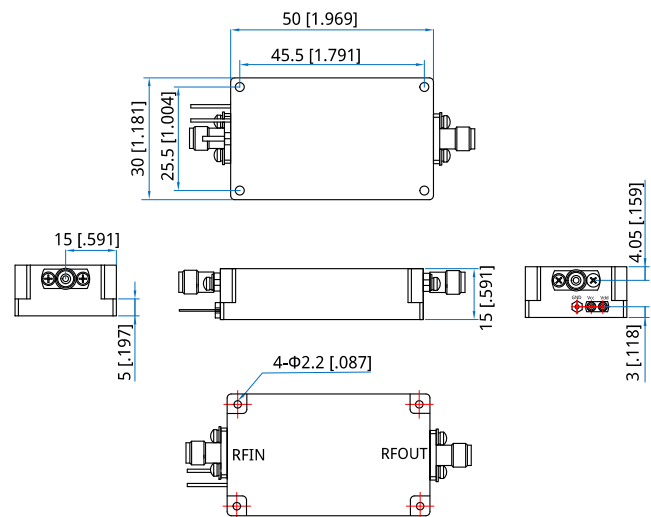
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-15000-45-22

Customization is available upon request.

NLA-100-20000-25-40

0.1~20GHz, 25dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~20GHz
Small Signal Gain:	25dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	20dBm min.@25°C
IP3:	30dBm min.
Noise Figure:	4dB max.@25°C
Input VSWR:	3.0 max.
output VSWR:	2.0 max.
Voltage:	+12V DC
Current:	350mA max.
Impedance:	50Ω

Mechanical

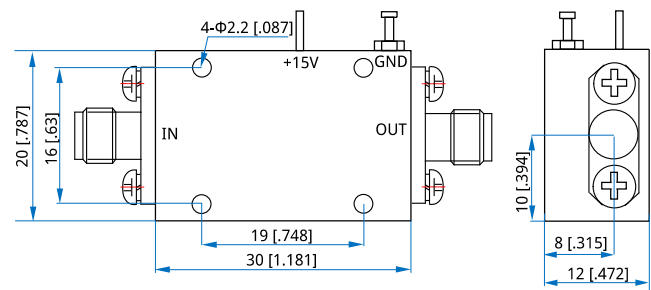
Size*1:	30*20*12mm 1.181*0.787*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-55~+85°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-20000-25-40

Customization is available upon request.

NLA-100-26500-30-30

0.1~26.5GHz, 30dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~26.5GHz
Small Signal Gain:	30dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+20dBm min.
Noise Figure:	3dB typ.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	270mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

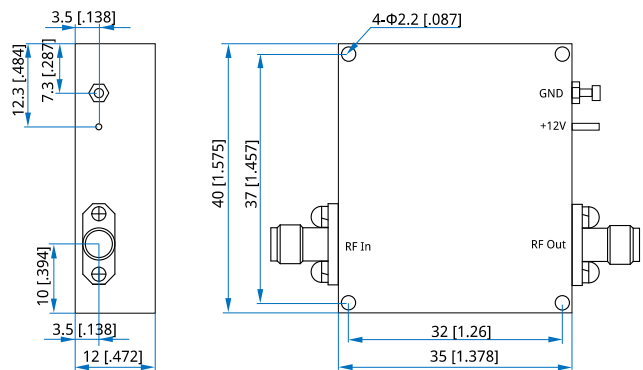
Size ^{*1} :	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-26500-30-30

Customization is available upon request.

NLA-100-30000-18-55

0.1~30GHz, 18dB, 5.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~30GHz
Small Signal Gain:	18dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	5.5dB typ.
VSWR:	2.5 max.
Voltage:	+12V DC
Current:	350mA typ.
Impedance:	50Ω

Mechanical

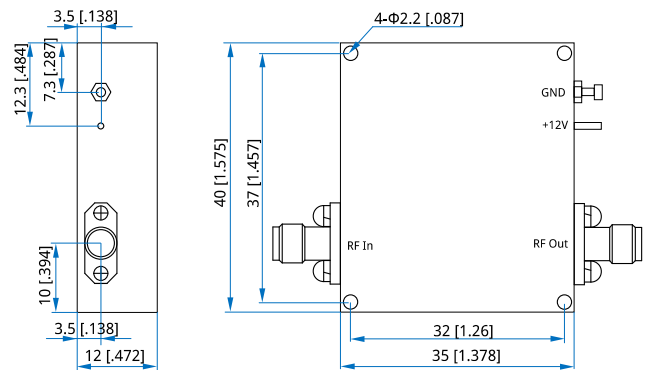
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-30000-18-55

Customization is available upon request.

NLA-100-50000-28-50

0.1~50GHz, 28dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~50GHz
Gain:	28dB min.
Gain Flatness:	±3.0dB max.
Output Power (P1dB):	10dBm min.
OIP3:	20dBm typ.
Noise Figure:	5.0dB typ.
Input VSWR:	3 max.
Output VSWR:	3 max.
Voltage:	12V DC typ.
Current:	420mA typ.
Impedance:	50Ω

Mechanical

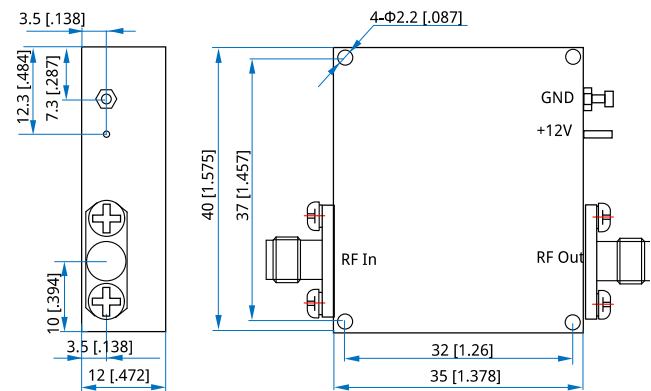
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
------------------------	-----------

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-50000-28-50

Customization is available upon request.

NLA-100-50000-28-50-1

0.1~50GHz, 28dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~50GHz
Gain:	28dB min.
Gain Flatness:	±3.0dB max.
Output Power (P1dB):	10dBm min.
OIP3:	20dBm typ.
Noise Figure:	5.0dB typ.
Input VSWR:	3 max.
Output VSWR:	3 max.
Voltage:	12V DC typ.
Current:	420mA typ.
Impedance:	50Ω

Mechanical

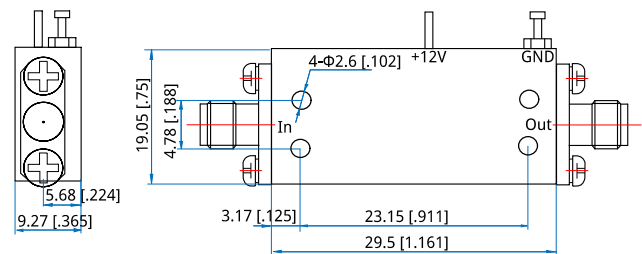
Size*1:	29.5*19.05*9.27mm 1.161*0.75*0.365in
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.6mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-50000-28-50-1

Customization is available upon request.

NLA-100-50000-32-60

0.1~50GHz, 32dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:0.1~50GHz
Gain	:32dB min.
Gain Flatness	:3.5dB max.
Output Power P1dB	:19dBm min.
OIP3	:30dBm typ.
Noise Figure	:6dB typ.
Input VSWR	:2.5 max.
Output VSWR	:2.5 max.
Voltage	:12V DC typ.
RF Input Power*	:-5 dBm
Current	:400mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

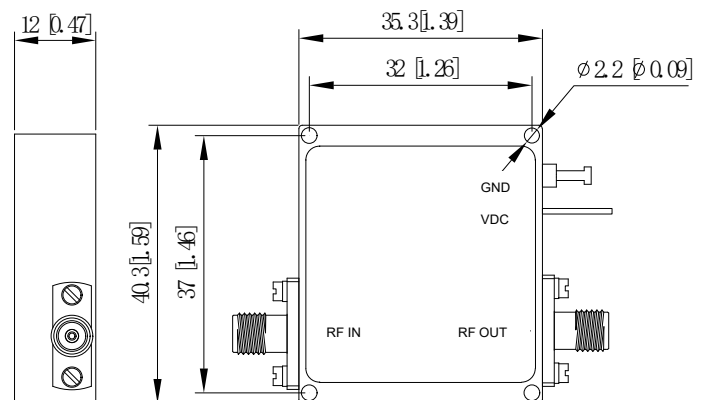
Size ^[1] :	35.3*40.3*12 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature : -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-50000-32-60

Customization is available upon request.

NLA-100-67000-18-50

0.1~67GHz, 18dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:0.1~67GHz
Gain	:18dB min.
Gain Flatness	:2,5dB max.
Output Power P1dB	:15dBm min.
OIP3	:22dBm typ.
Noise Figure	:6dB typ
Input VSWR	:2,5 max.
Output VSWR	:2,5 max.
Voltage	:12VDC typ.
RF Input Power*	:10dBm
Current	:200mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

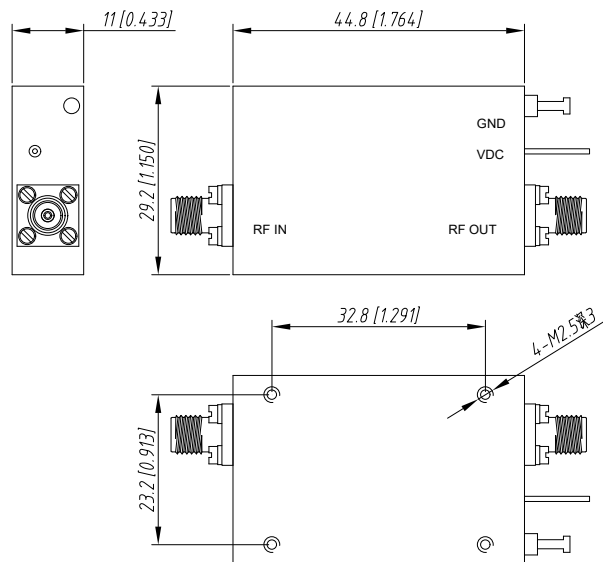
Size ¹ :	44.8*29.2*11 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-67000-18-50

Customization is available upon request.

NLA-100-67000-25-50

0.1~67GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:0.1~67GHz
Gain	:25dB min.
Gain Flatness	:3.5dB max.
Output Power P1dB	:15dBm min.
OIP3	:25dBm typ.
Noise Figure	:5.5dB typ.
Input VSWR	:2.5 max.
Output VSWR	:2.5 max.
Voltage	:12V DC typ.
RF Input Power*	:0 dBm
Current	:300mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

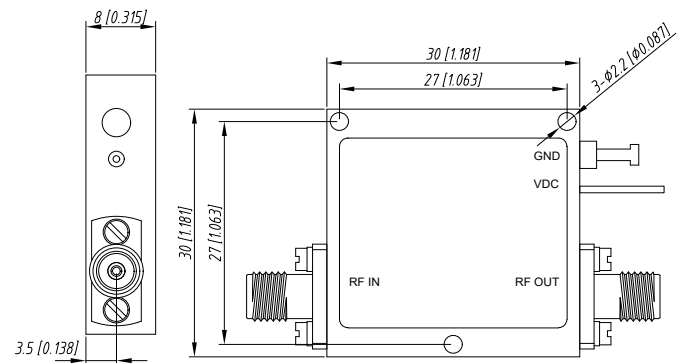
Size ¹ :	30*30*8 mm
RF Connectors:	1.85mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	55g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-100-67000-25-50

Customization is available upon request.

NLA-200-2000-30-30

0.2~2GHz, 30dB, 3dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.2~2GHz
Power Gain:	30dB typ.
Gain Flatness:	±2dB typ.
Noise Figure:	3dB typ.
Output Power (P1dB):	10dBm typ.
Spurious:	-60dBc typ.
2 th Harmonic:	-10dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Impedance:	50Ω
Input Power:	-15dBm max.

Mechanical

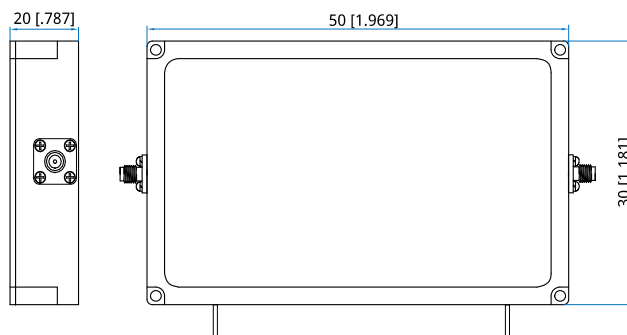
Size*1:	50*30*20mm 1.969*1.181*0.787in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-200-2000-30-30

Customization is available upon request.

NLA-200-6000-42-13

0.2~6GHz, 42dB, 1.3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.2~6GHz
Gain:	42dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	1.3 typ.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω
Input Power Without Damage:	+15dBm max.

Mechanical

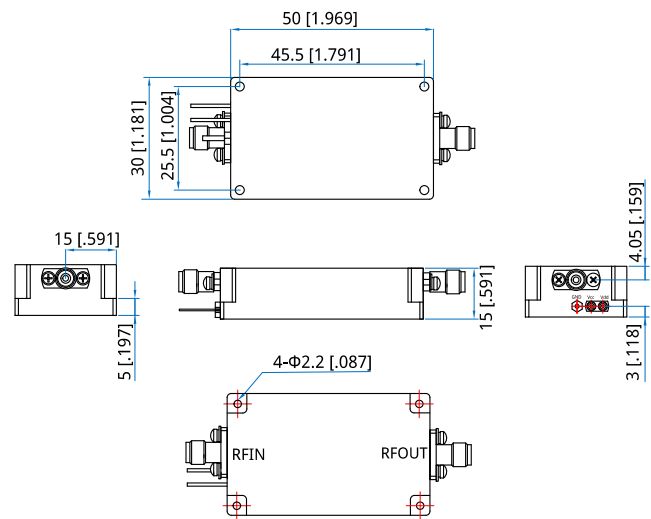
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-45~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-200-6000-42-13

Customization is available upon request.

NLA-200-10000-45-50

0.2~10GHz, 45dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.2~10GHz
Small Signal Gain:	45dB min.
Gain Flatness:	±2.0dB max.
Output Power (P1dB):	23dBm min.
Noise Figure:	5.0dB max.
VSWR:	2.2 max.
Voltage:	+12V DC typ.
Current:	280mA typ.
Impedance:	50Ω

Mechanical

Size^{*1}: 35*40*12mm
1.378*1.575*0.472in

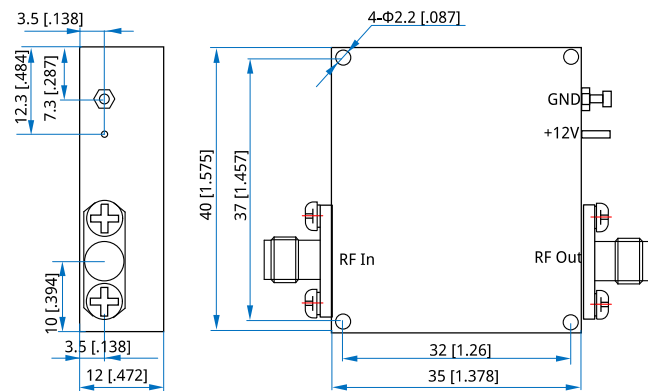
RF Connectors: SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+70°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-200-10000-45-50

Customization is available upon request.

NLA-300-40000-40-55

0.3~40GHz, 40dB, 5.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.3~40GHz
Small Signal Gain:	40dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	14dBm min.
Noise Figure:	5.5dB typ.
Input VSWR:	2.5 max.
Output VSWR:	2.5 max.
Voltage:	+12V DC typ.
Current:	600mA typ.
Impedance:	50Ω

Mechanical

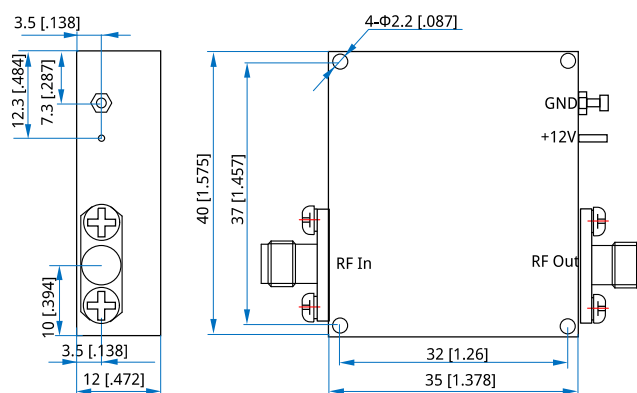
Size ^{*1} :	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-300-40000-40-55

Customization is available upon request.

NLA-400-2000-25-20

0.4~2GHz, 25dB, 2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.4~2GHz
Small Signal Gain:	25dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+20dBm min.
IP3:	32dBm min.
Noise Figure:	2dB max.
Input VSWR:	2.5 max.
Output VSWR:	2.0 max.
Voltage:	+9V DC typ
Current:	150mA typ.
Impedance:	50Ω

Mechanical

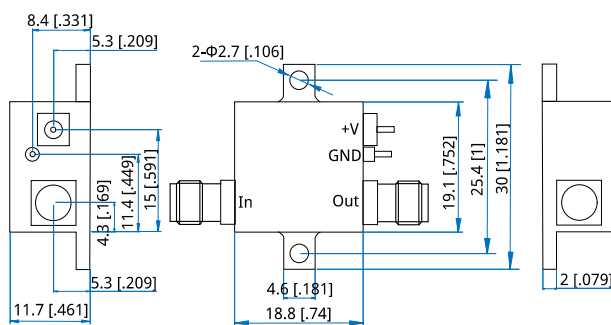
Size ^{*1} :	18.8*19.1*11.7mm 0.74*0.752*0.461in
RF Connectors:	SMA Female
Mounting:	2-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-400-2000-25-20

Customization is available upon request.

NLA-400-8000-40-25

0.4~8GHz, 40dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.4~8GHz
Gain:	40dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	+14dBm min.
Noise Figure:	2.5dB max.
Spurious:	-60dBc max.
Input VSWR:	2 typ.
Output VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω
Input Power:	+18dBm max.

Mechanical

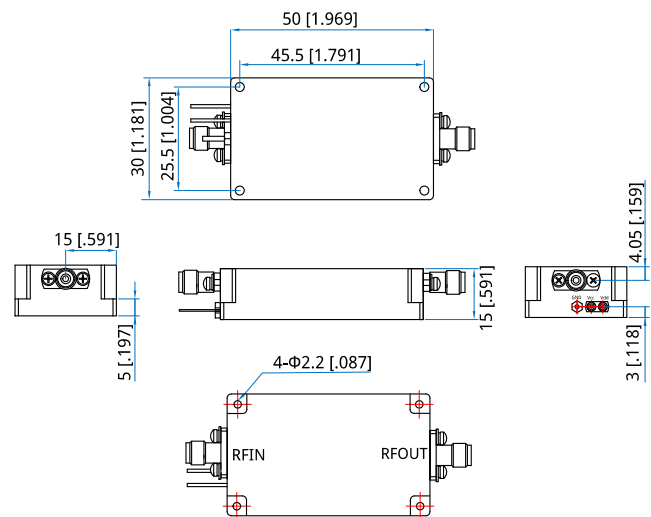
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-30~+75°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-400-8000-40-25

Customization is available upon request.

NLA-400-50000-40-60

0.4~50GHz, 40dB, 6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency	:0.4~50GHz
Gain	:40dB min.
Gain Flatness	:4.0dB max.
Output Power P1dB	:18dBm min.
OIP3	:21dBm typ.
Noise Figure	:6dB typ.
Input VSWR	:2.5 max.
Output VSWR	:2.5 max.
Voltage	:12V DC typ.
Spurious	: -60dBc
RF Input Power*	: -15dBm
Current	:500mA typ.
Impedance	:50Ω

* Absolute Maximum Rating

Mechanical

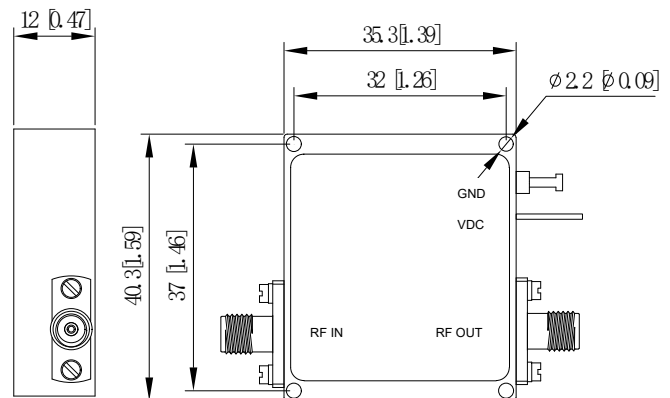
Size ^[1] :	35.3*40.3*12 mm
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole
Weight :	48g

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+75C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-400-50000-40-60

Customization is available upon request.

NLA-500-8000-20-16

0.5~8GHz, 20dB, 1.6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~8GHz
Small Signal Gain:	20dB typ.
Gain Flatness:	±1.0dB typ. @0.5~7GHz
Output Power (P1dB):	+18dBm typ.
IP3:	28dBm typ.
Noise Figure:	1.6dB typ.
VSWR:	2.3 max. @0.5~7GHz 3.5 max. @7~8GHz
Input Power(no damage):	15dBm
Voltage:	+6V DC typ.
Current:	80mA typ.@6V
Impedance:	50Ω

Mechanical

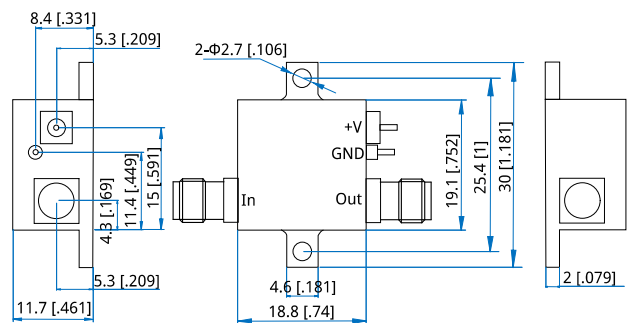
Size*1:	18.8*19.1*11.7mm 0.74*0.752*0.461in
RF Connectors:	SMA Female
Mounting:	2-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-500-8000-20-16

Customization is available upon request.

NLA-500-18000-10-30

0.5~18GHz, 10dB, 3dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	0.5~18GHz
Small Signal Gain:	10dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	12dBm min.
Noise Figure:	3dB typ.
Input VSWR:	2.0 max.
output VSWR:	2.0 max.
Voltage:	+15V DC max.
Current:	150mA max.
Impedance:	50Ω
Input Power(no damage):	17dBm max.

Mechanical

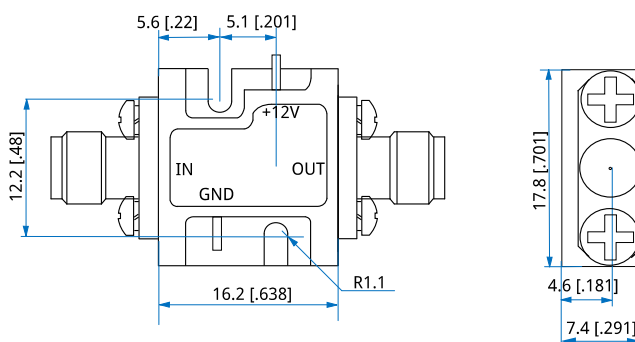
Size*1:	21.8*17.8*7.4mm 0.858*0.701*0.291in
RF Connectors:	SMA Female
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-54~+85°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-500-18000-10-30

Customization is available upon request.

NLA-500-18000-14-30

0.5~18GHz, 14dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~18GHz
Small Signal Gain:	14dB min.
Gain Flatness:	±0.75dB typ.
Output Power (P1dB):	17dBm min.
Noise Figure:	3dB typ.
Input VSWR:	2.0 max.
output VSWR:	2.0 max.
Voltage:	+15V DC max.
Current:	165mA typ.
Impedance:	50Ω
Input Power(no damage):	17dBm max.

Mechanical

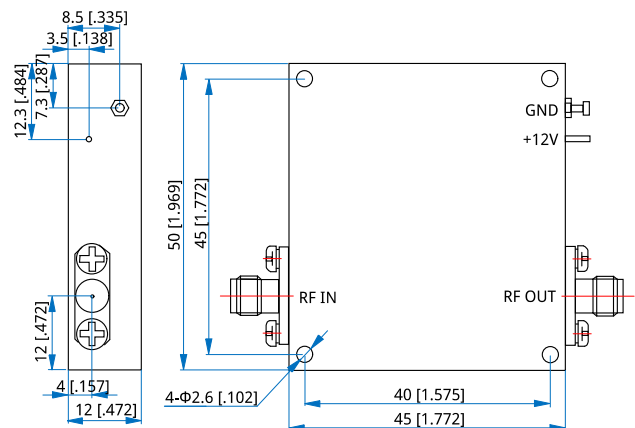
Size*1:	45*50*12mm 1.772*1.969*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.6mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-54~+85°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-500-18000-14-30

Customization is available upon request.

NLA-500-18000-16-50

0.5~18GHz, 16dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~18GHz
Small Signal Gain:	16dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	18dBm min.
Noise Figure:	5dB max.
Input VSWR:	2.2max.
output VSWR:	1.5 max.
Voltage:	+12V DC typ.
Current:	300mA typ.
Impedance:	50Ω

Mechanical

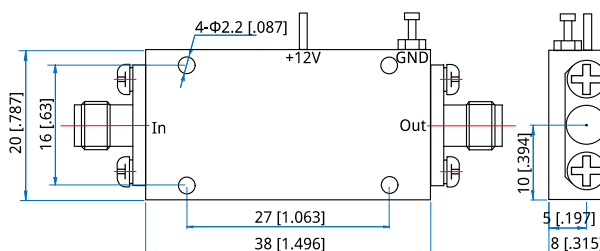
Size*1:	38*20*8mm 1.496*0.787*0.315in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+85℃

Outline Drawings



Unit: mm [in]

Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

How To Order

NLA-500-18000-16-50

Customization is available upon request.

NLA-500-18000-40-30

0.5~18GHz, 40dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~18GHz
Small Signal Gain:	40dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	3dB max.
VSWR:	2.5 max.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω

s

Mechanical

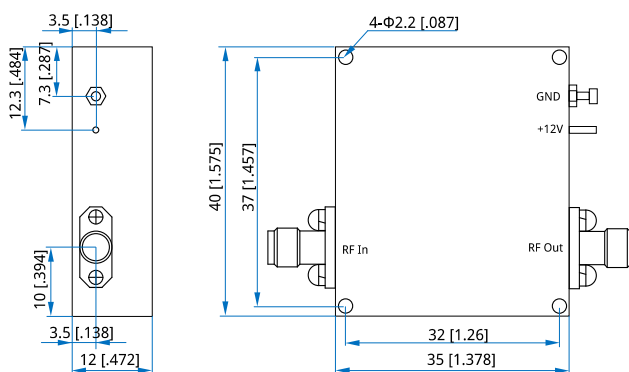
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-500-18000-40-30

Customization is available upon request.

NLA-500-18000-40-35

0.5~18GHz, 40dB, 3.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~18GHz
Gain:	40dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	12dBm typ.
Noise Figure:	3dB typ., 3.5dB max.
Spurious:	-60dBc max.
VSWR:	2 max.
Voltage:	+5V DC
Current:	300mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

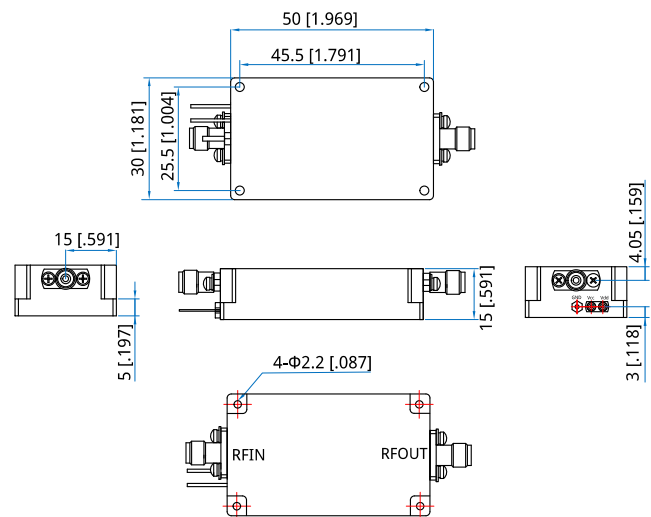
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-500-18000-40-35

Customization is available upon request.

NLA-500-40000-43-50

0.5~40GHz, 43dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~40GHz
Small Signal Gain:	43dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+14dBm min.
Noise Figure:	5dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	350mA typ.
Impedance:	50Ω
Input Power:	-15dBm max.

Mechanical

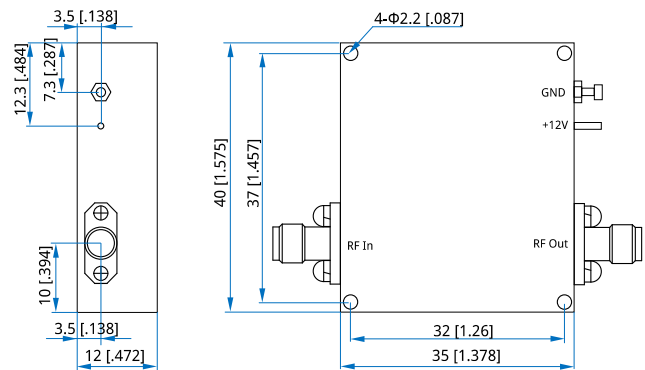
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-45~+85°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-500-40000-43-50

Customization is available upon request.

NLA-600-4200-20-10

600~4200MHz, 20dB, 1dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	600~4200MHz
Gain:	20dB typ.
Gain Flatness:	±2dB typ.
Noise Figure:	1dB typ.
Output Power (P1dB):	21dBm typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Impedance:	50Ω

Absolute Maximum Ratings*1

RF Input Power:	22dBm
Voltage:	+7V

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

Size*2:	30*30*15mm 1.181*1.181*0.591in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

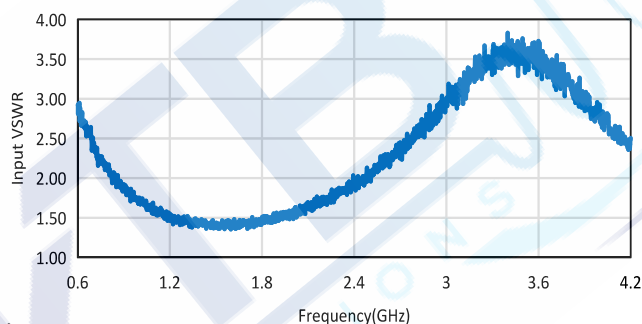
[2] Exclude connectors.

Environmental

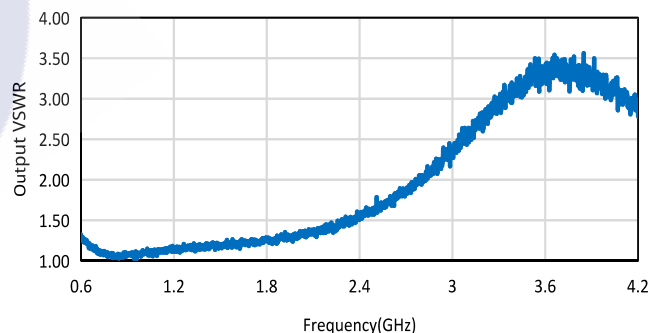
Operating Temperature:	-40~+85°C
Non-Operating Temperature:	-55~+125°C

Typical Performance Curves

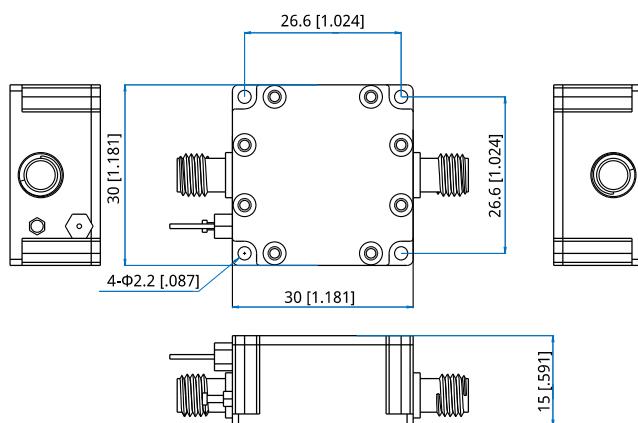
Input VSWR vs. Frequency



Output VSWR vs. Frequency



Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

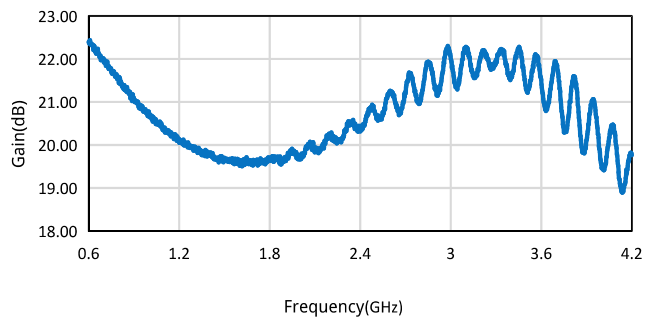
How To Order

NLA-600-4200-20-10

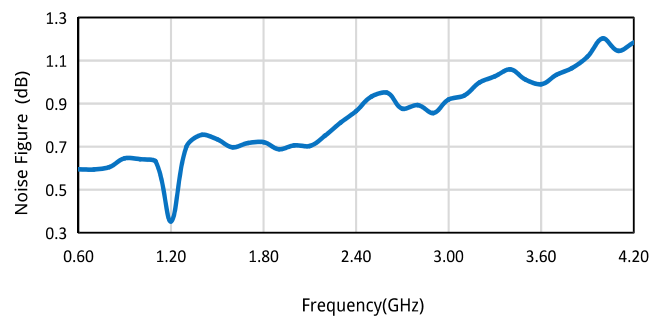
Customization is available upon request.

Low Noise Amplifier

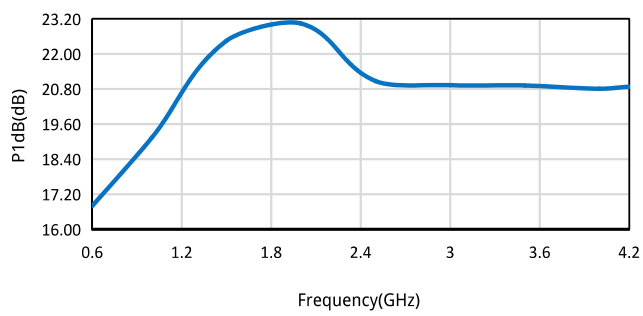
Gain vs. Frequency



Noise Figure vs. Frequency



P1dB vs. Frequency



NLA-600-4200-30-08

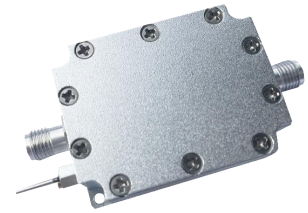
600~4200MHz, 30dB, 0.8dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test



Electrical

Frequency:	600~4200MHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ. @0.6~3GHz ±2.5dB typ. @3~4.2GHz
Noise Figure:	0.8dB typ.
Output Power (P1dB):	21dBm typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC
Impedance:	50Ω

Absolute Maximum Ratings

RF Input Power:	+22dBm
Voltage:	+7V

Mechanical

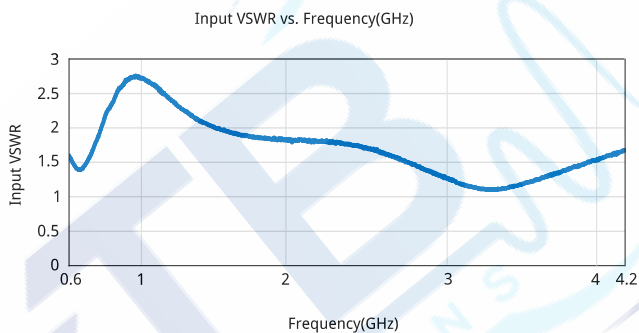
Size*1:	40*30*15mm 1.575*1.181*0.591in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

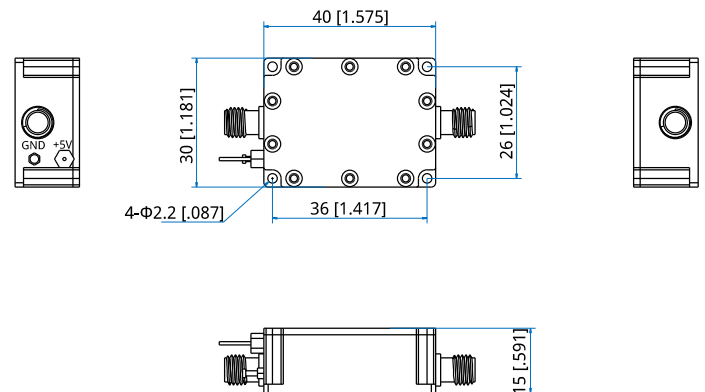
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+150°C

Typical Performance Curves



Outline Drawings



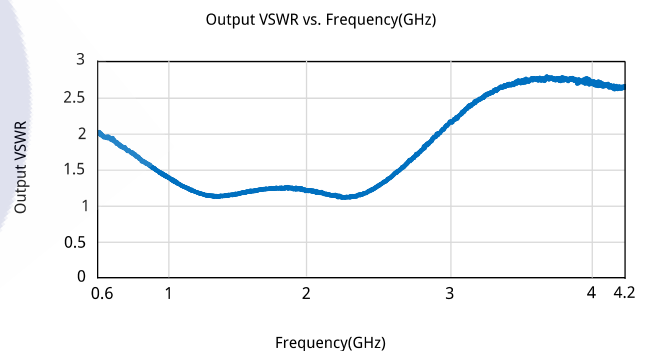
Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

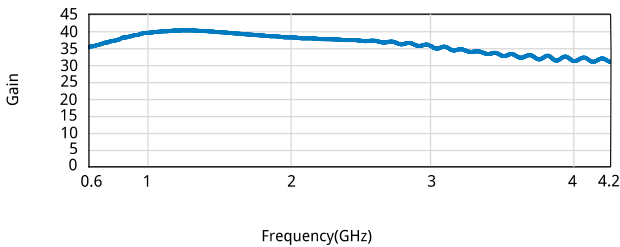
NLA-600-4200-30-08

Customization is available upon request.

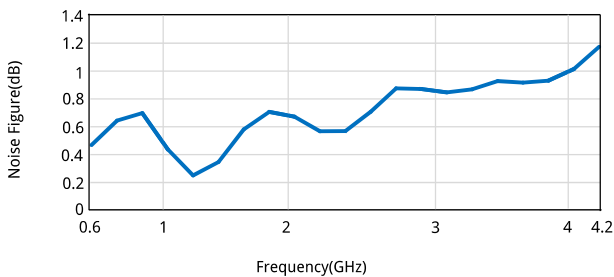


Low Noise Amplifier

Gain vs. Frequency(GHz)



Noise Figure(dB) vs. Frequency(GHz)



NLA-600-4200-35-10

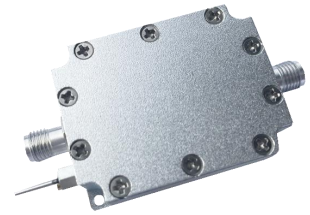
600~4200MHz, 35dB, 1.0dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test



Electrical

Frequency:	600~4200MHz
Gain:	35dB min.
Gain Flatness:	±2dB max.
Noise Figure:	1.0dB typ.
Output Power (P1dB):	21dBm typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC
Impedance:	50Ω

Absolute Maximum Ratings

RF Input Power:	+22dBm
Voltage:	+7V

Mechanical

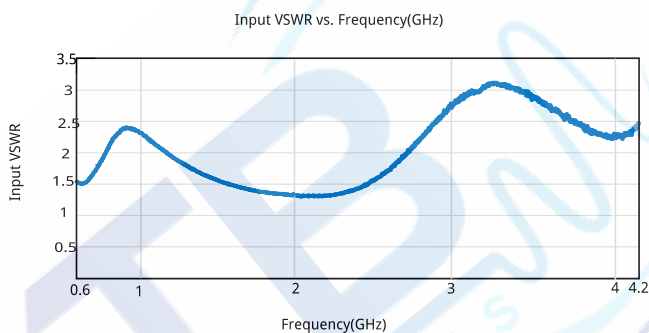
Size*1:	40*30*15mm 1.575*1.181*0.591in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

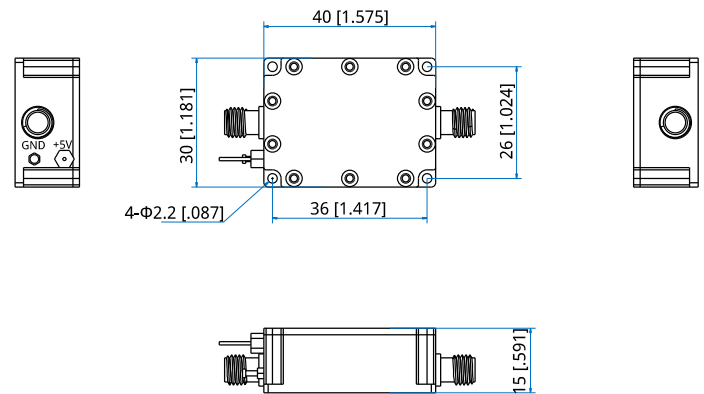
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+150°C

Typical Performance Curves



Outline Drawings



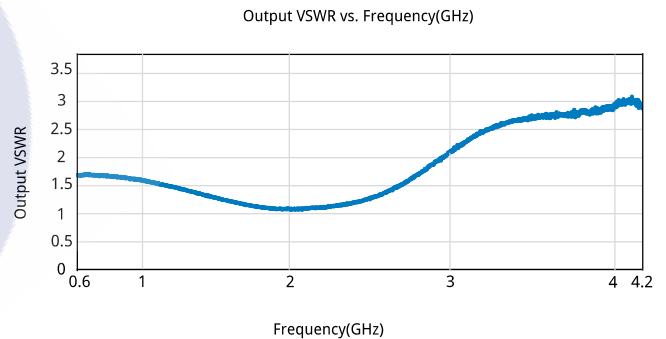
Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

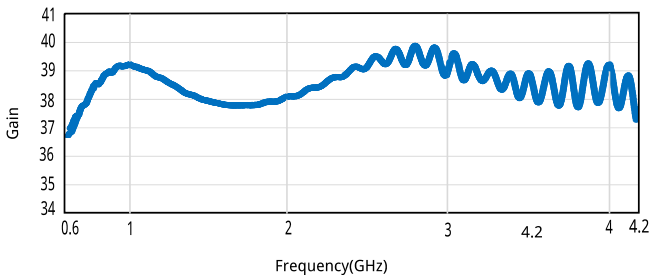
NLA-600-4200-35-10

Customization is available upon request.

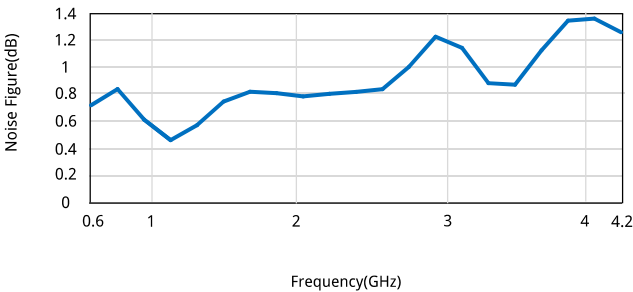


Low Noise Amplifier

Gain vs. Frequency(GHz)



Noise Figure(dB) vs. Frequency(GHz)



NLA-600-4200-55-11

600~4200MHz, 55dB, 1.1dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	600~4200MHz
Gain:	55dB typ.
Gain Flatness:	±3dB typ.
Noise Figure:	1.1dB typ.
Output Power (P1dB):	21dBm typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC
Impedance:	50Ω

Absolute Maximum Ratings

RF Input Power:	+22dBm
Voltage:	+7V

Mechanical

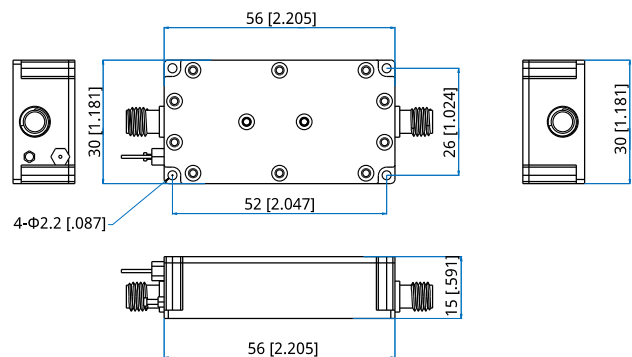
Size ^{*1} :	56*30*15mm 2.205*1.181*0.591in
RF Connectors:	SMA female
Power Supply Connectors:	SMA female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-600-4200-55-11

Customization is available upon request.

NLA-700-1100-20-25

0.7~1.1GHz, 20dB, 2.5dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	0.7~1.1GHz
Gain:	20dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+13dBm min.
Noise Figure:	2.5dB max.
Spurious:	-60dBc max.
VSWR:	1.5 max.
Voltage:	+12V DC
Current:	120mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

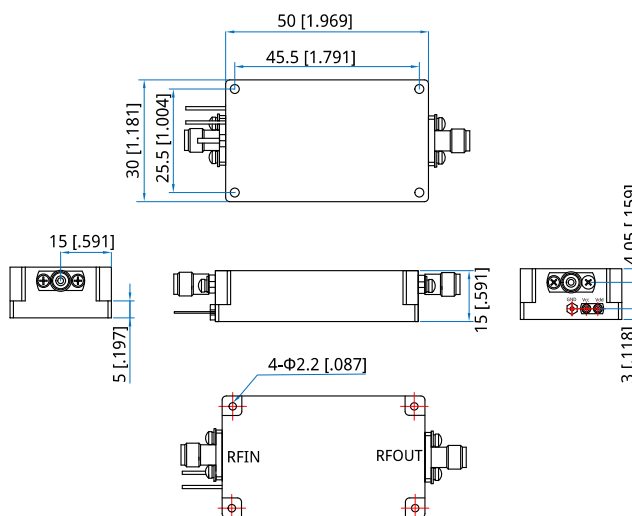
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-700-1100-20-25

Customization is available upon request.

NLA-700-1100-25-25
0.7~1.1GHz, 25dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.7~1.1GHz
Gain:	25dB min.
Gain Flatness:	±1.5dB
Output Power (P1dB):	13dBm
Noise Figure:	2.5dB max.
Spurious:	-60dBc max.
Voltage:	+5V DC

Mechanical

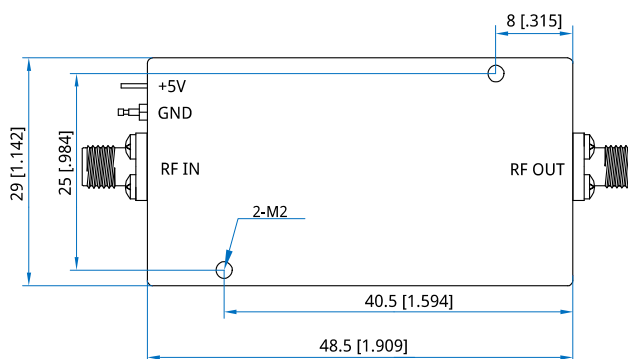
Size*1:	48.5*29mm 1.909*1.142in
RF Connectors:	SMA Female
Mounting:	4-M2 through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+60°C

Outline Drawings



Unit: mm [in]

Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

How To Order

NLA-700-1100-25-25

Customization is available upon request.

NLA-800-18000-25-35

0.8~18GHz, 25dB, 3.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.8~18GHz
Gain:	25dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+13dBm min.
Noise Figure:	3.5dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

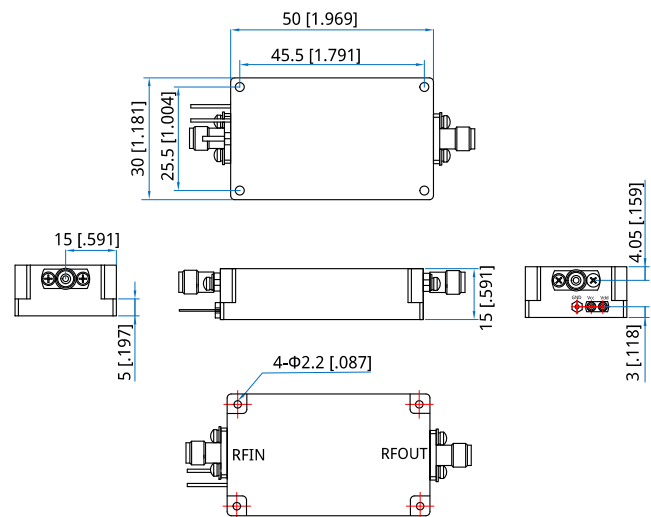
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-800-18000-25-35

Customization is available upon request.

NLA-950-2150-20-20

0.95~2.15GHz, 20dB, 2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.95~2.15GHz
Gain:	20dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	2dB typ.
Spurious:	-60dBc max.
Harmonic:	-20dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	0.15A typ.

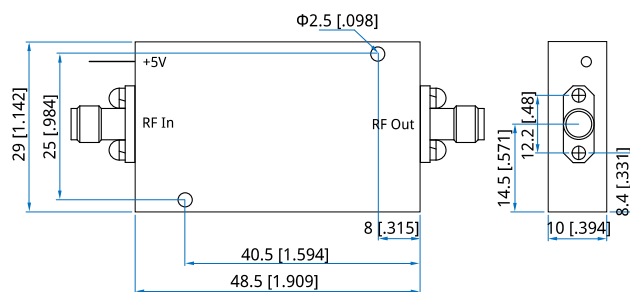
Mechanical

Size ^{*1} :	48.5*29*10mm 1.909*1.142*0.394in
RF Connectors:	SMA Female
Mounting:	2-Φ2.5mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+65°C
------------------------	-----------



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-950-2150-20-20

Customization is available upon request.

Outline Drawings

NLA-1000-6000-15-20

1000~6000MHz, 15dB, 2dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	1000~6000MHz
Power Gain:	15dB typ.
Gain Flatness:	±4.5dB typ.
Noise Figure:	2dB typ.
Output Power (P1dB):	12dBm typ.
Spurious:	-60dBc typ. @12dBm
2 th Harmonic:	-15dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Impedance:	50Ω
Input Power:	0dBm max.

Mechanical

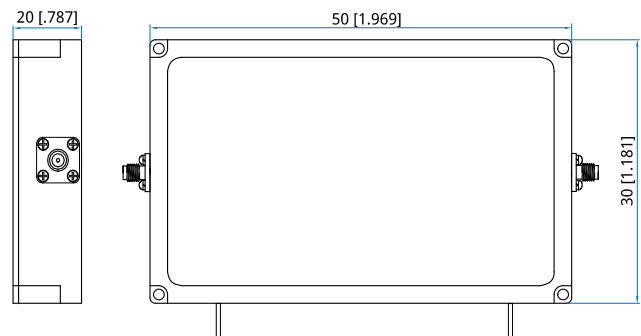
Size*1:	50*30*20mm 1.969*1.181*0.787in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-6000-15-20

Customization is available upon request.

NLA-1000-12000-25-50

1~12GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~12GHz
Gain:	25dB min.
Gain Flatness:	±1.5dB max.
Output Power (Psat):	30dBm min.
IP3:	38dBm typ.
Noise Figure:	5dB typ.
Input VSWR:	2.0max.
output VSWR:	2.0 max.
Voltage:	+12V DC typ.
Current:	700mA typ.
Impedance:	50Ω

Mechanical

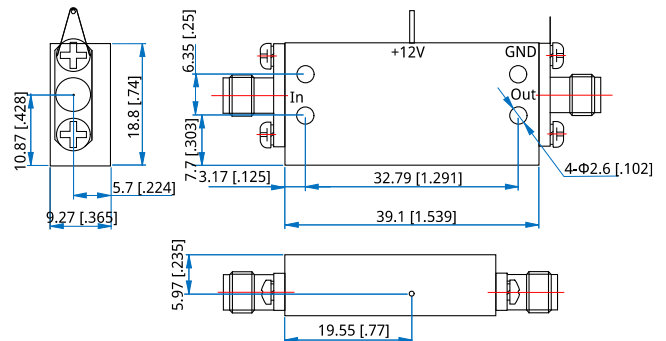
Size*1:	39.1*18.8*9.27mm 1.539*0.74*0.365in
RF Connectors:	SMA Female
Mounting:	4-Φ2.6mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-40~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-12000-25-50

Customization is available upon request.

NLA-1000-12000-28-30

1~12GHz, 28dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~12GHz
Gain:	28dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
Input VSWR:	2 max.
Output VSWR:	2 max.
Voltage:	+12V DC typ.
Current:	120mA typ.
Impedance:	50Ω

Mechanical

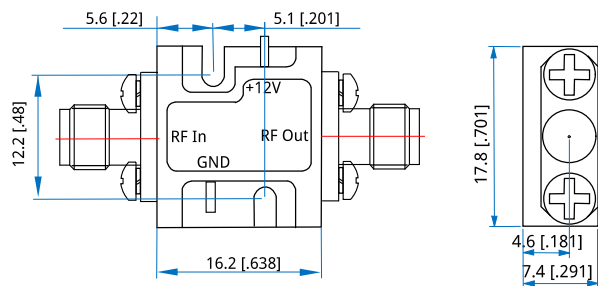
Size*1:	16.2*17.8*7.4mm 0.638*0.701*0.291in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-12000-28-30

Customization is available upon request.

NLA-1000-18000-30-40

1~18GHz, 30dB, 4dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	1~18GHz
Gain:	30dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+12V DC
Current:	180mA typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

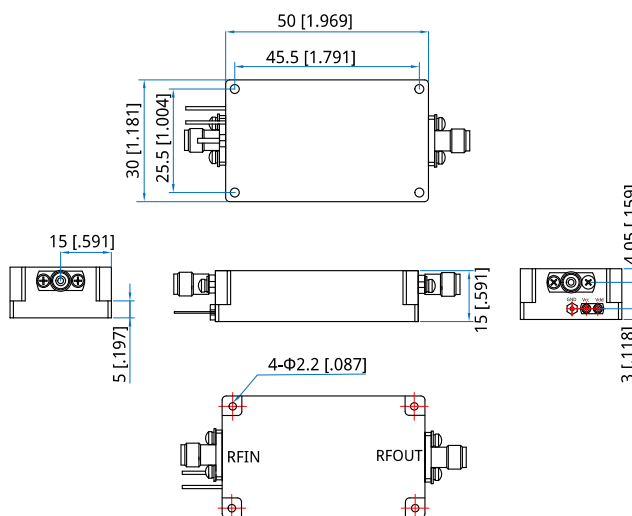
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-30-40

Customization is available upon request.

NLA-1000-18000-40-32

1~18GHz, 40dB, 3.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~18GHz
Gain:	40dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	8dBm typ.
Noise Figure:	3.2dB typ.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.8 typ.
Output VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	300mA typ.

Mechanical

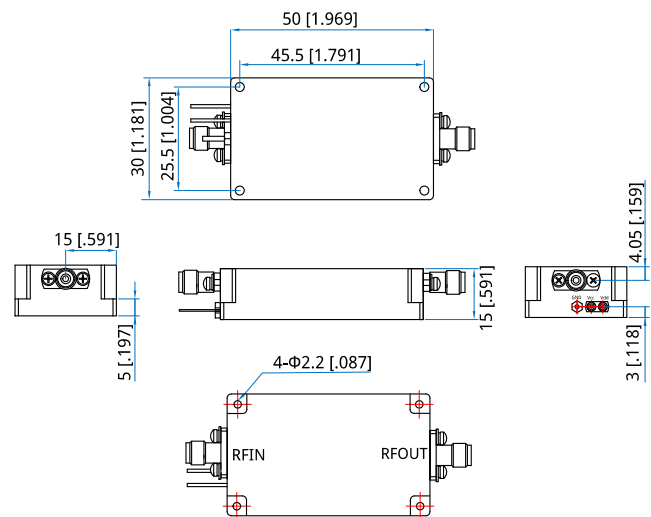
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-40-32

Customization is available upon request.

NLA-1000-18000-42-25

1~18GHz, 42dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~18GHz
Gain:	42dB min. 45dB typ.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	2.5dB max.
VSWR:	2 max.
Voltage:	+9V DC
Current:	150mA typ.
Impedance:	50Ω

Mechanical

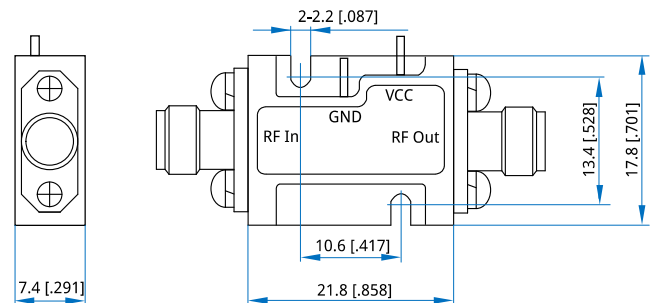
Size*1:	21.8*17.8*7.4mm 0.858*0.701*0.291in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-42-25

Customization is available upon request.

NLA-1000-18000-45-30

1~18GHz, 45dB, 3dB

Features:
* Broadband
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	1~18GHz
Gain:	45dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	10dBm min.
Noise Figure:	3.0dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+5V or +12V DC
Current:	200mA typ.
Input Power:	-20dBm max.
Impedance:	50Ω

Mechanical

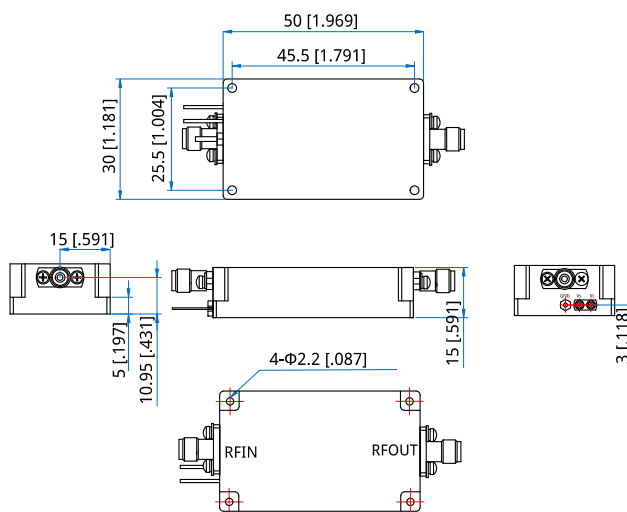
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-45-30

Customization is available upon request.

NLA-1000-18000-47-25

1~18GHz, 47dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~18GHz
Gain:	47dB min. 50dB typ.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	2.5dB max.
VSWR:	2 max.
Voltage:	+9V DC
Current:	150mA typ.
Impedance:	50Ω

Mechanical

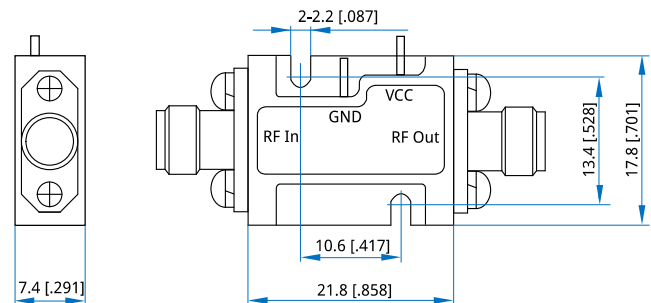
Size*1:	21.8*17.8*7.4mm 0.858*0.701*0.291in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-47-25

Customization is available upon request.

NLA-1000-18000-47-32

1~18GHz, 47dB, 3.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~18GHz
Gain:	47dB min.
Output Power (P1dB):	12dBm typ.
Noise Figure:	3.2dB typ.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.8 typ.
Output VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	300mA typ.

Mechanical

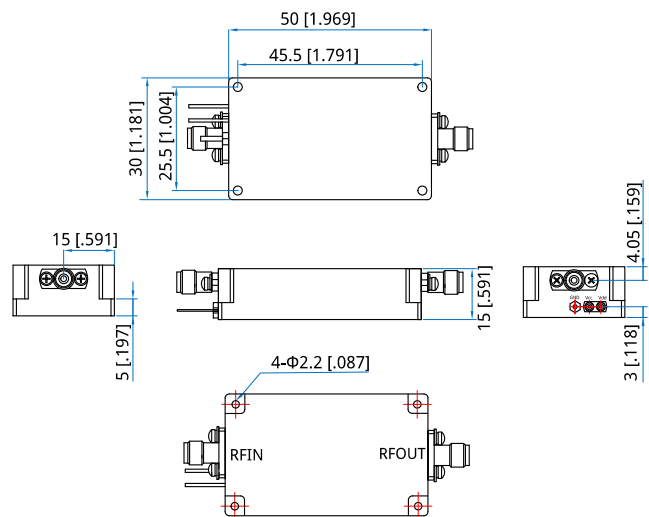
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-47-32

Customization is available upon request.

NLA-1000-18000-50-30

1~18GHz, 50dB, 3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	1~18GHz
Gain:	50dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+20dBm min.
Noise Figure:	3dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	350mA typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

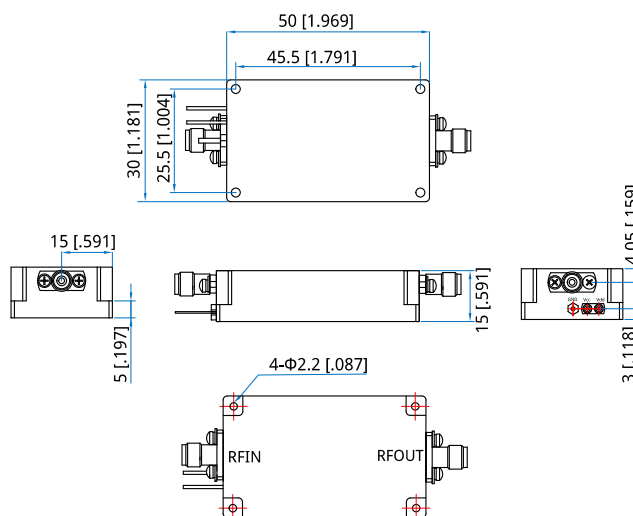
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-50-30

Customization is available upon request.

NLA-1000-18000-55-22

1~18GHz, 55dB, 2.2dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	1~18GHz
Small Signal Gain:	55dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	+10dBm min.
Noise Figure:	2.2dB typ. 3dB max.
VSWR:	2.5 max.
Voltage:	+12V DC
Current:	270mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

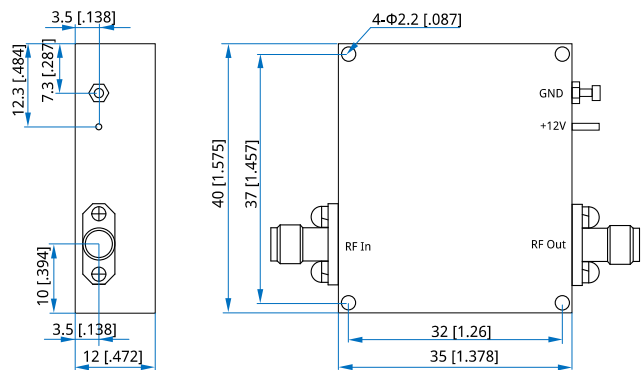
Size*1:	40*35*12mm 1.575*1.378*0.472in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-18000-55-22

Customization is available upon request.

NLA-1000-20000-25-35

1~20GHz, 25dB, 3.5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	1~20GHz
Gain:	25dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	21dBm typ.
Noise Figure:	3.5dB typ.
Spurious:	-60dBc max.
VSWR:	2.0 typ.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

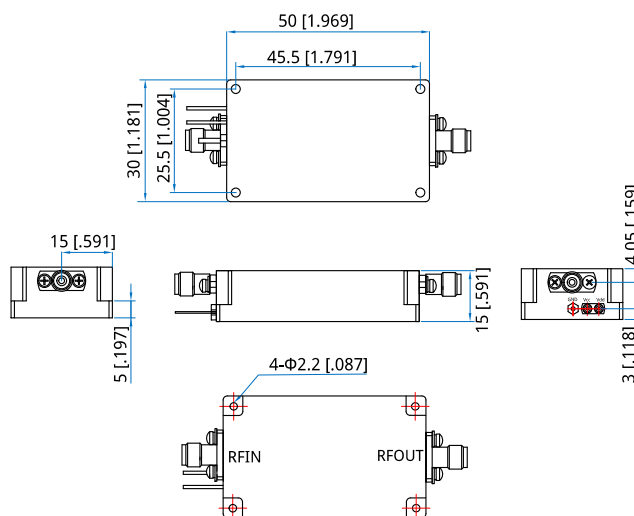
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	100g max.
RF Connectors:	2.92mm Female or SMA female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-20000-25-35

Customization is available upon request.

NLA-1000-20000-40-40

1~20GHz, 40dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~20GHz
Gain:	40dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	+16dBm min.
Noise Figure:	4dB max.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+12V DC
Current:	300mA typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

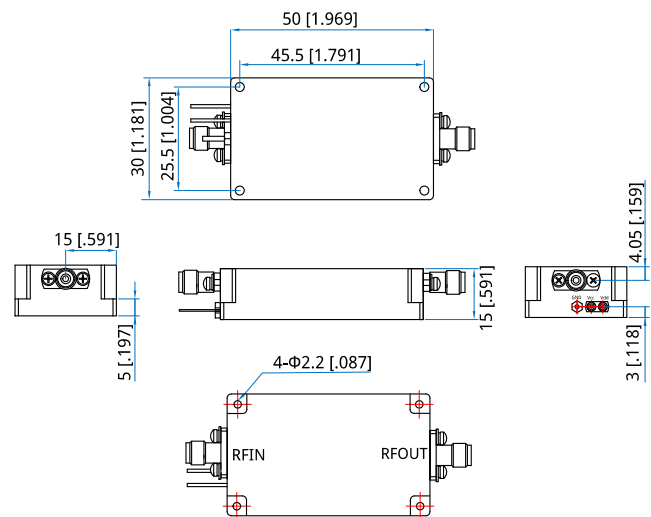
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-20000-40-40

Customization is available upon request.

NLA-1000-40000-30-80

1~40GHz, 30dB, 8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~40GHz
Small Signal Gain:	30dB min.
Gain Flatness:	±3dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	8dB max.
Input VSWR:	2.5max.
output VSWR:	2.5 max.
Voltage:	+12V DC
Current:	600mA typ.
Impedance:	50Ω

Mechanical

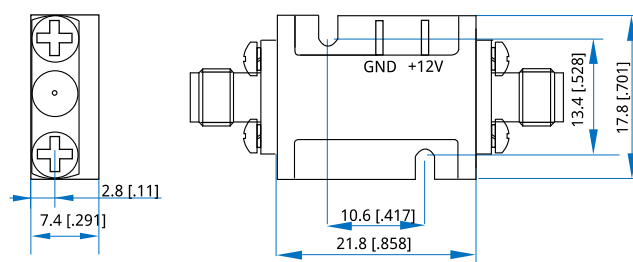
Size* ¹ :	21.8*17.8*7.4mm 1.858*0.701*0.291in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-1000-40000-30-80

Customization is available upon request.

NLA-2000-4000-40-15

2~4GHz, 40dB, 1.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~4GHz
Gain:	40dB typ.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	15dBm min.
Noise Figure:	1.5dB max.
VSWR:	2 typ.
Voltage:	15V DC
Current:	500mA typ.
Impedance:	50Ω

Mechanical

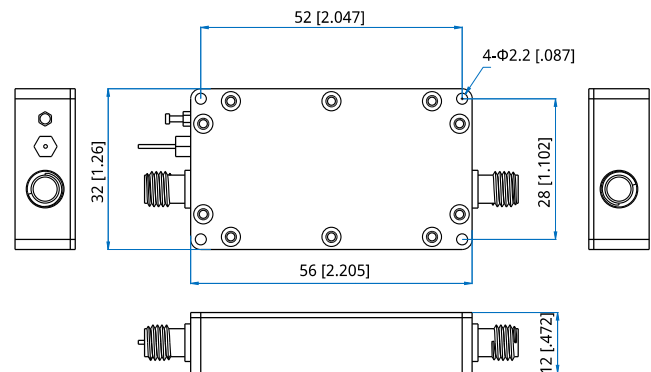
Size ^{*1} :	56*32*12mm 2.205*1.26*0.472in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-20~+60°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.5mm [±0.02in]

How To Order

NLA-2000-4000-40-15

Customization is available upon request.

NLA-2000-6000-30-15

2~6GHz, 30dB, 1.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~6GHz
Small Signal Gain:	30dB min.
Gain Flatness:	±1dB max.
Output Power (P1dB):	2dBm min.
Noise Figure:	1.5dB max.
Input VSWR:	2.0max.
output VSWR:	2.0max.
Voltage:	+5V DC
Current:	80mA typ.
Impedance:	50Ω

Mechanical

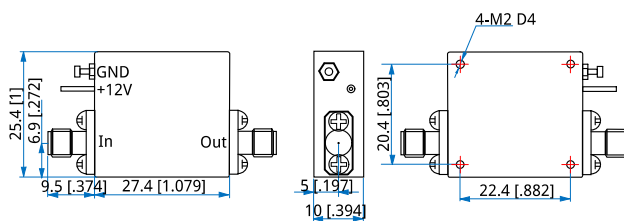
Size ^{*1} :	27.4*25.4*10mm 1.079*1*0.394in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-M2mm Deep 4mm

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-6000-30-15

Customization is available upon request.

NLA-2000-6000-39-45

2~6GHz, 39dB, 4.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~6GHz
Gain:	39dB min.
Gain Flatness:	±0.8dB typ.
Output Power (P1dB):	23dBm min.
Noise Figure:	4.5dB max..
Input VSWR:	2 max.
Output VSWR:	2 max.
Voltage:	+10V DC typ.
Current:	300mA typ.
Impedance:	50Ω

Mechanical

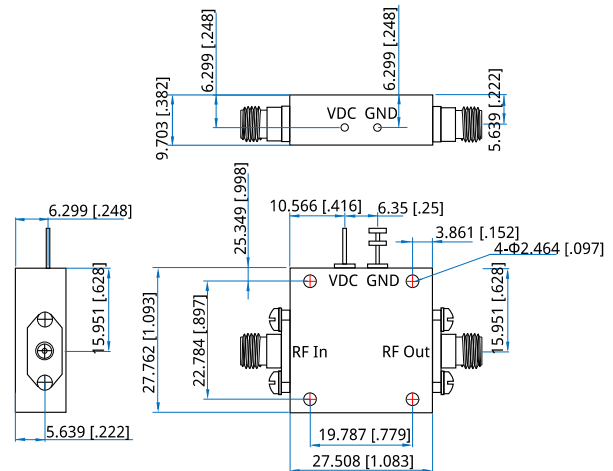
Size ^{*1} :	27.508*27.762*9.703mm 1.083*1.093*0.382in
RF Connectors:	SMA Female
Mounting:	4-Φ2.464mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+70°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-6000-39-45

Customization is available upon request.

NLA-2000-8000-20-40

2~8GHz, 20dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~8GHz
Gain:	20dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	8dBm typ.
Noise Figure:	4dB max.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.6 typ.
Output VSWR:	1.6 typ.
Voltage:	+5V DC
Current:	200mA typ.
Impedance:	50Ω

Mechanical

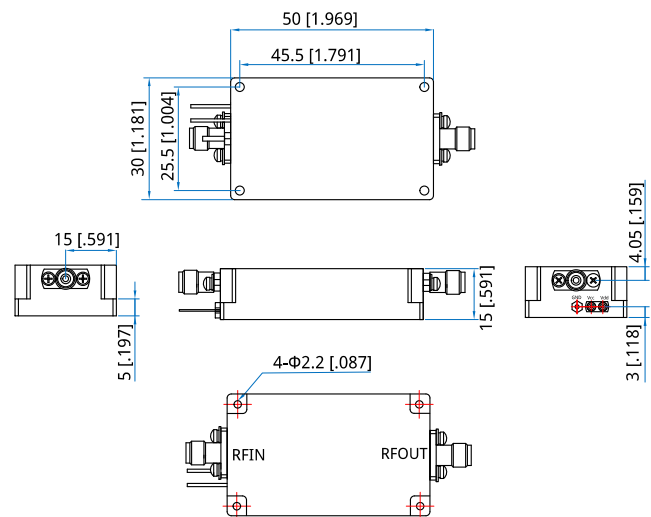
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-8000-20-40

Customization is available upon request.

NLA-2000-10000-30-40

2~10GHz, 30dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~10GHz
Gain:	30dB min.
Gain Flatness:	±1dB max.
Output Power (P1dB):	15dBm min.
Noise Figure:	4dB max..
Input VSWR:	2 max.
Output VSWR:	2 max.
Voltage:	+12V DC typ.
Current:	200mA max.
Impedance:	50Ω

Mechanical

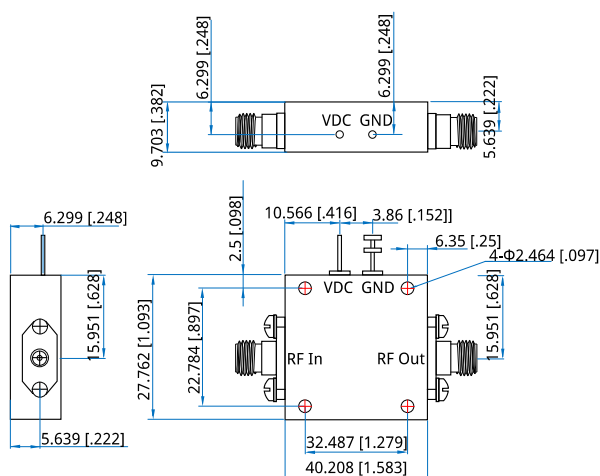
Size*1:	40.208*27.762*9.703mm 1.583*1.093*0.382in
RF Connectors:	SMA Female
Mounting:	4-Φ2.464mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-54~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

How To Order

NLA-2000-10000-30-40

Customization is available upon request.

NLA-2000-18000-12-32

2~18GHz, 12dB, 3.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~18GHz
Small Signal Gain:	12dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	13dBm min.
Noise Figure:	3.2dB max.
Iuput VSWR:	2.0 max.
Output VSWR:	1.8 max.
Voltage:	+12V typ.
Current:	70mA typ.
Impedance:	50Ω

Mechanical

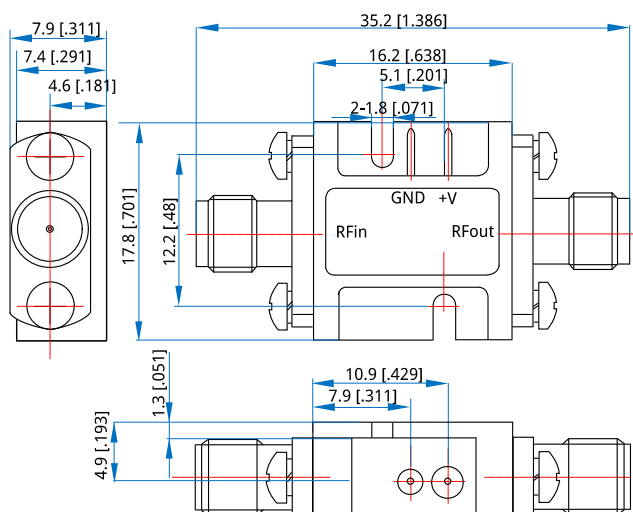
Size*1:	16.2*17.8*7.9mm 0.638*0.701*0.311in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-12-32

Customization is available upon request.

NLA-2000-18000-18-30

2~18GHz, 18dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~18GHz
Gain:	18dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	10dBm min.
Noise Figure:	3dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+12V DC
Current:	100mA typ.
Input Power:	+15dBm max.
Impedance:	50Ω

Mechanical

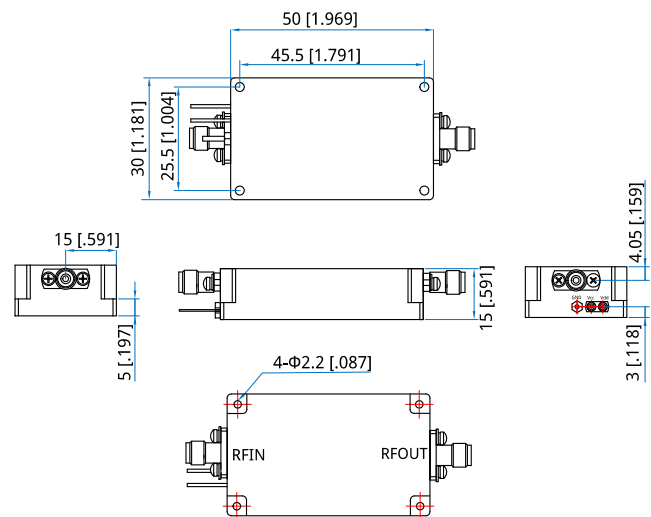
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-18-30

Customization is available upon request.

NLA-2000-18000-18-40

2~18GHz, 18dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~18GHz
Small Signal Gain:	18dB min.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	19dBm min.
Noise Figure:	4dB max.
VSWR:	2 max.
Voltage:	+12V DC typ.
Current:	150mA typ.
Impedance:	50Ω

Mechanical

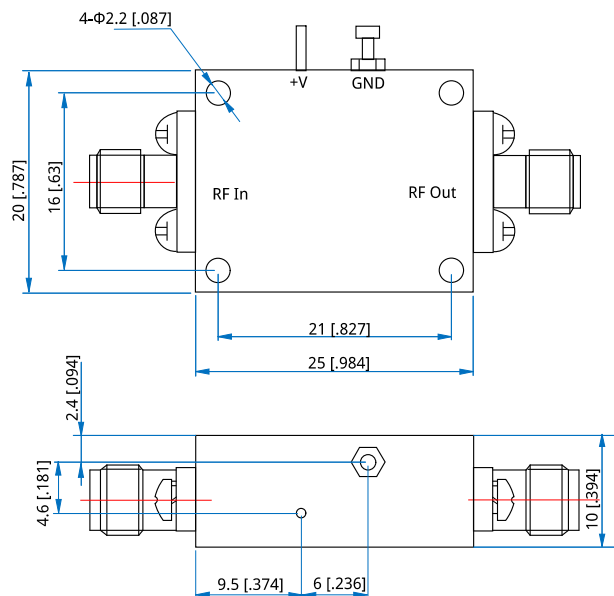
Size*1:	25*20*10mm 0.984*0.787*0.394in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-54~+85°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-18-40

Customization is available upon request.

NLA-2000-18000-21-40

2~18GHz, 21dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~18GHz
Small Signal Gain:	21dB min.
Gain Flatness:	±1dB max.
Output Power (P1dB):	23dBm min.
Noise Figure:	4dB max.
VSWR:	2 max.
2 th Harmonic:	-20dBc typ.
Input Power before damage:	19dBm min.
Voltage:	+12V DC typ.
Current:	400mA max.
Impedance:	50Ω

Mechanical

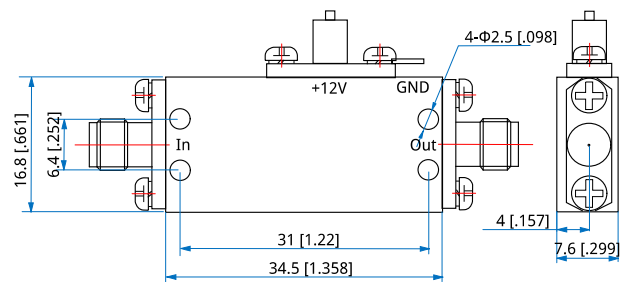
Size*1:	34.5*16.8*7.6mm 1.358*0.661*0.299in
RF Connectors:	SMA Female
Mounting:	4-Φ2.5mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	0~+70°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-21-40

Customization is available upon request.

NLA-2000-18000-28-30

2~18GHz, 28dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~18GHz
Gain:	28dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	10dBm min.
Noise Figure:	3dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+12V DC
Current:	200mA typ.
Input Power:	+15dBm max.
Impedance:	50Ω

Mechanical

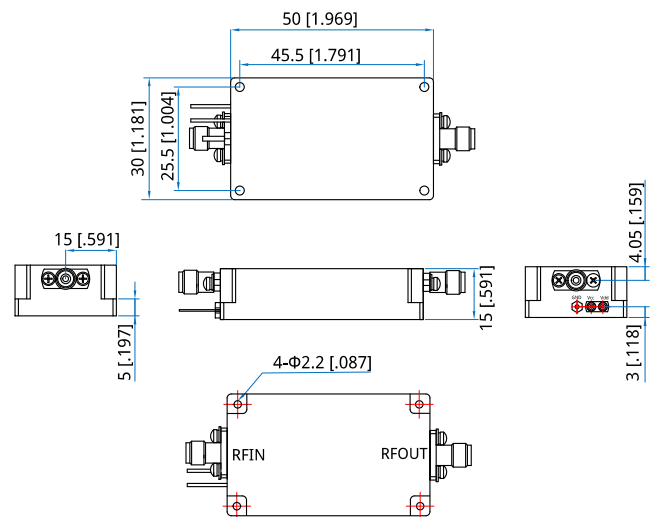
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-28-30

Customization is available upon request.

NLA-2000-18000-30-45

2~18GHz, 30dB, 4.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	2~18GHz
Gain:	30dB min.
Gain Flatness:	±2.0dB max.
Output Power (P1dB):	+10dBm min.
Noise Figure:	4.5dB max.
VSWR:	2 max.
Voltage:	+12V DC
Current:	120mA typ.
Impedance:	50Ω

Mechanical

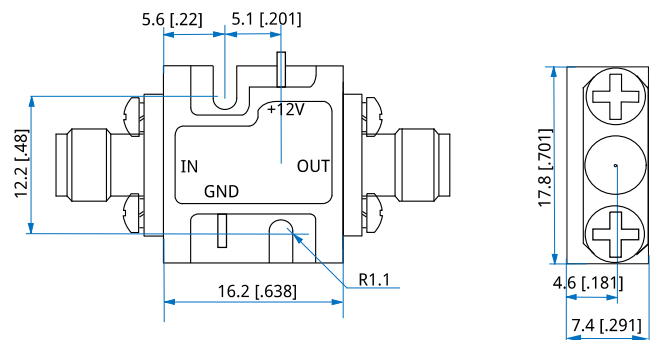
Size*1:	16.2*17.8*7.4mm 0.638*0.70*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-30-45

Customization is available upon request.

NLA-2000-18000-34-30

2~18GHz, 33dB, 3dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	2~18GHz
Small Signal Gain:	34dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	22dBm min.
Noise Figure:	3dB max.
VSWR:	2.2 max.
Voltage:	+12V DC typ.
Current:	400mA typ.
Impedance:	50Ω

Mechanical

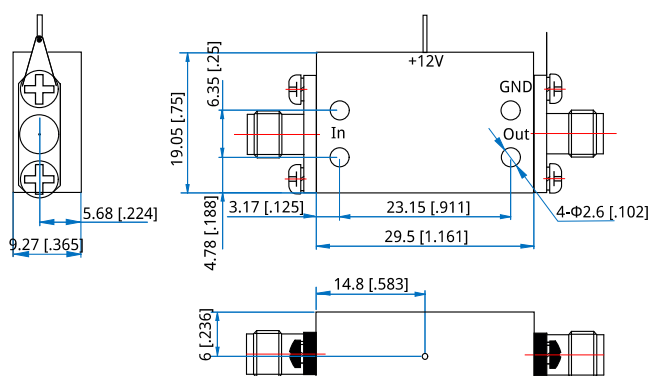
Size*1:	29.5*19.05*9.27 mm 1.161*0.75*0.365 in
RF Connectors:	SMA Female
Mounting:	4-Φ2.6mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-Operating Temperature:	-40~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-18000-34-30

Customization is available upon request.

NLA-2000-26500-25-40

2~26.5GHz, 25dB, 4dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	2~26.5GHz
Gain:	25dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	+8dBm min.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

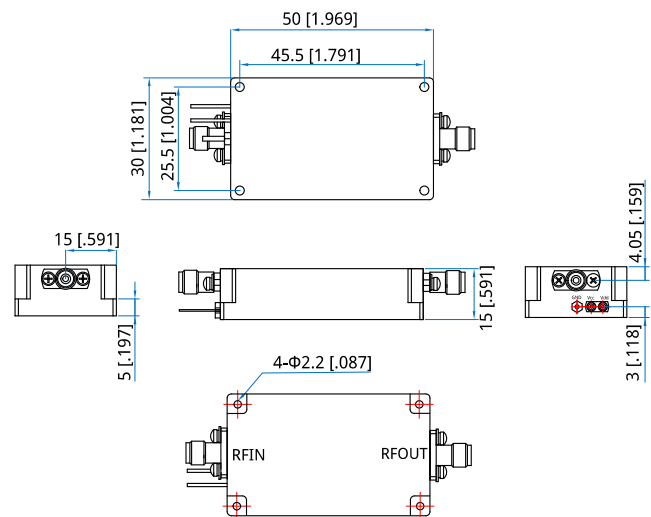
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-26500-25-40

Customization is available upon request.

NLA-2000-26500-48-50

2~26.5GHz, 48dB, 5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	2~26.5GHz
Gain:	48dB min.
Gain Flatness:	±4.5dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	5dB typ.
Spurious:	-60dBc max.
VSWR:	2.5 typ.
Voltage:	+9V DC
Current:	500mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

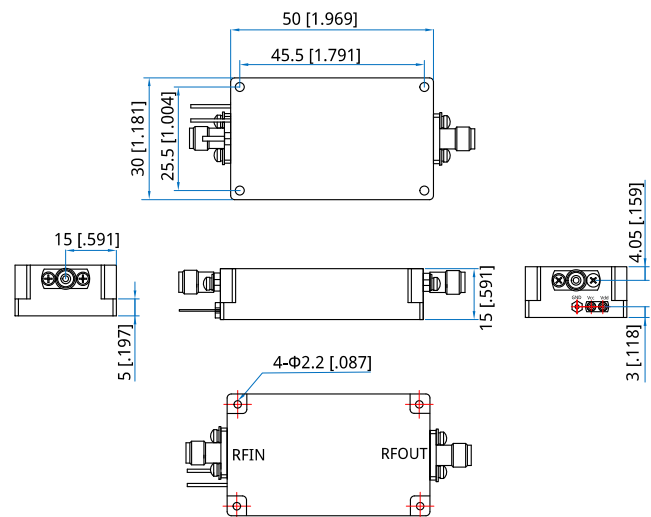
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-2000-26500-48-50

Customization is available upon request.

NLA-3000-12000-24-30

3~12GHz, 24dB, 3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	3~12GHz
Gain:	24dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+21dBm min.
OIP3:	+33dBm typ.
Noise Figure:	3dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+12V DC
Current:	400mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

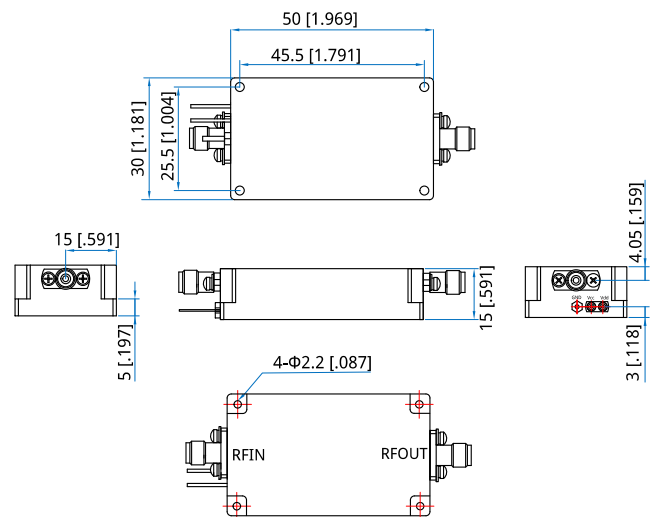
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-3000-12000-24-30

Customization is available upon request.

NLA-3000-15000-15-30

3~15GHz, 15dB, 3dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	3~15GHz
Gain:	15dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+8dBm min.
Noise Figure:	3dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

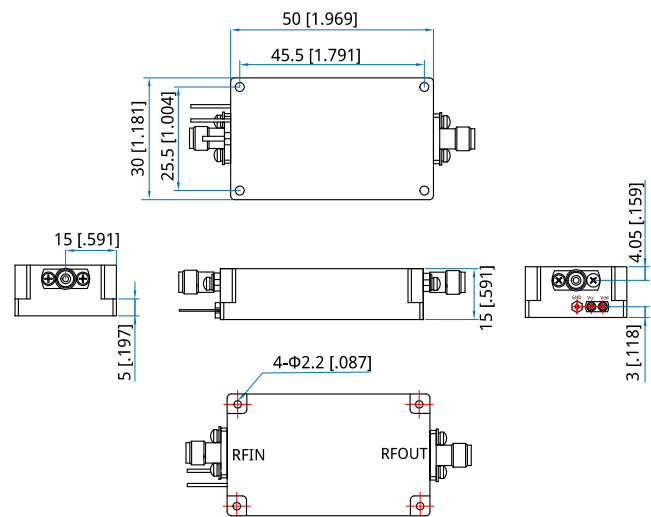
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-3000-15000-15-30

Customization is available upon request.

NLA-4000-8000-21-15

4~8GHz, 21dB, 1.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	4~8GHz
Gain:	21dB min.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	1.5dB typ.
VSWR:	1.8 typ.
Voltage:	+12V DC typ.
Current:	100mA typ.
Spurious:	-60dBc max.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

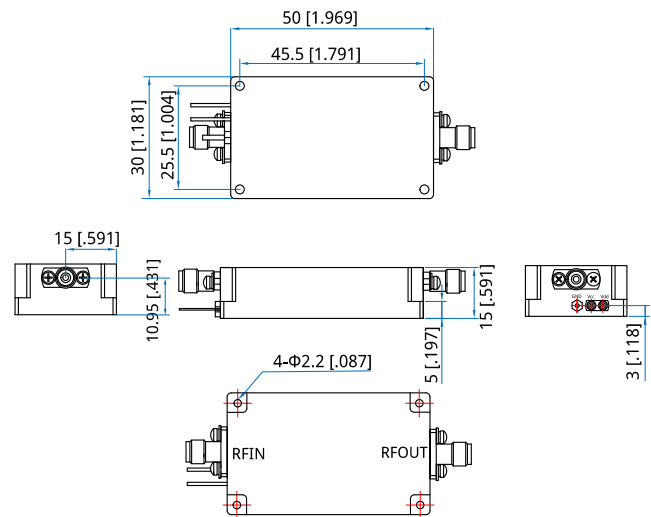
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	SMA
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+80°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.5mm [±0.02in]

How To Order

NLA-4000-8000-21-15

Customization is available upon request.

NLA-4000-8000-22-25

4~8GHz, 22dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	4~8GHz
Small Signal Gain:	22dB min.
Gain Flatness:	±1.0dB max.
Output Power (P1dB):	+14dBm min.
Noise Figure:	2.5dB max.
VSWR:	2.0 max.
Voltage:	+12V DC
Current:	60mA typ.
Impedance:	50Ω

Mechanical

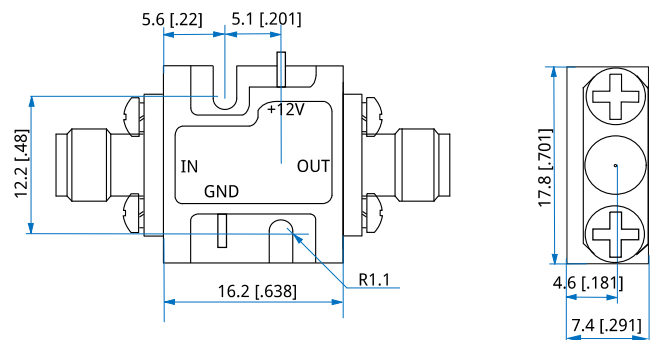
Size*1:	16.2*17.8*7.4mm 0.638*0.701*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-4000-8000-22-25

Customization is available upon request.

NLA-4000-8000-40-11

4~8GHz, 40dB, 1.1dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	4~8GHz
Gain:	40dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	1.1dB max.
VSWR:	2 max.
Voltage:	+12V typ.
Current:	150mA typ.
Impedance:	50Ω

Mechanical

Size*1: 17.8*16.2*7.4mm
0.701*0.638*0.291in

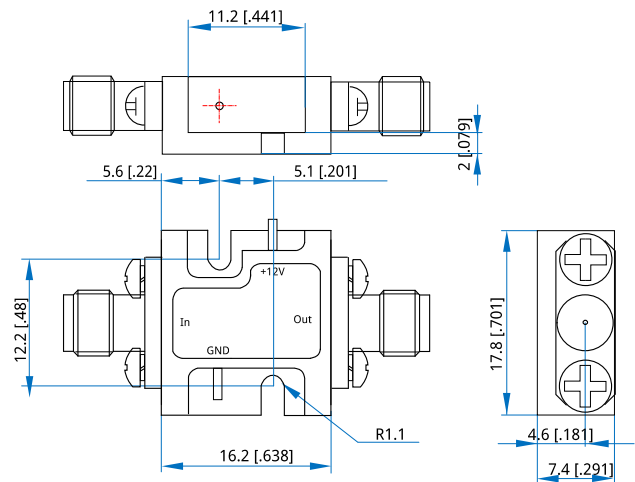
RF Connectors: SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-4000-8000-40-11

Customization is available upon request.

NLA-4000-12000-14-30

4~12GHz, 14dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	4~12GHz
Gain:	14dB min.
Gain Flatness:	±2.0dB max.
Output Power (P1dB):	15dBm min.
Noise Figure:	3.0dB max.
VSWR:	2.0 max.
Voltage:	+12V typ.
Current:	60mA typ.
Impedance:	50Ω

Mechanical

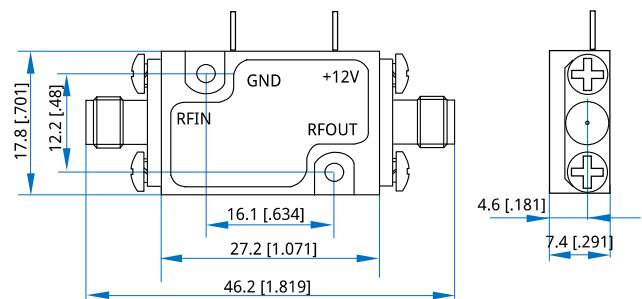
Size*1:	27.2*17.8*7.4mm 1.071*0.701*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-4000-12000-14-30

Customization is available upon request.

NLA-4000-12000-30-15

4~12GHz, 30dB, 1.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	4~12GHz
Gain:	30dB min.
Gain Flatness:	±2.0dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	1.5dB max.
VSWR:	2 max.
Voltage:	+12V typ.
Current:	120mA typ.
Impedance:	50Ω

Mechanical

Size*1:	17.8*16.2*7.4mm 0.701*0.638*0.291in
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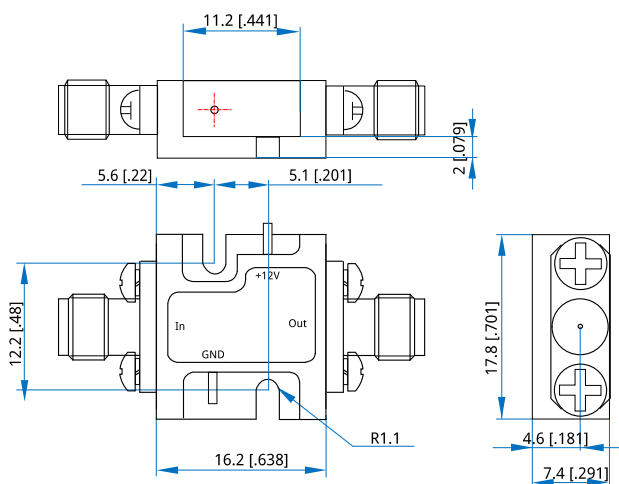
RF Connectors: SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-4000-12000-30-15

Customization is available upon request.

NLA-5000-10000-30-23

5~10GHz, 30dB, 2.3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	5~10GHz
Gain:	30dB min.
Gain Flatness:	±1.2dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	2.3dB max.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

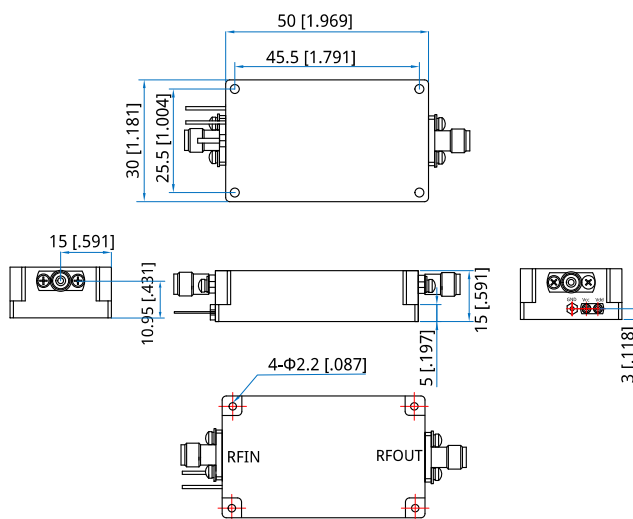
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	SMA
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-5000-10000-30-23

Customization is available upon request.

NLA-5400-5900-35-08

5.4~5.9GHz, 35dB, 0.8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	5.4~5.9GHz
Gain:	35dB min.
Gain Flatness:	±0.3dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	0.8dB typ.
Spurious:	-60dBc max.
VSWR:	1.4 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω
Limiting power:	+30dBm max.

Mechanical

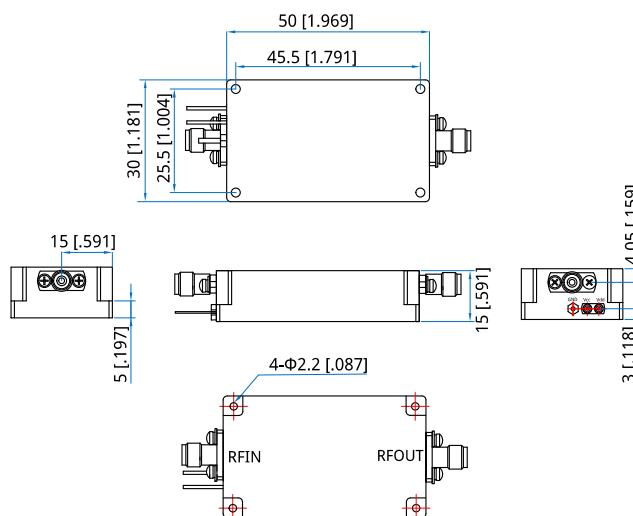
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-5400-5900-35-08

Customization is available upon request.

NLA-6000-18000-20-28

6~18GHz, 20dB, 2.8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	6~18GHz
Small Signal Gain:	20dB min.
Gain Flatness:	±1.2dB max.
Output Power (P1dB):	+13dBm min.
Noise Figure:	2.8dB max.
VSWR:	2 max.
Voltage:	+12V DC typ.
Current:	60mA typ.
Impedance:	50Ω
Input Power:	10dBm

Mechanical

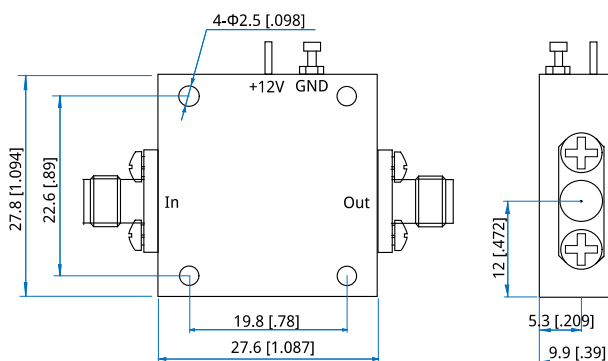
Size*1:	27.6*27.8*9.9mm 1.087*1.094*0.39in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-6000-18000-20-28

Customization is available upon request.

NLA-6000-18000-25-50

6~18GHz, 25dB, 5dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	6~18GHz
Gain:	25dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	5dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

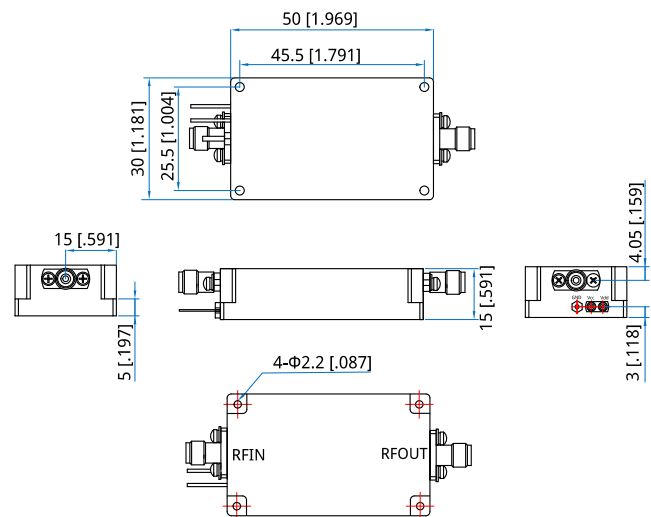
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-6000-18000-25-50

Customization is available upon request.

NLA-6000-18000-29-40

6~18GHz, 29dB, 4dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	6~18GHz
Gain:	29dB min.
Gain Flatness:	±1dB typ.
Output Power (Psat):	+27dBm min.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC typ.
Current:	500mA typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

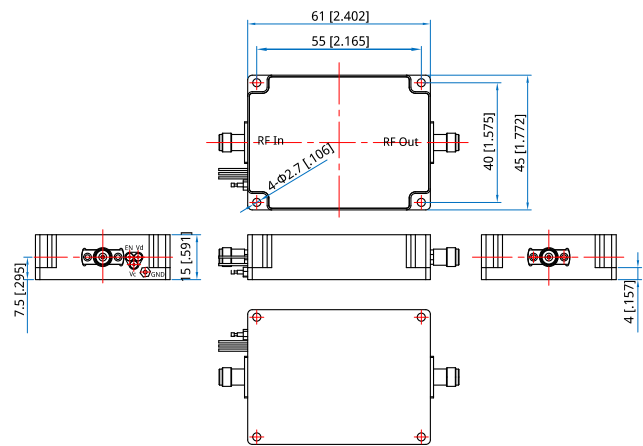
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	SMA
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-6000-18000-29-40

Customization is available upon request.

NLA-6000-18000-50-30

6~18GHz, 50dB, 3dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	6~18GHz
Gain:	50dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
VSWR:	2 max.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

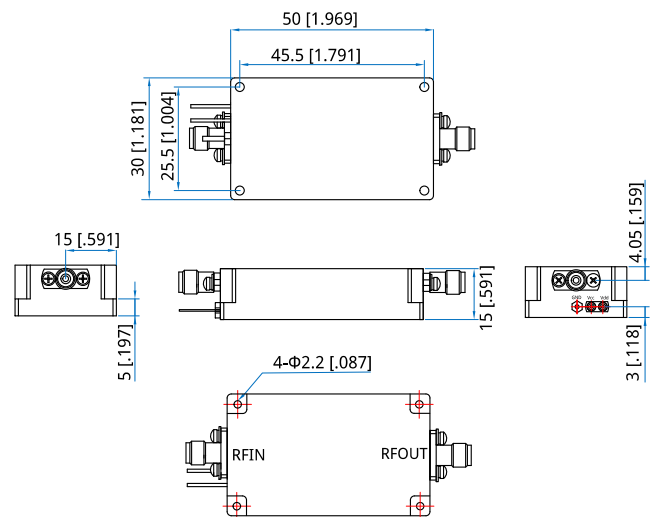
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-6000-18000-50-30

Customization is available upon request.

NLA-8000-12000-15-40

8~12GHz, 15dB, 4dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	8~12GHz
Gain:	15dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+13dBm min.
Noise Figure:	4dB max.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

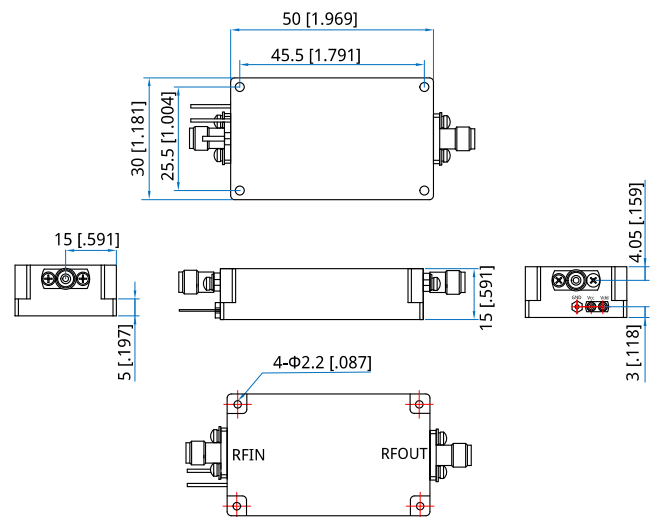
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-8000-12000-15-40

Customization is available upon request.

NLA-8000-12000-28-13

8~12GHz, 28dB, 1.3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	8~12GHz
Gain:	28dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	14dBm min.
Noise Figure:	1.3dB max.
VSWR:	2 typ.
Voltage:	+12V DC typ.
Current:	120mA typ.
Impedance:	50Ω

Mechanical

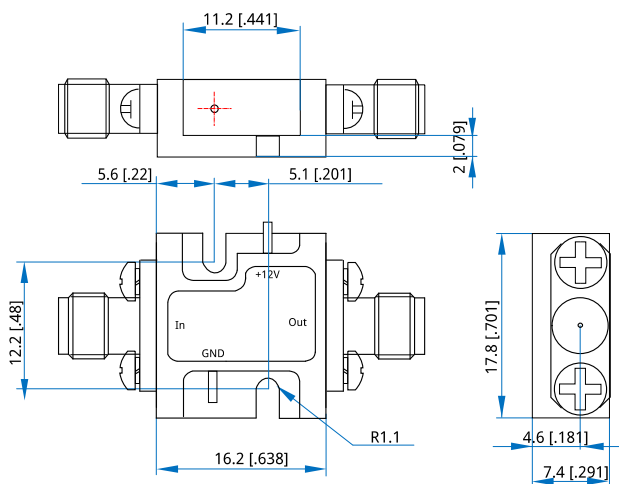
Size ^{*1} :	17.8*16.2*7.4mm 0.701*0.638*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.5mm [±0.02in]

How To Order

NLA-8000-12000-28-13

Customization is available upon request.

NLA-8000-12000-32-13

8~12GHz, 32dB, 1.3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	8~12GHz
Gain:	32dB min.
Gain Flatness:	±1.0dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	1.3dB max.
VSWR:	2 max.
Voltage:	+12V typ.
Current:	120mA typ.
Impedance:	50Ω

Mechanical

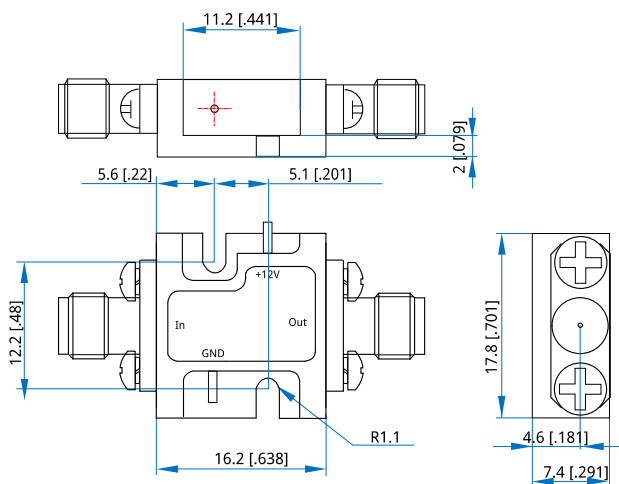
Size ^{*1} :	17.8*16.2*7.4mm 0.701*0.638*0.291in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-8000-12000-32-13

Customization is available upon request.

NLA-8000-18000-20-40

8~18GHz, 20dB, 4dB

Features:
 * Broad Band
 * Low Noise

Applications:
 * Wireless
 * Receiver
 * Laboratory Test
 * Radar

Electrical

Frequency:	8~18GHz
Gain:	20dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	8dBm typ.
Noise Figure:	4dB max.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.6 typ.
Output VSWR:	1.6 typ.
Voltage:	+5V DC
Current:	200mA typ.
Impedance:	50Ω

Mechanical

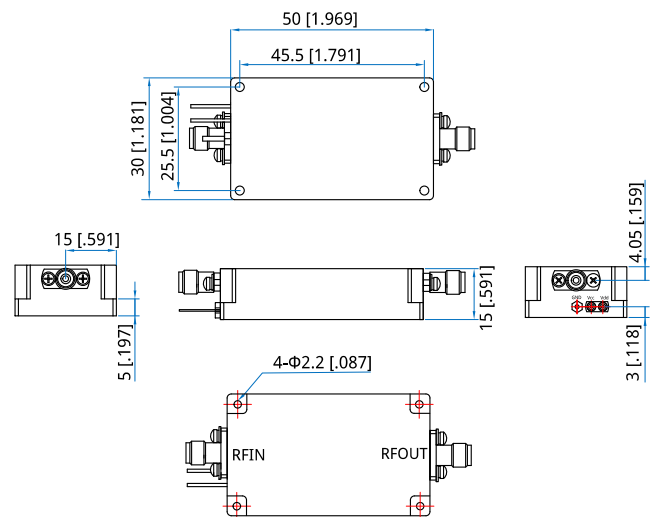
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
 Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-8000-18000-20-40

Customization is available upon request.

NLA-8000-26500-15-35

8~26.5GHz, 15dB, 3.5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	8~26.5GHz
Gain:	15dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+8dBm min.
Noise Figure:	3.5dB typ.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

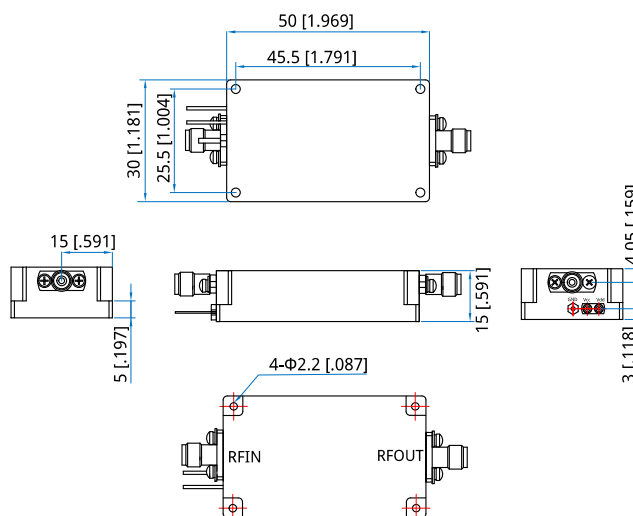
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-8000-26500-15-35

Customization is available upon request.

NLA-8000-26500-40-65

8~26.5GHz, 40dB, 6.5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	8~26.5GHz
Gain:	40dB typ.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	18dBm min.
Noise Figure:	6.5dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	650mA typ.
Input Power:	+15dBm max.
Impedance:	50Ω

Mechanical

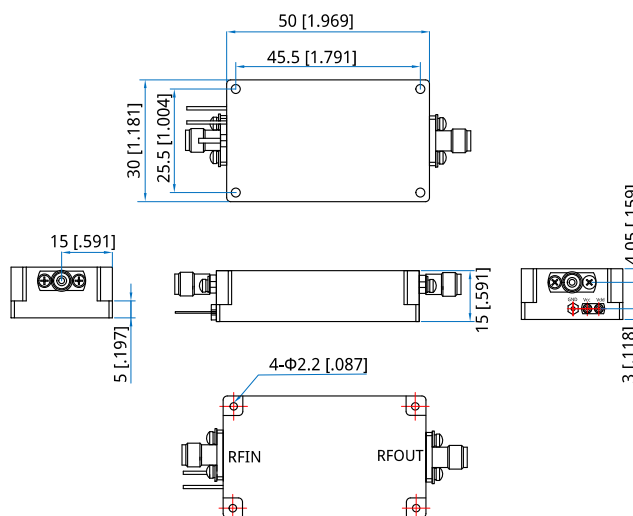
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-8000-26500-40-65

Customization is available upon request.

NLA-9000-10000-25-15

9~10GHz, 25dB, 1.5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	9~10GHz
Gain:	25dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+20dBm min.
Output Power (Psat):	23dBm max.
Noise Figure:	1.5dB typ.
Spurious:	-60dBc max.
VSWR:	1.8 typ.
Voltage:	+9V DC
Current:	300mA typ.
Impedance:	50Ω
Input Power:	+23dBm max.

Mechanical

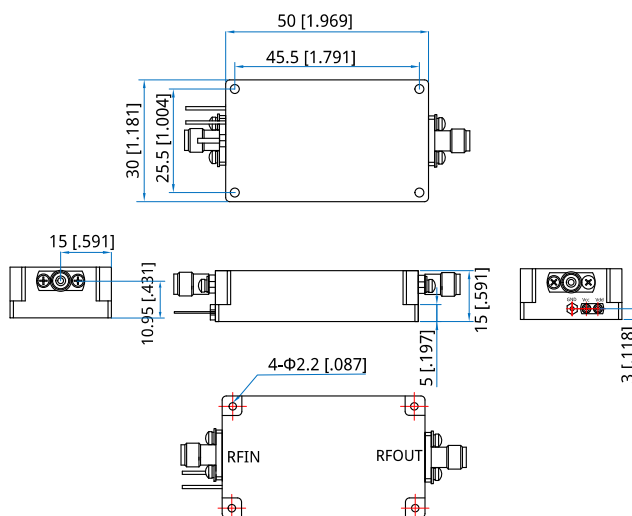
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+80°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.5mm [±0.02in]

How To Order

NLA-9000-10000-25-15

Customization is available upon request.

NLA-10700-12750-25-30

10.7~12.75GHz, 25dB, 3dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	10.7~12.75GHz
Gain:	25dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+8dBm min.
Noise Figure:	3dB max.
Spurious:	-65dBc max.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	50mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

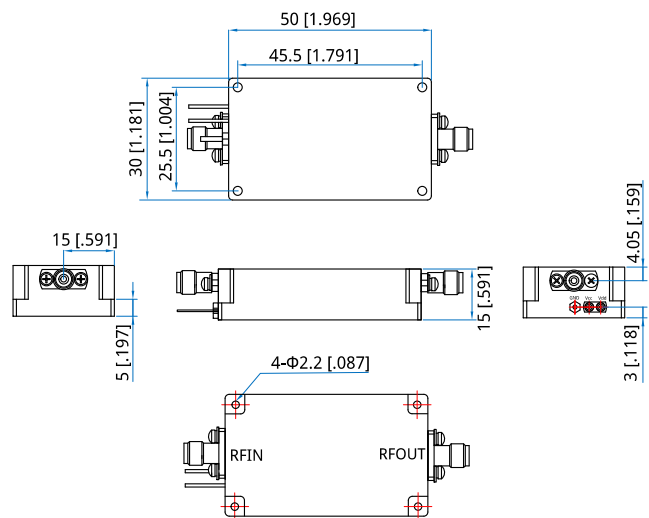
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	100g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+80°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-10700-12750-25-30

Customization is available upon request.

NLA-12000-18000-20-40

12~18GHz, 20dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	12~18GHz
Gain:	20dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	15dBm min.
Noise Figure:	4dB max.
Spurious:	-60dBc max.
VSWR:	1.5 max.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

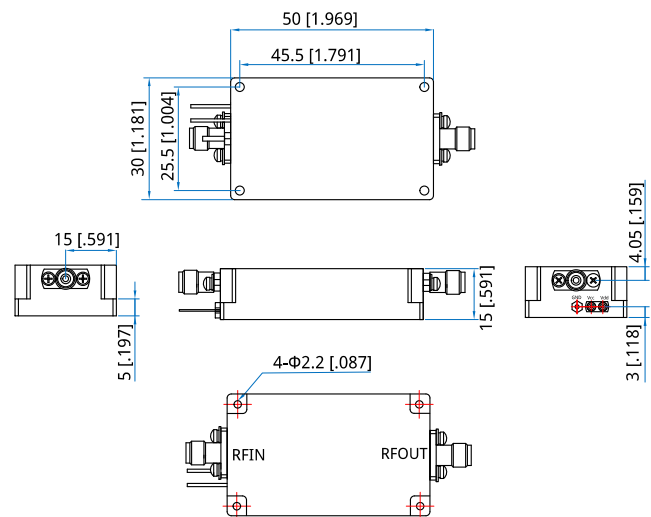
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-12000-18000-20-40

Customization is available upon request.

NLA-12000-18000-36-18

12~18GHz, 36dB, 1.8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	12~18GHz
Gain:	36dB min.
Gain Flatness:	±1.2dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	1.8dB max.
VSWR:	2 max.
Voltage:	+12V typ.
Current:	150mA typ.
Impedance:	50Ω
Input Power:	15dBm max.

Mechanical

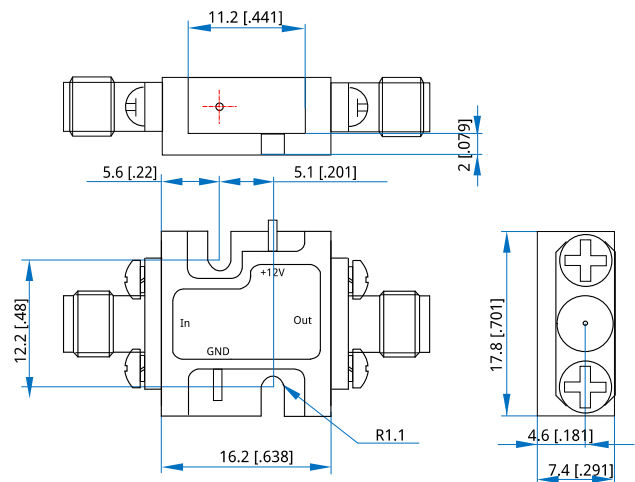
Size ^{*1} :	17.8*16.2*7.4mm 0.701*0.638*0.291in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-12000-18000-36-18

Customization is available upon request.

NLA-12000-40000-30-40

12~40GHz, 30dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	12~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+5dBm min.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	2.5 typ.
Voltage:	+12V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	0dBm max.

Mechanical

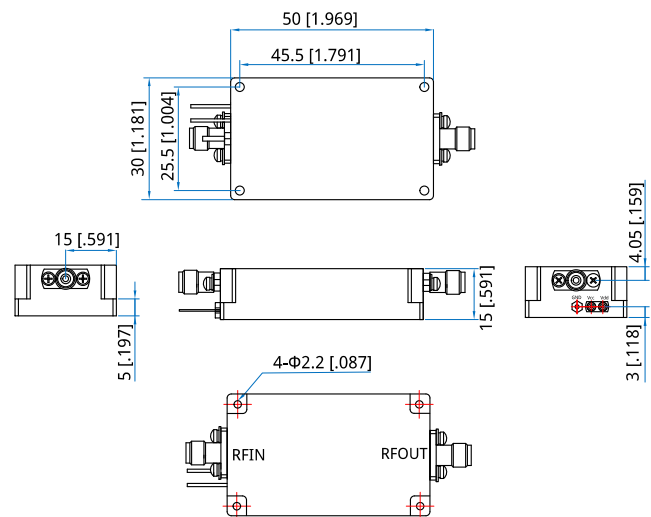
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+65°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-12000-40000-30-40

Customization is available upon request.

NLA-16000-22000-35-25

16~22GHz, 35dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	16~22GHz
Gain:	35dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	+19dBm min.
Noise Figure:	2.5dB max.
VSWR:	2 max.
Voltage:	+12V DC
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

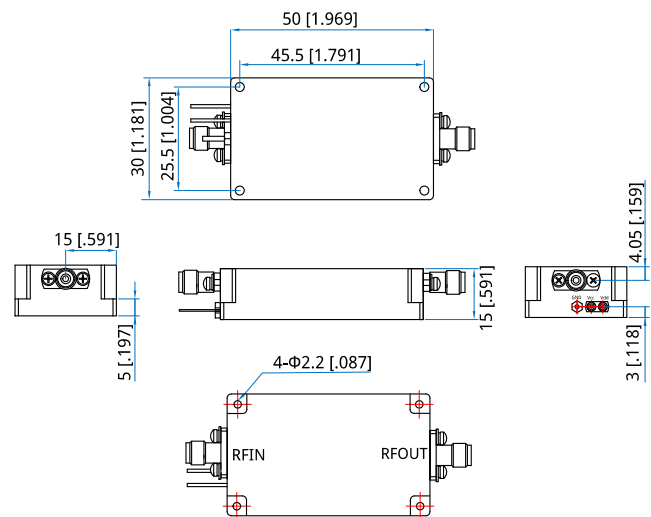
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-16000-22000-35-25

Customization is available upon request.

NLA-16000-40000-20-35

16~40GHz, 20dB, 3.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	16~40GHz
Gain:	18dB min. 20dB typ.
Gain Flatness:	±3.5dB typ.
Output Power (P1dB):	+16dBm min.
Noise Figure:	3.5dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	160mA typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

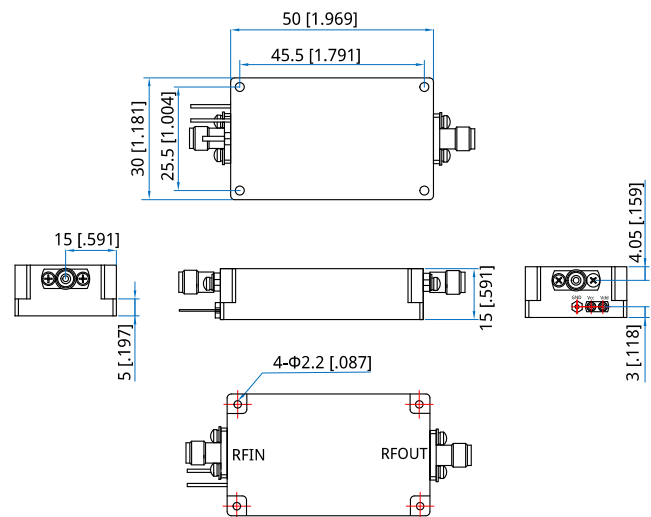
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-16000-40000-20-35

Customization is available upon request.

NLA-17500-20200-20-20

17.5~20.2GHz, 20dB, 2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	17.5~20.2GHz
Gain:	20dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+2dBm min.
Noise Figure:	2dB max.
Spurious:	-60dBc max.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	30mA typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

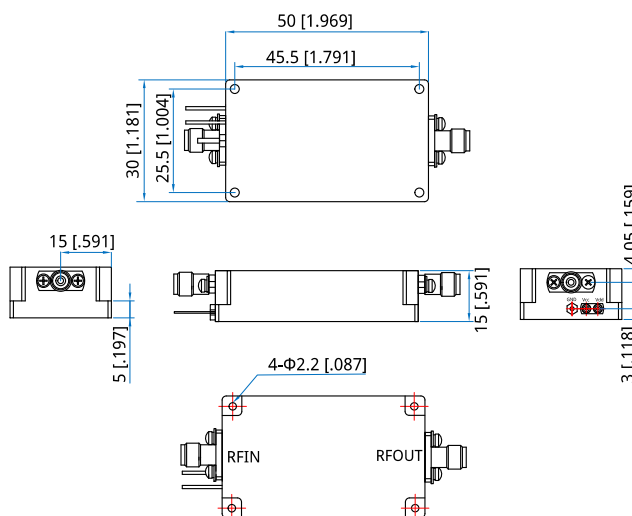
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

How To Order

NLA-17500-20200-20-20

Customization is available upon request.

NLA-17700-21200-30-80

17.7~21.2GHz, 30dB, 8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	17.7~21.2GHz
Gain:	30dB min.
Gain Flatness:	±2.0dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	8.0dB max.
Impedance:	50Ω
VSWR:	2.0 typ.
Voltage:	+15~24V DC
Current:	200mA typ.

Mechanical

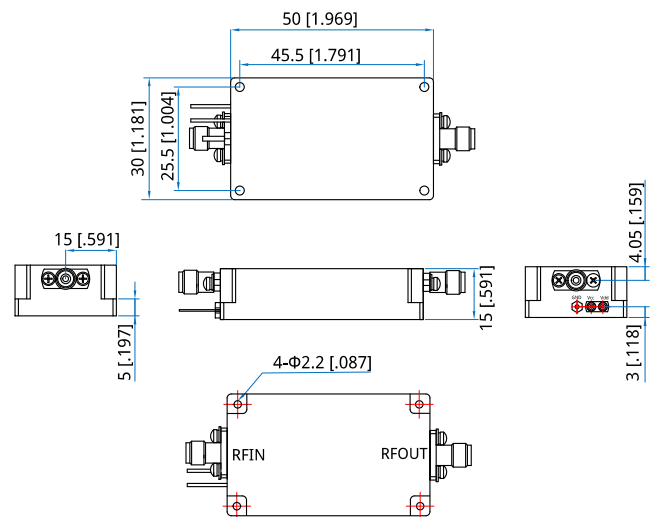
Size:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
Connectors:	2.92mm female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2 through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-17700-21200-30-80

Customization is available upon request.

NLA-18000-26500-30-40

18~26.5GHz, 30dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~26.5GHz
Gain:	30dB min.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	5dBm typ.
Noise Figure:	4dB max.
VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	120mA typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

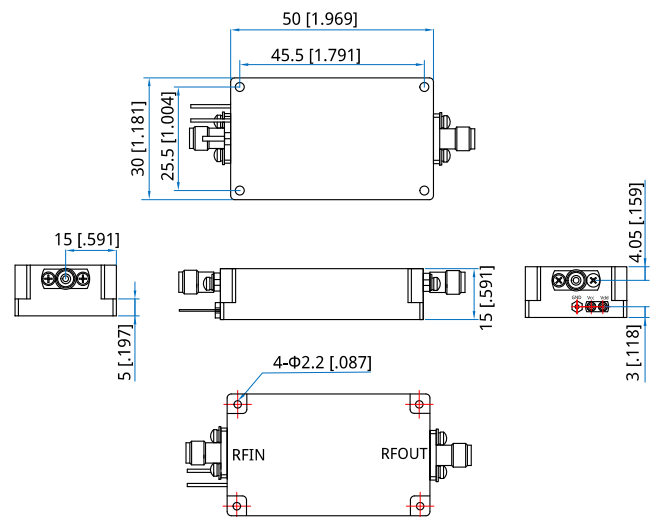
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-26500-30-40

Customization is available upon request.

NLA-18000-26500-45-32

18~26.5GHz, 45dB, 3.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~26.5GHz
Gain:	45dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	10dBm typ.
Noise Figure:	3.2dB max.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.8 typ.
Output VSWR:	1.8 typ.
Voltage:	+5V DC
Current:	300mA typ.

Mechanical

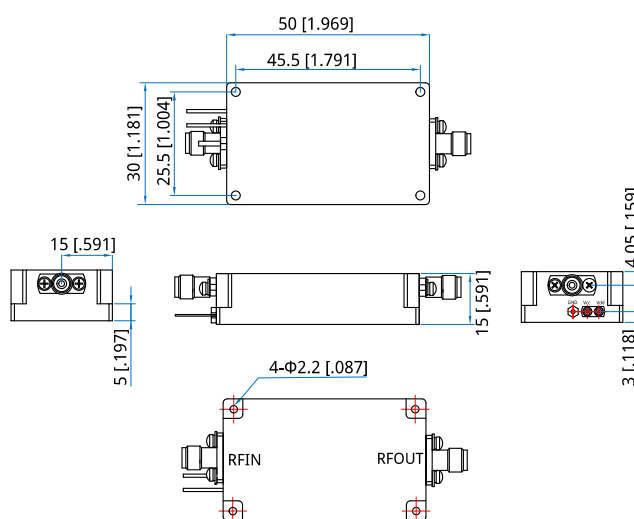
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-26500-45-32

Customization is available upon request.

NLA-18000-26500-48-25

18~26.5GHz, 48dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~26.5GHz
Gain:	48dB min.
Gain Flatness:	±2.5dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	2.5dB max.
VSWR:	2.3 max.
Voltage:	+12V typ.
Current:	240mA typ.
Impedance:	50Ω

Mechanical

Size*1:	17.8*16.2*7.4mm 0.701*0.638*0.291in
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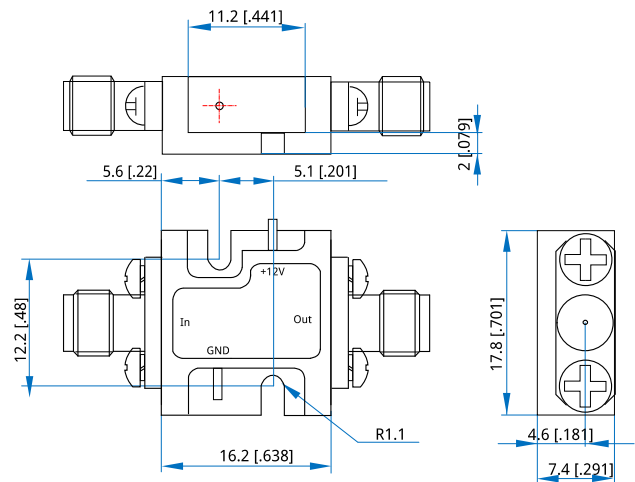
RF Connectors: 2.92mm Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-26500-48-25

Customization is available upon request.

NLA-18000-28000-20-40

18~28GHz, 20dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~28GHz
Gain:	20dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	8dBm typ.
Noise Figure:	4dB max.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.6 typ.
Output VSWR:	1.6 typ.
Voltage:	+5V DC
Current:	200mA typ.
Impedance:	50Ω

Mechanical

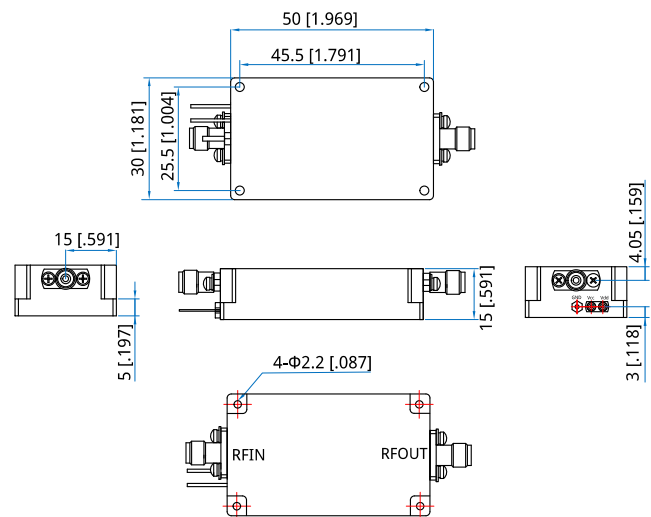
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-28000-20-40

Customization is available upon request.

NLA-18000-40000-25-50(P10)

18~40GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Gain:	25dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	5dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

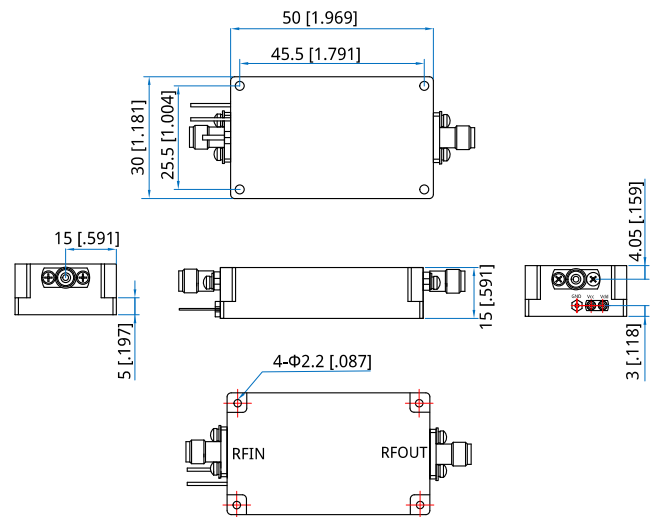
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-25-50(P10)

Customization is available upon request.

NLA-18000-40000-25-50(P15)

18~40GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Gain:	25dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+15dBm min.
Noise Figure:	5dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	300mA typ.
Impedance:	50Ω
Input Power:	+5dBm max.

Mechanical

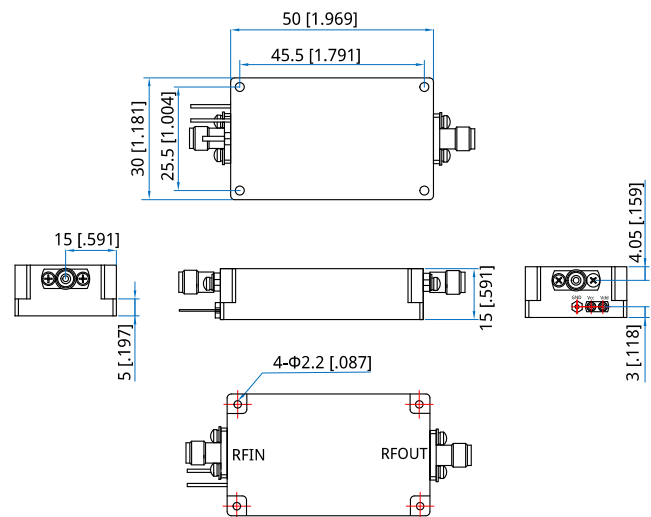
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-25-50(P15)

Customization is available upon request.

NLA-18000-40000-25-50

18~40GHz, 25dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Small Signal Gain:	25dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	+12dBm min.
Noise Figure:	5dB max.
VSWR:	2.5 max.
Voltage:	+12V DC
Current:	200mA typ.
Impedance:	50Ω

Mechanical

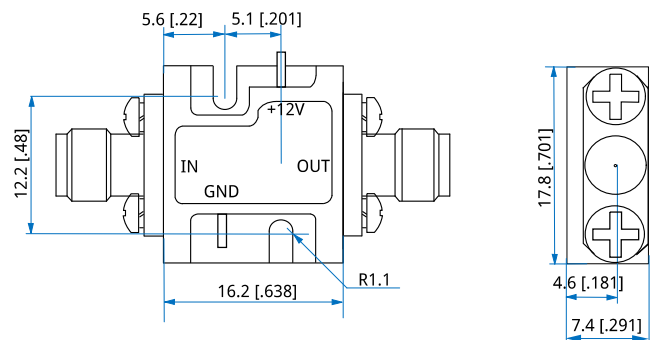
Size*1:	16.2*17.8*7.4mm 0.638*0.701*0.291in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-25-50

Customization is available upon request.

NLA-18000-40000-30-35

18~40GHz, 30dB, 3.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Small Signal Gain:	30dB min.
Gain Flatness:	±2.5dB max.
Output Power (P1dB):	+8dBm min.
Noise Figure:	3.5dB max.
VSWR:	2.2 max..
Voltage:	+12V DC
Current:	160mA typ.
Impedance:	50Ω

Mechanical

Size*1:	17.8*16.2*7.4mm
	0.701*0.638*0.291in

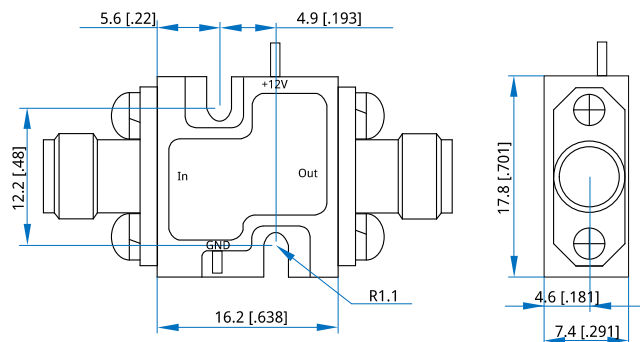
RF Connectors: 2.92mm Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-30-35

Customization is available upon request.

NLA-18000-40000-30-50(P20)

18~40GHz, 30dB, 5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+20dBm typ.
Noise Figure:	5dB typ.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
VSWR:	2.5 typ.
Voltage:	+12V DC
Current:	0.4A typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

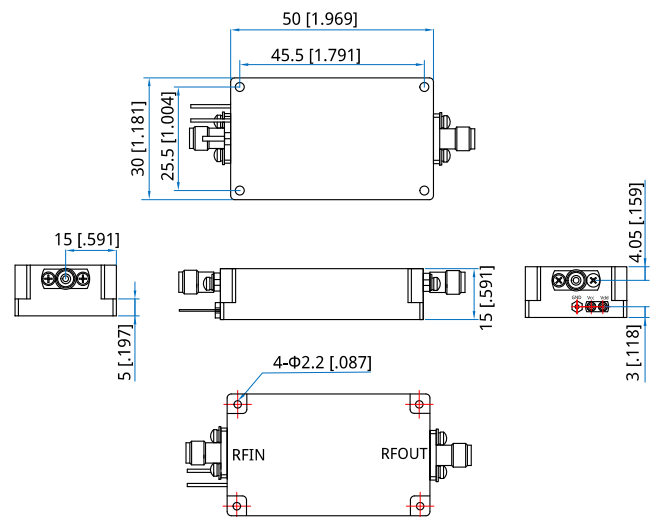
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-30-50(P20)

Customization is available upon request.

NLA-18000-40000-40-45

18~40GHz, 40dB, 4.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Gain:	40dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	+6dBm min.
Noise Figure:	4dB typ. 4.5dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+15V DC
Current:	200mA typ.
Impedance:	50Ω
Input Power:	0dBm max.

Mechanical

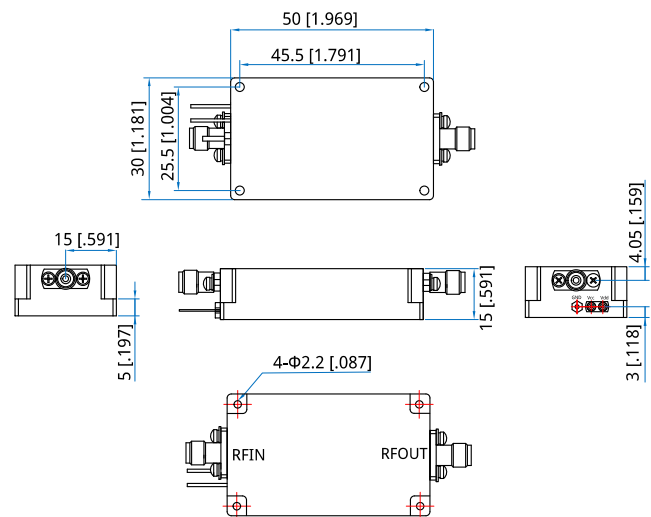
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-40-45

Customization is available upon request.

NLA-18000-40000-50-45

18~40GHz, 50dB, 4.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	18~40GHz
Gain:	50dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	+5dBm min.
Noise Figure:	4.5dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+15V DC
Current:	400mA typ.
Impedance:	50Ω
Input Power:	+5dBm max.

Mechanical

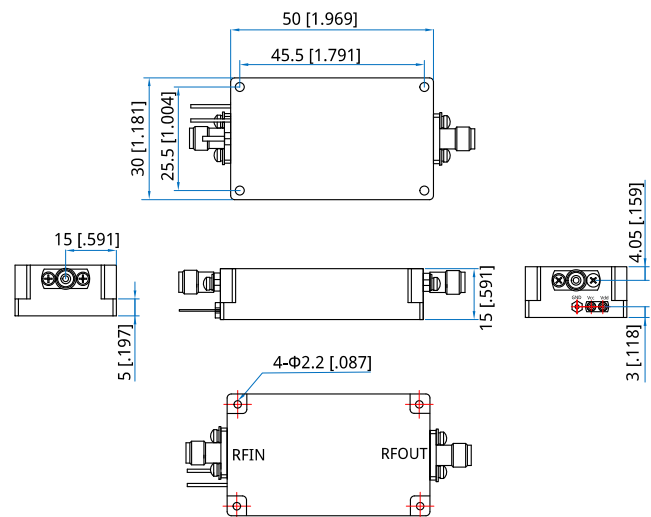
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-18000-40000-50-45

Customization is available upon request.

NLA-20000-32000-40-25

20~32GHz, 40dB, 2.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	20~32GHz
Gain:	40dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	10dBm typ.
Noise Figure:	2.5dB typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC

Mechanical

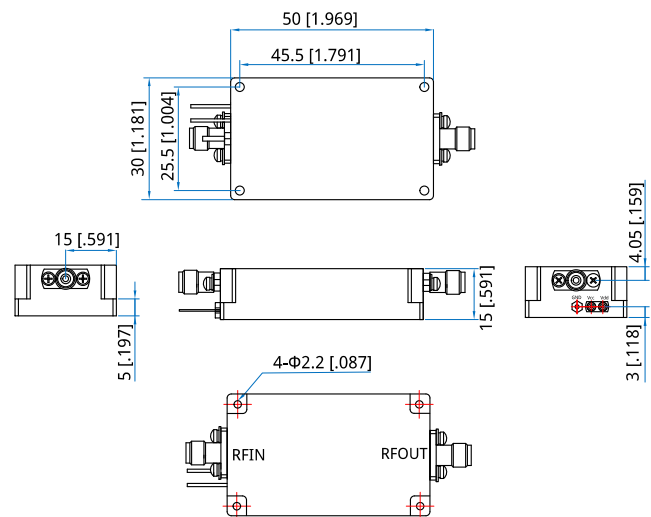
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-20000-32000-40-25

Customization is available upon request.

NLA-23000-25000-35-20

23~25GHz, 35dB, 2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	23~25GHz
Gain:	35dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	-3dBm typ.
Noise Figure:	2dB max.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.8 typ.
Output VSWR:	1.8 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω

Mechanical

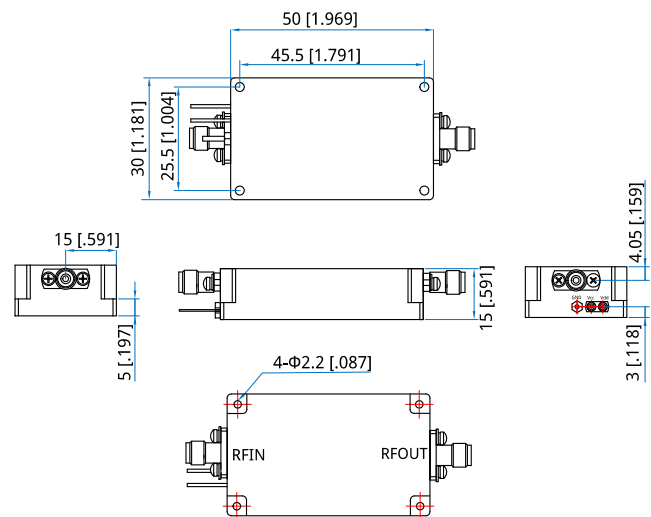
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-23000-25000-35-20

Customization is available upon request.

NLA-23000-40000-34-35

23~40GHz, 34dB, 3.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	23~40GHz
Gain:	34dB min.
Gain Flatness:	±2.5dB max.
Output Power (P1dB):	+10dBm min.
Noise Figure:	3.5dB typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+12V DC
Input Power:	-10dBm max.
Impedance:	50Ω

Mechanical

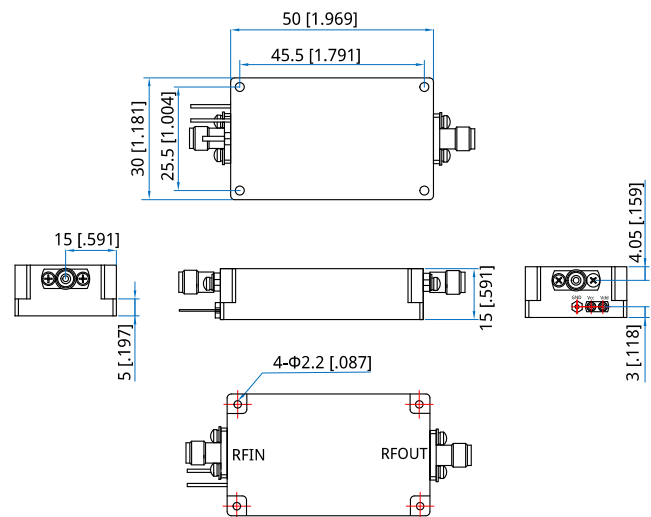
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-23000-40000-35-35

Customization is available upon request.

NLA-24000-28000-30-40

24~28GHz, 30dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	24~28GHz
Gain:	30dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	4dB max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	120mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

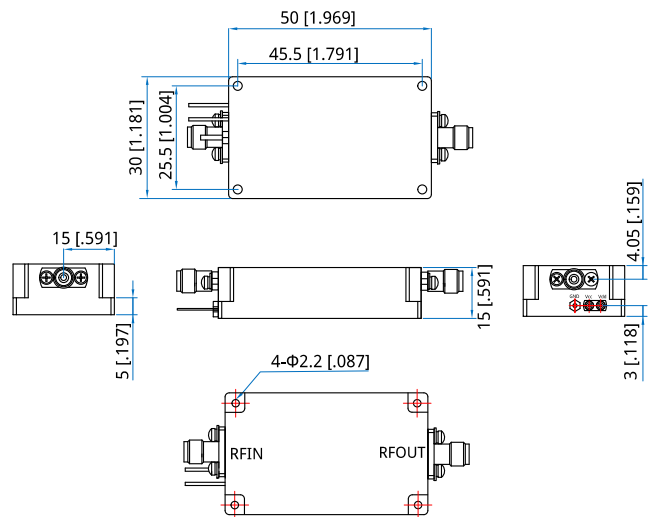
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-24000-28000-30-40

Customization is available upon request.

NLA-24000-30000-30-20

24~30GHz, 30dB, 2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	24~30GHz
Gain:	30dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	+10dBm typ.
Noise Figure:	2dB typ.
VSWR:	1.5 typ.
Voltage:	+5V DC
Current:	100mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

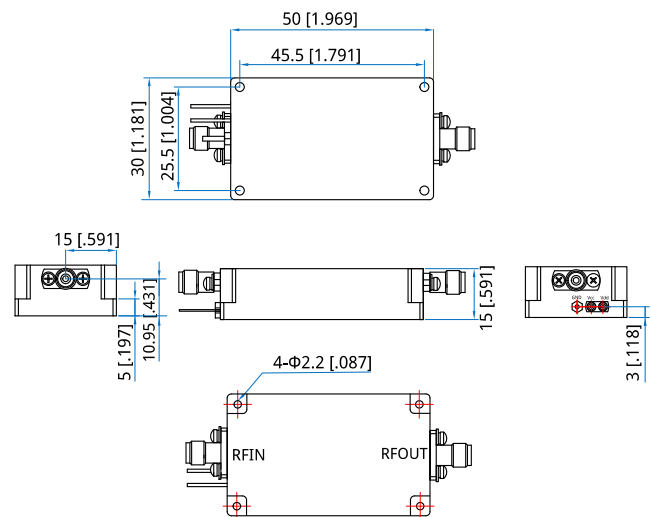
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-24000-30000-30-20

Customization is available upon request.

NLA-25300-27200-50-18

25.3~27.2GHz, 50dB, 1.8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	25.3~27.2GHz
Gain:	49~51dB
Gain Flatness:	±1dB typ.
Gain Stability:	±0.5dB/24h max.
Phase Stability:	±0.5°/24h max.
Phase Stability:	±20°@0~+55°C max.
Phase Matching:	±20°@23°C max.
Output Power (P1dB):	5dBm min.
IP3:	+15dBm min.
Noise Figure:	1.8dB@23°C max. 2.1dB@55°C max.
Input VSWR:	1.7 max.
Output VSWR:	1.5 max.
Isolation:	40dB min.
Voltage:	+12V DC
Current:	400mA typ.

Mechanical

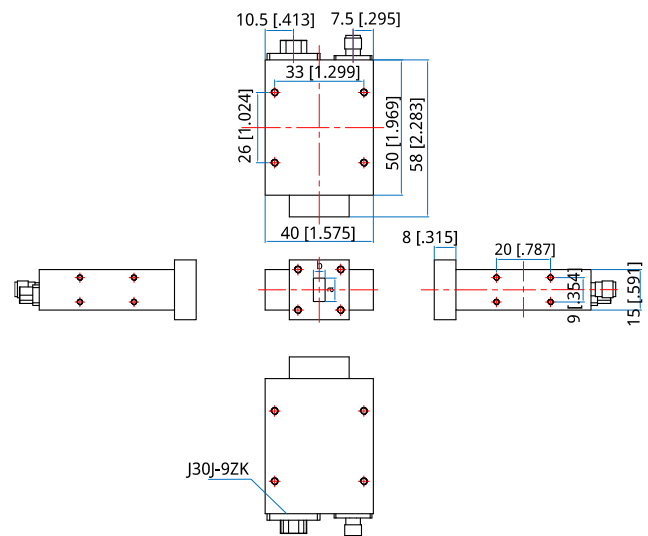
Size*1:	58*40*22.1mm 2.283*1.575*0.87in
RF Input Interface:	WR-34
RF Output Connector:	2.92mm female
Power Supply Connectors:	J30J-9ZK
Housing Material:	Aluminum
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-0~+55°C
Non-operating Temperature:	-20~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Pin Numbering

Pin	Function	Pin	Function
1~1	+12V	5	EN
3~4	GND	6~9	NC

How To Order

NLA-25300-27200-50-18

Customization is available upon request.

NLA-26000-40000-30-28

26~40GHz, 30dB, 2.8dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	26~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB max.
Output Power (P1dB):	10dBm min.
Noise Figure:	2.8dB max.
VSWR:	2.3 max.
Voltage:	+12V typ.
Current:	180mA typ.
Impedance:	50Ω

Mechanical

Size*1: 17.8*16.2*7.4mm
0.701*0.638*0.291in

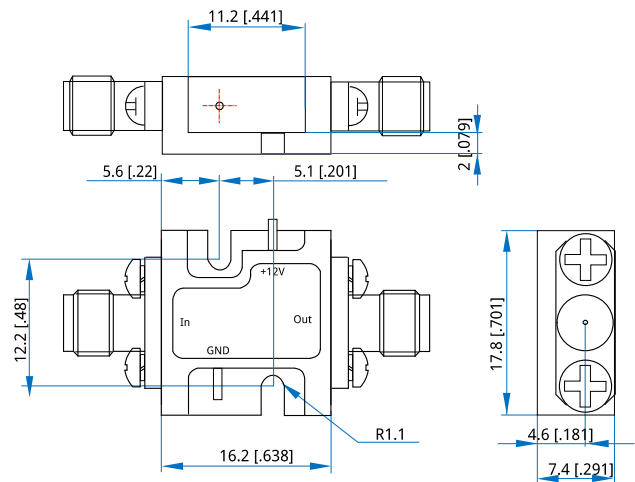
RF Connectors: 2.92mm Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-Operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-26000-40000-30-28

Customization is available upon request.

NLA-26000-40000-30-30

26~40GHz, 30dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	26~40GHz
Small Singal Gain:	30dB min.
Noise Figure:	3dB max.
Input VSWR:	2.2 typ.
Output VSWR:	2 typ.
Voltage:	+7V DC (+6V min., +10V max.)
Current:	150mA typ.
Impedance:	50Ω
Input Power:	15dBm max.

Mechanical

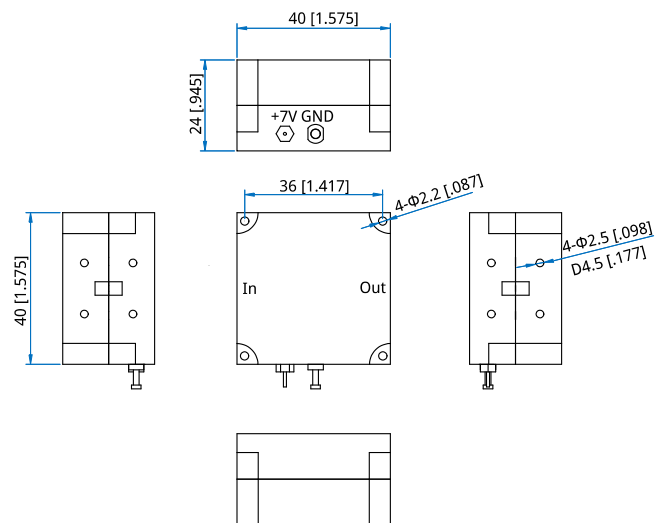
Size*1:	40*40*24mm 1.575*1.575*0.945in
RF Interface:	WR-28
Flange:	UG-599/U
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-26000-40000-30-30

Customization is available upon request.

NLA-26500-40000-20-30

26.5~40GHz, 20dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	26.5~40GHz
Gain:	20dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	+5dBm typ.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
VSWR:	1.5 max.
Voltage:	+5V DC
Current:	80mA typ.
Impedance:	50Ω
Input Power:	+0dBm max.

Mechanical

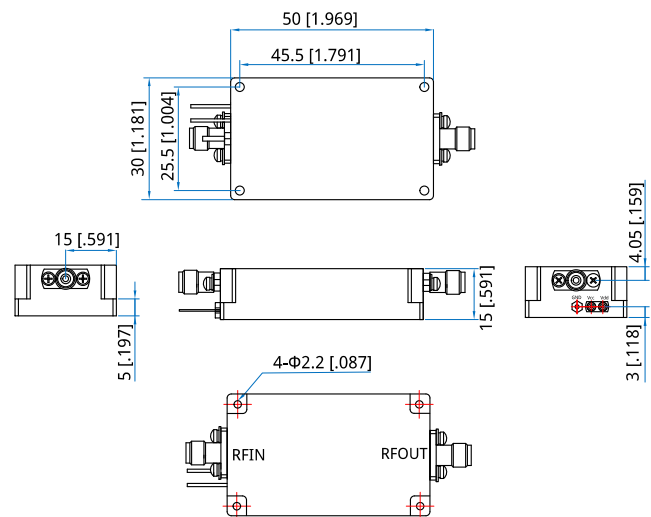
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-265500-40000-20-30

Customization is available upon request.

NLA-26500-40000-25-40

26.5~40GHz, 25dB, 4dB

Features:

- * Broadband
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	26.5~40GHz
Gain:	25dB min.
Gain Flatness:	±2dB typ.
Output Power:	0dBm max.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
Input Power:	0dBm
VSWR:	1.8 typ.
Voltage:	+5V typ.
Current:	50 mA typ.

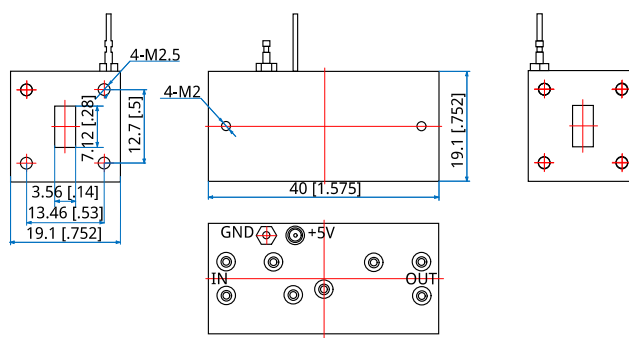
Mechanical

Size ^{*1} :	40*19.1*19.1mm 1.575*0.752*0.752in
Interface:	WR-28

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.5mm [±0.02in]

How To Order

NLA-26500-40000-25-40

Customization is available upon request.

NLA-39000-41000-30-32

39~41GHz, 30dB, 3.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	39~41GHz
Gain:	30dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	3.2dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	160mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

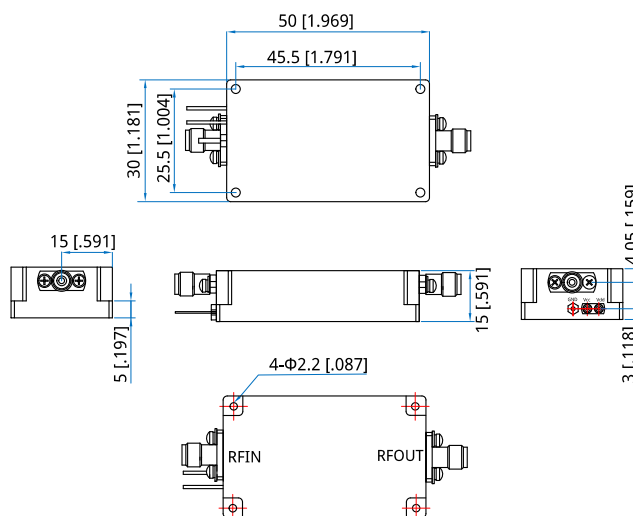
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-39000-41000-30-32

Customization is available upon request.

NLA-40000-53000-40-50

40~53GHz, 40dB, 5dB

Features:
* Broad Band
* Low Noise

Applications:
* Wireless
* Receiver
* Laboratory Test
* Radar

Electrical

Frequency:	40~53GHz
Gain:	40dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	+10dBm min.
Noise Figure:	5dB typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	0.9A typ.
Impedance:	50Ω
Input Power:	0dBm max.

Mechanical

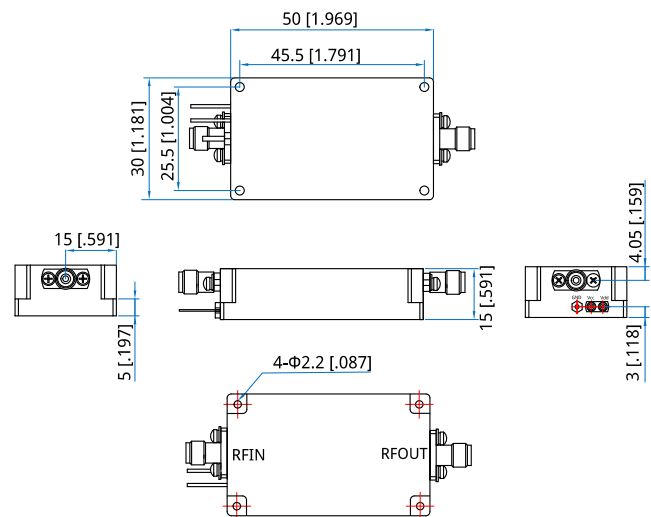
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	300g max.
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-40000-53000-40-50

Customization is available upon request.

NLA-50000-59000-40-55

50~59GHz, 40dB, 5.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	50~59GHz
Gain:	40dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	10dBm typ.
Noise Figure:	5.5dB typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+8V DC

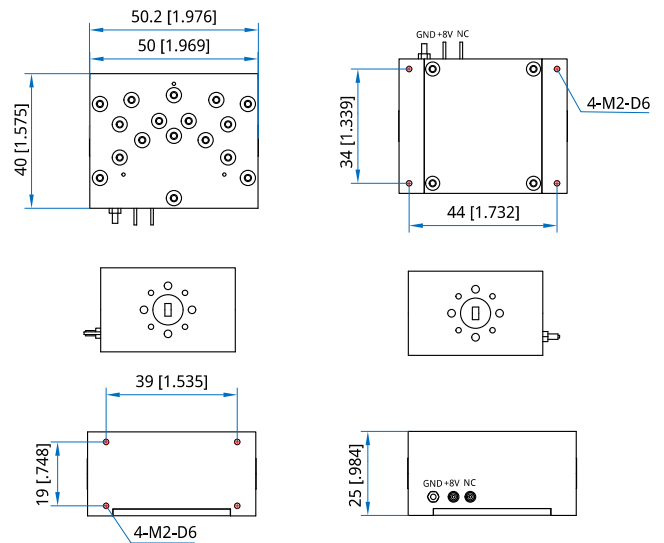
Mechanical

Size:	50.2*40*25mm 1.976*1.575*0.984in
Weight:	300g max.
RF Interface:	WR-15
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-M2, depth 6mm

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50000-59000-40-55

Customization is available upon request.

NLA-50000-75000-25-30

50~75GHz, 25dB, 3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	50~75GHz
Small Singal Gain:	25dB min.
Noise Figure:	3dB max.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+7V DC (+6V min., +10V max.)
Current:	80mA typ.
Impedance:	50Ω
Input Power:	15dBm max.

Mechanical

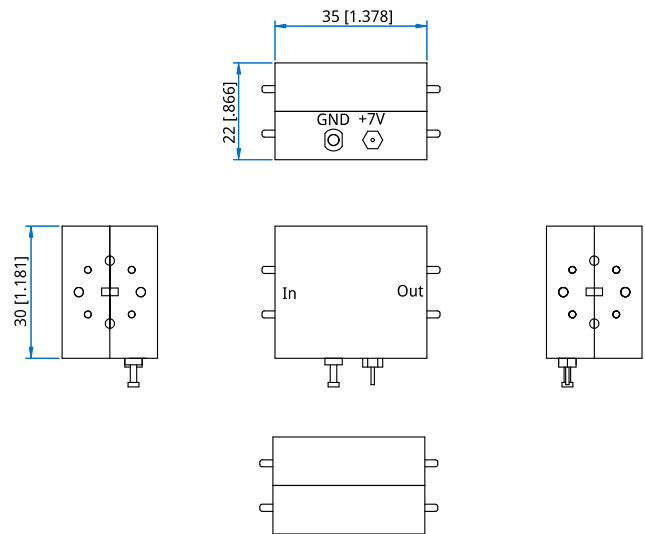
Size ^{*1} :	35*30*22mm 1.378*1.181*0.866in
RF Interface:	WR-15
Flange:	UG-385/U
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-50000-75000-25-30

Customization is available upon request.

NLA-57000-67000-30-50

57~67GHz, 30dB, 5dB

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	57~67GHz
Gain:	30dB min.
Output Power (P1dB):	10dBm min.
Noise Figure:	5dB max.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	300mA typ.
Impedance:	50Ω

Mechanical

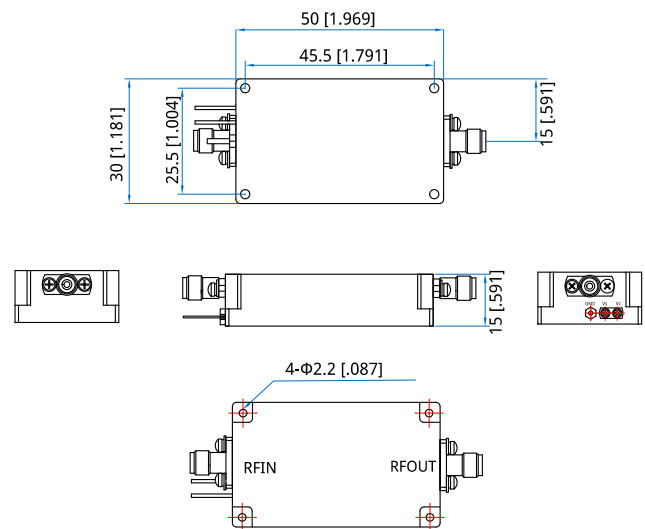
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	1.85mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-57000-67000-30-50

Customization is available upon request.

NLA-60000-90000-26-43

60~90GHz, 26dB, 4.3dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	60~90GHz
Small Singal Gain:	26dB min.
Noise Figure:	4.3dB max.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+7V DC (+6V min., +10V max.)
Current:	140mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

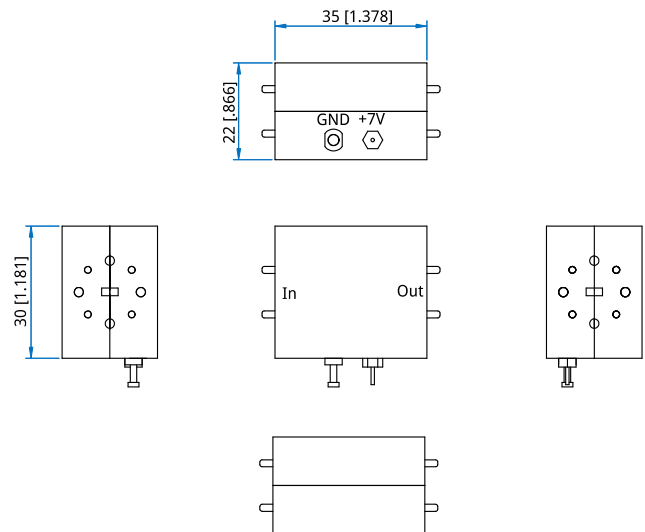
Size ^{*1} :	35*30*22mm 1.378*1.181*0.866in
RF Interface:	WR-12
Flange:	UG-387/U
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-60000-90000-26-43

Customization is available upon request.

NLA-60000-90000-35-40

60~90GHz, 35dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	60~90GHz
Gain:	35dB typ.
Output Power (P1dB):	+9dBm typ.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
Input VSWR:	3 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Current:	150mA typ.
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

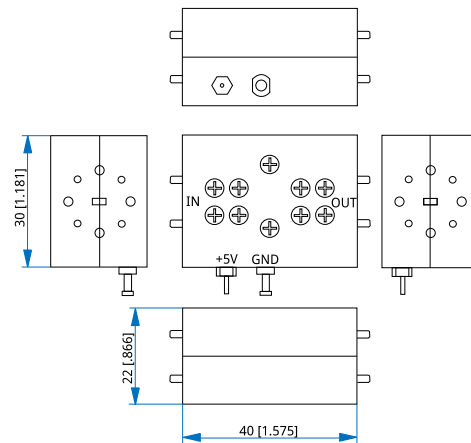
Size*1:	40*30*22mm 1.575*1.181*0.866in
RF Connectors:	WR-12

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-60000-90000-35-40

Customization is available upon request.

NLA-75000-110000-20.5-32

75~110GHz, 20.5dB, 3.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	75~110GHz
Small Singal Gain:	20.5dB min.
Gain Fatness:	±2.5dB
Noise Figure:	3.2dB typ.
Input VSWR:	2 typ.
Output VSWR:	1.5 typ.
Voltage:	+7V DC (+6V min., +10V max.)
Current:	36mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

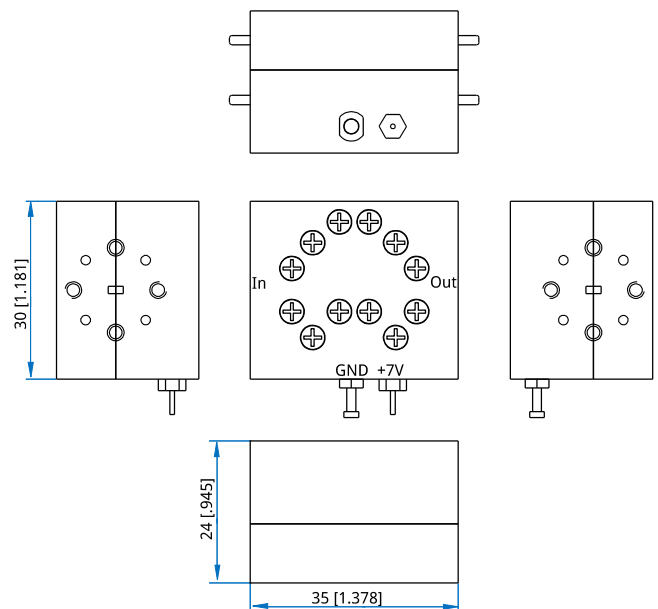
Size*1:	35*30*24mm 1.378*1.181*0.945in
RF Interface:	WR-10
Flange:	UG-387/UM
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-55~+85°C
Non-operating Temperature:	-65~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-75000-110000-20.5-32

Customization is available upon request.

NLA-75000-110000-38-36

75~110GHz, 38dB, 3.6dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	75~110GHz
Small Singal Gain:	38dB min.
Noise Figure:	3.6dB max.
Input VSWR:	2.2 typ.
Output VSWR:	1.8 typ.
Voltage:	+7V DC (+6V min., +10V max.)
Current:	60mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

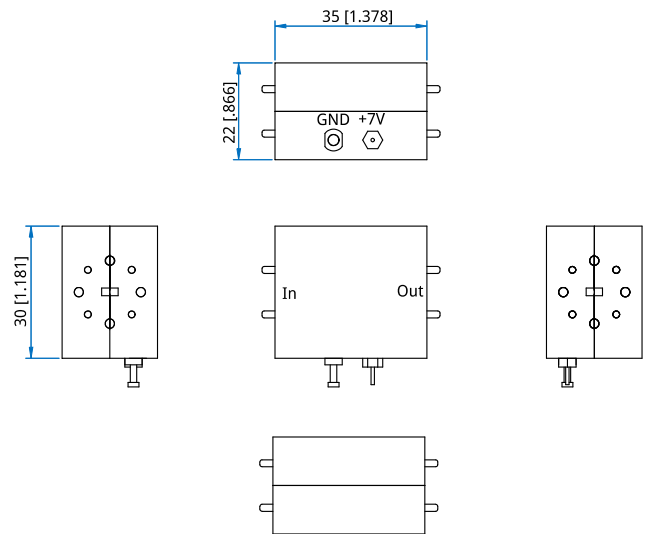
Size ^{*1} :	35*30*22mm 1.378*1.181*0.866in
RF Interface:	WR-10
Flange:	UG-387/UM
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-75000-110000-38-36

Customization is available upon request.

NLA-110000-170000-16-40

110~170GHz, 16dB, 4dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	110~170GHz
Gain:	16dB min.
Gain Flatness:	±3dB
Noise Figure:	4dB typ.
Input VSWR:	2.2 typ.
Output VSWR:	1.9 typ.
Voltage:	+7V DC
Current:	30mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

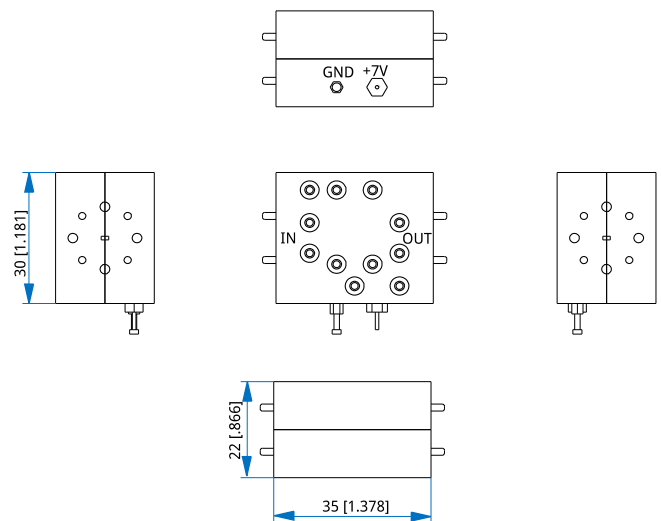
Size ^{*1} :	35*30*22mm 1.378*1.181*0.866in
RF Connectors:	WR-6, UG-387/UM

[1] Exclude connectors.

Environmental

Operating Temperature:	-55~+85°C
Non-operating Temperature:	-65~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-110000-170000-16-40

Customization is available upon request.

NLA-140000-200000-15-45

140~200GHz, 15dB, 4.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	140~200GHz
Small Singal Gain:	15dB min.
Gain Fatness:	±3dB
Noise Figure:	4.5dB typ.
Input VSWR:	2.5 typ.
Output VSWR:	2.5 typ.
Voltage:	+7V DC (+5V min., +8V max.)
Current:	39mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

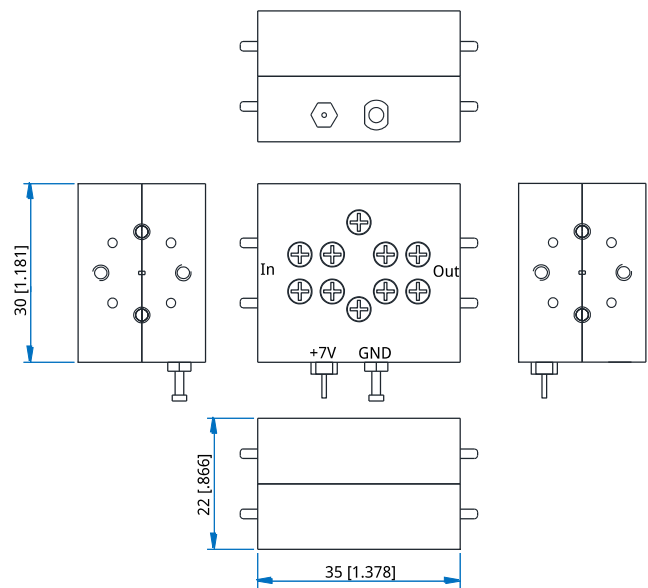
Size*1:	35*30*22mm 1.378*1.181*0.866in
RF Interface:	WR-5
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-55~+85°C
Non-operating Temperature:	-65~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-140000-200000-15-45

Customization is available upon request.

NLA-200000-230000-22-72

200~230GHz, 22dB, 7.2dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	200~230GHz
Small Singal Gain:	22dB min.
Gain Fatness:	±3dB
Noise Figure:	7.2dB max.
Input VSWR:	2 typ.
Output VSWR:	2.5 typ.
Voltage:	+5V DC (+5V min., +8V max.)
Current:	40mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

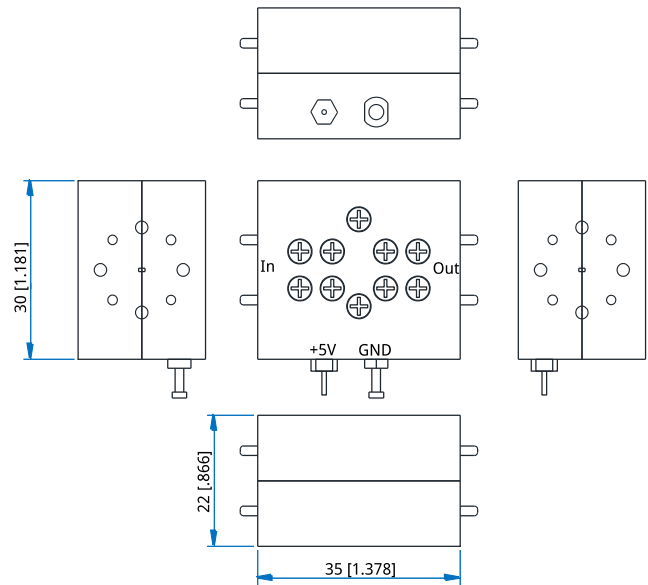
Size*1:	35*30*22mm 1.378*1.181*0.866in
RF Interface:	WR-4
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-200000-230000-22-72

Customization is available upon request.

NLA-230000-260000-19-85

230~260GHz, 19dB, 8.5dB

Features:

- * Broad Band
- * Low Noise

Applications:

- * Wireless
- * Receiver
- * Laboratory Test
- * Radar

Electrical

Frequency:	230~260GHz
Small Singal Gain:	19dB typ.
Noise Figure:	8.5dB typ.
Input VSWR:	2.5 typ.
Output VSWR:	3.5 typ.
Voltage:	+5V DC (+5V min., +8V max.)
Current:	42mA typ.
Impedance:	50Ω
Input Power:	10dBm max.

Mechanical

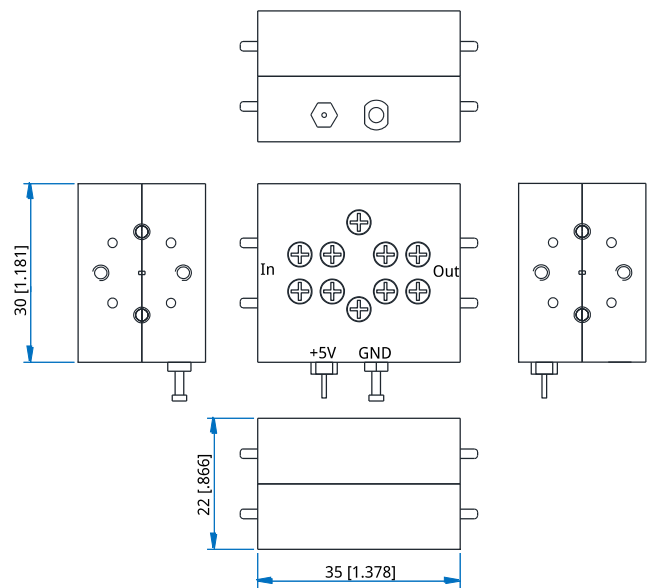
Size*1:	35*30*22mm 1.378*1.181*0.866in
RF Interface:	WR-3
Power Supply Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	10~+40°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NLA-230000-260000-19-85

Customization is available upon request.