

NPA-0.1-3000-25-26

0.1~3000MHz, 25dB, 26dBm

Features:

- * Small Size
- * Low Power Consumption

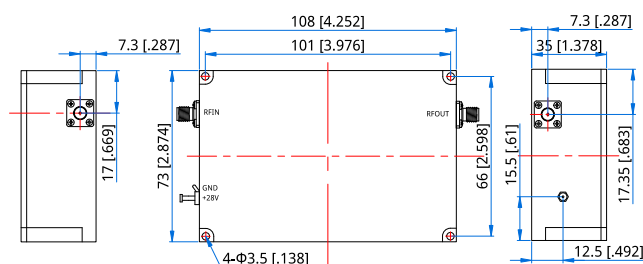
Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.1~3000MHz
Gain:	25dB min.
Gain Flatness:	±4dB typ.
Gain Flatness@100MHz:	±4dB typ.
Output Power (P1dB):	26dBm typ.
Spurious:	-50dBc typ.
Harmonic:	-5dBc typ.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Input Power:	+5dBm max.
Voltage:	+28V DC
Current:	200mA typ.
Impedance:	50Ω

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Mechanical

Size* ¹ :	118*73*35mm 4.646*2.874*1.378in
Weight:	635g
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ3.5mm through-hole
Cooling:	Forced air

[1] Exclude connectors.

Environmental

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

How To Order

NPA-0.1-3000-25-26

Customization is available upon request.

NPA-0.1-500-43-40

0.1~500MHz, 43dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.1~500MHz
Gain:	43dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	40dBm typ.
Spurious:	-50dBc typ.
Harmonic:	-12dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+24V DC
Input Power:	3dBm max.

Mechanical

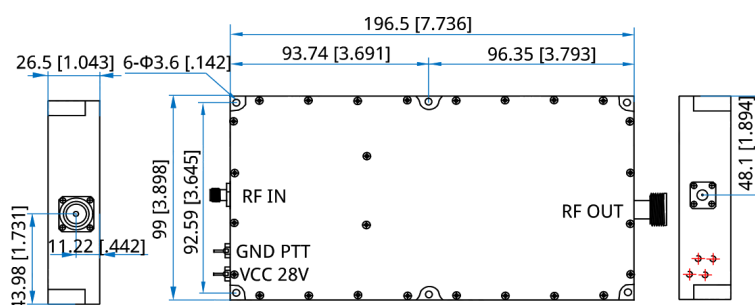
Size ^{*1} :	200*101*27.8mm 7.874*3.976*1.094in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	6-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-0.1-500-43-40

Customization is available upon request.

NPA-1000-18000-35-30

1~18GHz, 35dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

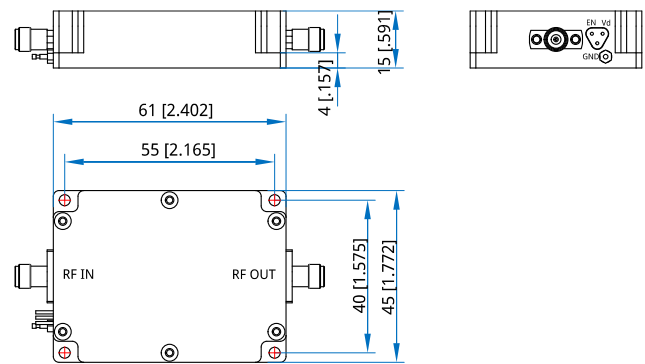
Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical@25°C

Frequency:	1~18GHz
Gain:	35dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	30dBm min.
Noise Figure:	4dB max.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
Input VSWR:	1.8 max.
Output VSWR:	2 max.
Voltage:	+12V DC
Current:	1.7A typ.
ON/OFF:	TTL High: On TTL Low/NC: Off
Input Power Without Damage:	10 dBm max.

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Mechanical

Size*1:	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-55~+85°C

How To Order

NPA-1000-18000-35-30

Customization is available upon request.

NPA-1000-26500-28-24

1~26.5GHz, 28dB, 24dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	1~26.5GHz
Gain:	28dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	24dBm typ.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+12V DC
Current:	250mA typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

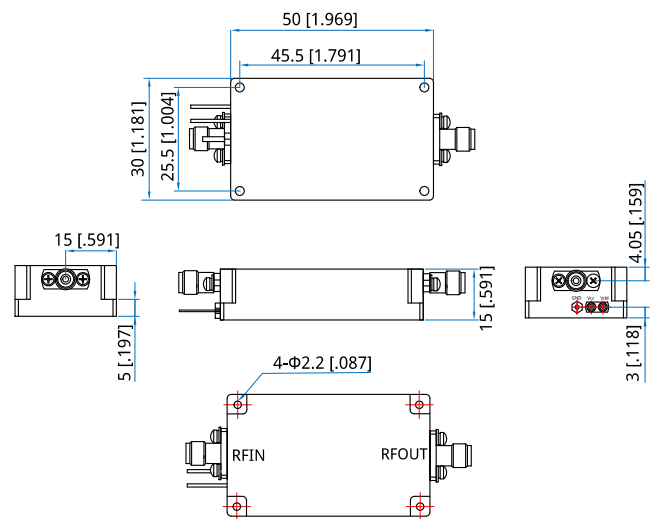
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-1000-26500-28-24

Customization is available upon request.

NPA-1000-4000-40-40S

1~4GHz, 40dB, 40dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	1~4GHz
Gain:	40dB min.
Gain Flatness:	±2.0dB typ.
Output Power (Psat):	40dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+50V or +28V DC
Impedance:	50Ω

Mechanical

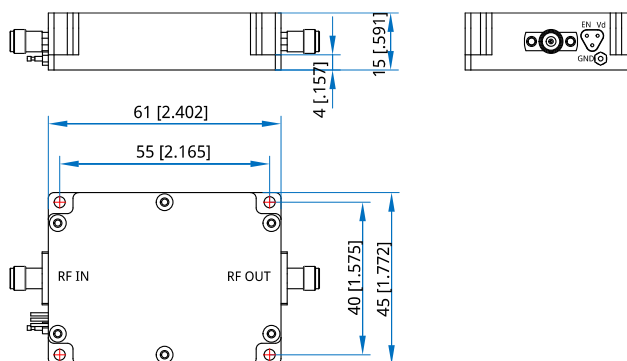
Size*1:	61*45*15mm 2.402*1.772*0.591in
Weight:	400g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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-1000-4000-40-40S

Customization is available upon request.

NPA-100-18000-30-24

0.1~18GHz, 30dB, 24dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.1~18GHz
Gain:	30dB min.
Gain Flatness:	±3.5dB typ.
Output Power (P1dB):	24dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	600mA typ.
Input Power:	0dBm max.
Impedance:	50Ω

Mechanical

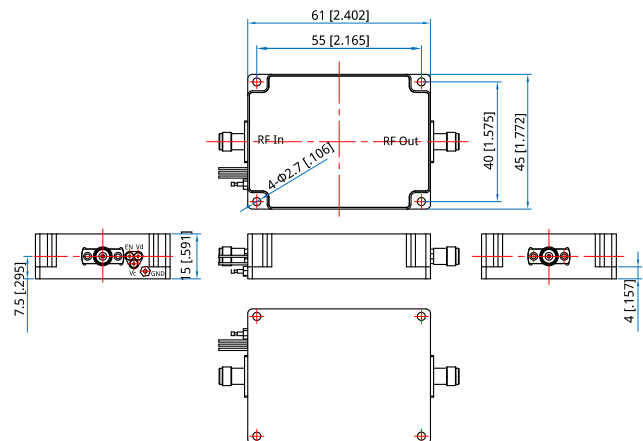
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	2.92mm female or SMA female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-100-18000-30-24

Customization is available upon request.

NPA-100-18000-30-30

0.1~18GHz, 30dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency (channel 1):	0.1~1GHz
Frequency (channel 2):	1~18GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	30dBm typ.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2 typ.
Input Power:	+10dBm max.
Voltage:	+12V DC
Current:	1A typ.
Impedance:	50Ω

Outline Drawings

To Be Done

Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order**NPA-100-18000-30-30**

Customization is available upon request.

Mechanical

Size*1:	200*150*40mm
	7.874*5.906*1.575in
Weight:	TBD
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

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

NPA-100-18000-56-24

0.1~18GHz, 56dB, 24dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.1~18GHz
Gain:	56dB min. 64dB max.
Output Power (P1dB):	24dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	900mA typ.
Input Power:	0dBm max.
Impedance:	50Ω

Mechanical

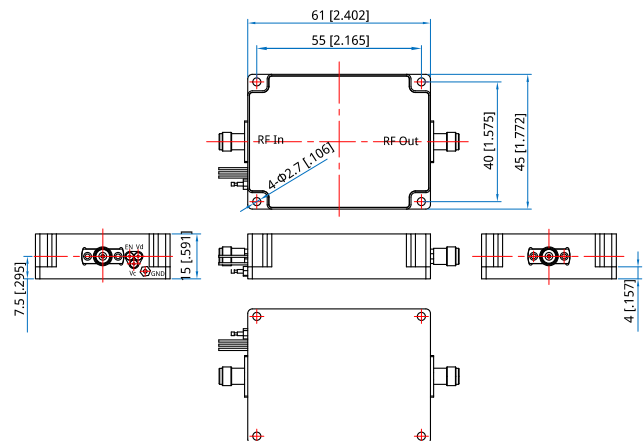
Size* ¹ :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	2.92mm female or SMA female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-100-18000-56-24

Customization is available upon request.

NPA-100-4000-60-20

0.1~4GHz, 60dB, 20dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.1~4GHz
Small Signal Gain:	60dB min.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	20dBm typ.
Spurious:	-50dBc max. @DC~10GH
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Impedance:	50Ω

Mechanical

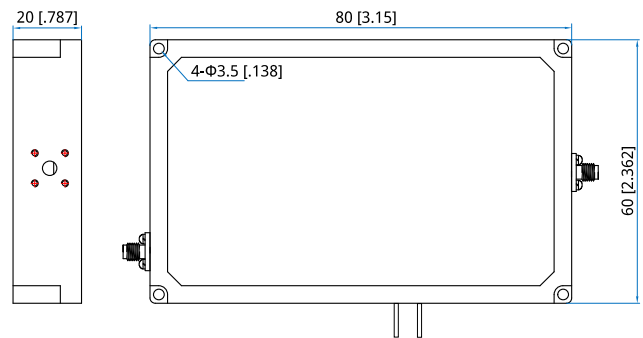
Size ^{*1} :	80*60*20mm 3.15*2.362*0.787in
RF Connectors:	SMA female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.5mm through-hole

[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

NPA-100-4000-60-20

Customization is available upon request.



NPA-100-500-30-40S

0.1~0.5GHz, 30dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.1~0.5GHz
Gain:	30dB min.
Gain Flatness:	±1dB typ.
Output Power (Psat):	40dBm min.
Spurious:	-70dBc max.
Input VSWR:	2 max.
Voltage:	+28V DC
Control interface:	PE(high: +3.3V)
Input Power:	10dBm max.

Mechanical

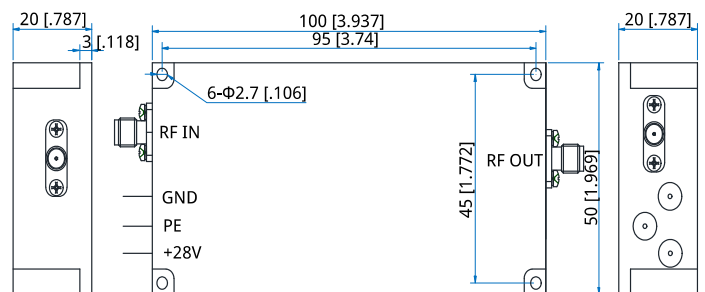
Size*1:	100*50*20mm 3.937*1.969*0.787in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	6-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-100-500-30-40S

Customization is available upon request.

NPA-12000-18000-25-30S

12~18GHz, 25dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	12~18GHz
Gain:	25dB min.
Gain Flatness:	±2dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-65dBc max.
VSWR:	2.5 typ.
Voltage:	+5V DC
Current:	1.5A typ.
Impedance:	50Ω
Input Power:	+15dBm max.

Mechanical

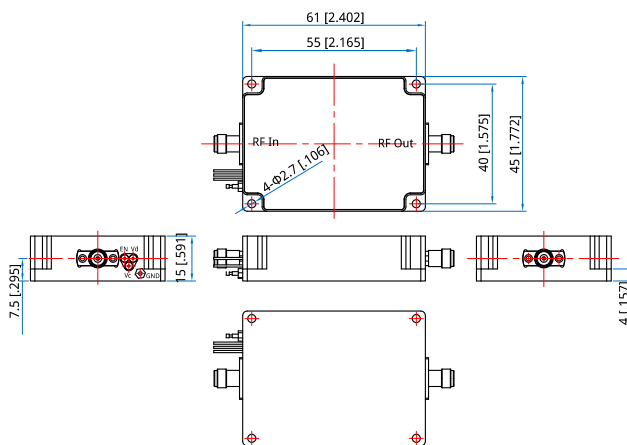
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-12000-18000-25-30S

Customization is available upon request.

NPA-15000-18000-30-33

15~18GHz, 30dB, 33dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	15~18GHz
Gain:	30dB min.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	33dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+8V DC
Current:	1.8A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

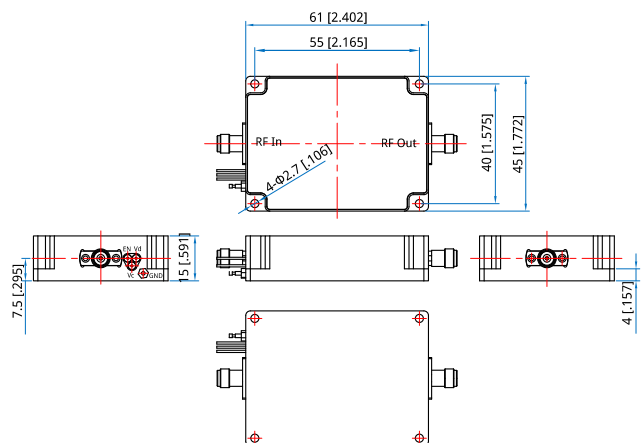
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-15000-18000-30-33

Customization is available upon request.

NPA-1500-5000-30-34

1.5~5GHz, 30dB, 34dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	1.5~5GHz
Power Gain:	30dB min.
Gain Flatness:	±5dB typ.
Output Power (P1dB):	34dBm min.
Spurious:	-60dBc typ.
Harmonic:	-15dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2.4 typ.
Voltage:	+32V DC
Input Power:	3dBm max.

Mechanical

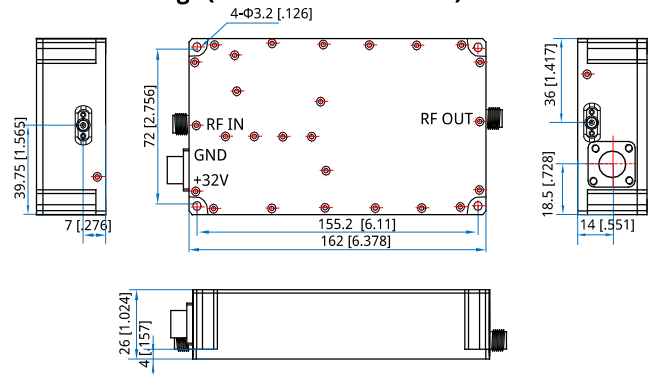
Size*1:	162*72*26mm 6.378*2.756*1.024in
Weight:	2kg
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings (Reference dimension)



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-1500-5000-30-34

Customization is available upon request.

NPA-18000-22000-35-13

18~22GHz, 35dB, 13dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~22GHz
Gain:	35dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	13dBm min.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC
Current:	100mA typ.

Mechanical

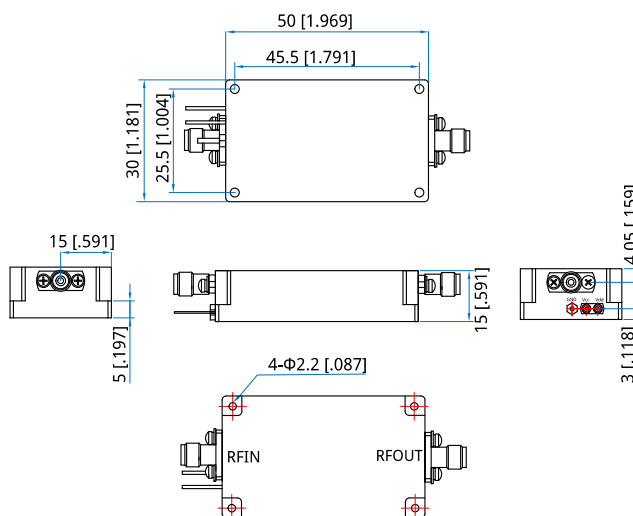
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-18000-22000-35-13

Customization is available upon request.

NPA-18000-22000-40-33

18~22GHz, 40dB, 33dBm

- Features:

 - * Small Size
 - * Low Power Consumption
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test

Electrical

Frequency:	18~22GHz
Gain:	40dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	33dBm min.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+6V DC
Current:	1.9A typ.
ON/OFF:	TTL High: On
	TTL Low/NC: Off
Input Power Without Damage:	10 dBm max.

Mechanical

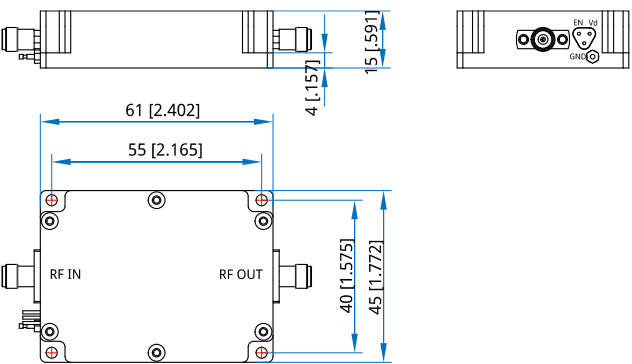
Size*1:	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-18000-22000-40-33

Customization is available upon request.

NPA-18000-26000-30-30S

18~26GHz, 30dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~26GHz
Gain:	30dB min.
Gain Flatness:	±3.5dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.5 typ.
Voltage:	+8V DC
Current:	2.5A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

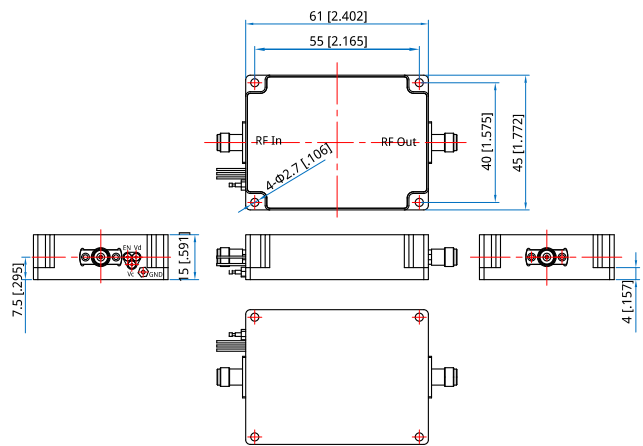
Size*1:	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-45~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-18000-26000-30-30S

Customization is available upon request.

NPA-18000-26500-15-23

18~26.5GHz, 15dB, 23dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~26.5GHz
Gain:	15dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	23dBm min.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
VSWR:	1.8 typ.
Voltage:	+9V DC
Current:	0.25A typ.
Input Power Without Damage:	15dBm max.

Mechanical

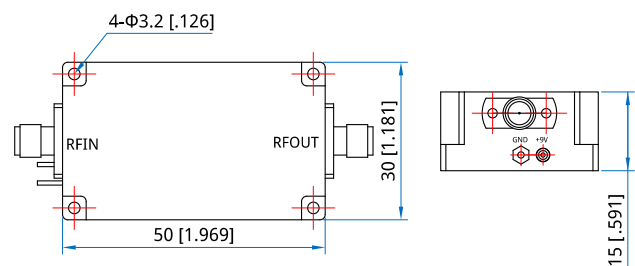
Size ^{*1} :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ3.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-18000-26500-15-23

Customization is available upon request.

NPA-18000-26500-30-30

18~26.5GHz, 30dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~26.5GHz
Gain:	30dB min.
Output Power (P1dB):	30dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.0 typ.
Voltage:	+8V DC
Current:	2.8A typ.
Impedance:	50Ω

Mechanical

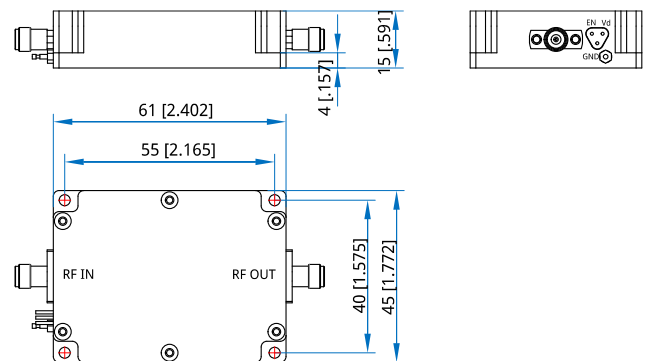
Size*1:	61*45*15mm 2.402*1.772*0.591in
Weight:	400g max.
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Cooling:	External Heatsink (supplied on request only)

[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

NPA-18000-26500-30-30

Customization is available upon request.

NPA-18000-26500-40-40

18~26.5GHz, 40dB, 40dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~26.5GHz
Gain:	40dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	40dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	1.5 typ.
Output VSWR:	2.0 typ.
Voltage:	+8V
Input Power:	10dBm max.
Impedance:	50Ω

Mechanical

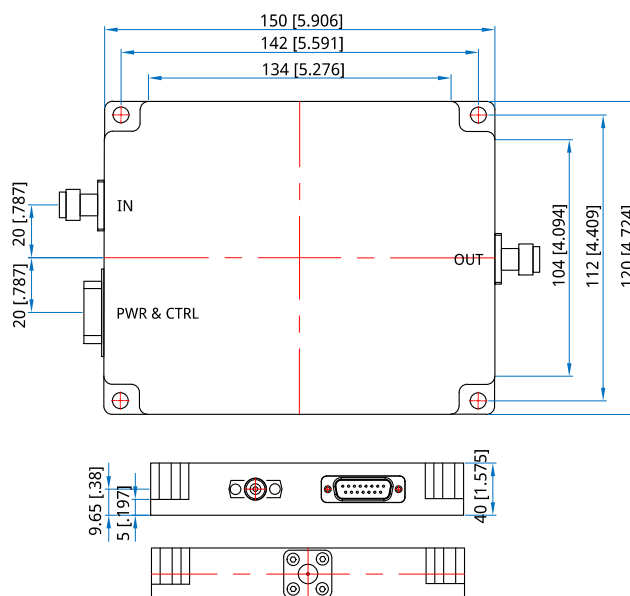
Size*1:	150*120*20mm max. 5.906*4.724*0.787in max.
Weight:	0.6Kg max.
RF Connectors:	2.92mm Female
Power Supply Connectors:	DB-9S

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
Non-operating Temperature:	-45~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-18000-26500-40-40

Customization is available upon request.

NPA-18000-26500-45-40S

18~26.5GHz, 45dB, 40dBm

- Features:

 - * Small Size
 - * Low Power Consumption
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test

Electrical

Frequency:	18~26.5GHz
Gain:	45dB min.
Gain Flatness:	±3.0dB typ.
Output Power (Psat):	40dBm min.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+28V/-5V DC
Input Power Without Damage:	10dBm max.

Mechanical

Size*1:	165*140*61mm 6.496*5.512*2.402in
RF Connectors:	2.92mm Female
Power Supply Connectors:	DB15
Housing Material:	Aluminum
Mounting:	4-Φ3.5mm through-hole
Cooling:	Forced air

[1] Exclude connectors and fans.

Environmental

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

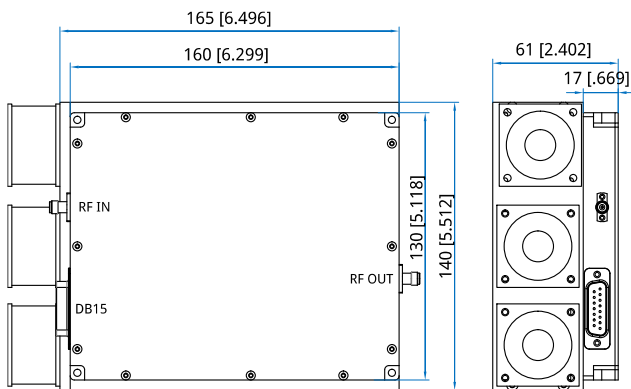
Pin Numbering

Pin	Function	Pin	Function
1~8	+28V	10~15	GND
9	-5V		

Fan Power

Line	Function	Line	Function
Red	+12V	Black	GND

Outline Drawings



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

How To Order

NPA-18000-26500-45-40S

Customization is available upon request.

NPA-18000-40000-20-20

18~40GHz, 20dB, 20dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~40GHz
Gain:	20dB min.
Output Power (P1dB):	20dBm typ.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+6V DC
Current:	300mA max.

Mechanical

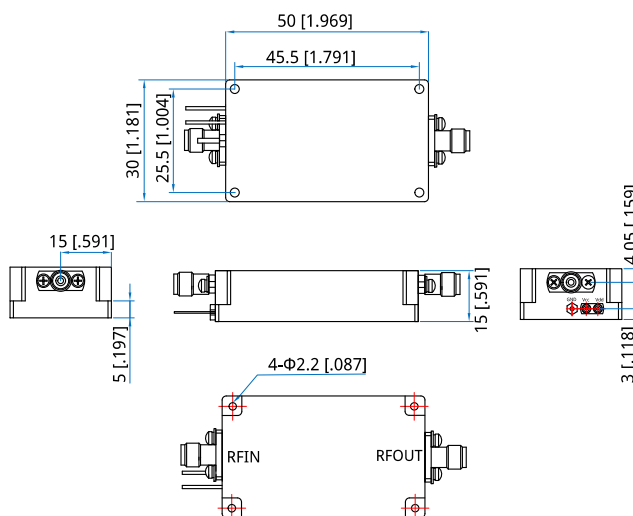
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-18000-40000-20-20

Customization is available upon request.

NPA-18000-40000-30-20

18~40GHz, 30dB, 20dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~40GHz
Gain:	30dB min.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	20dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	0.4A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

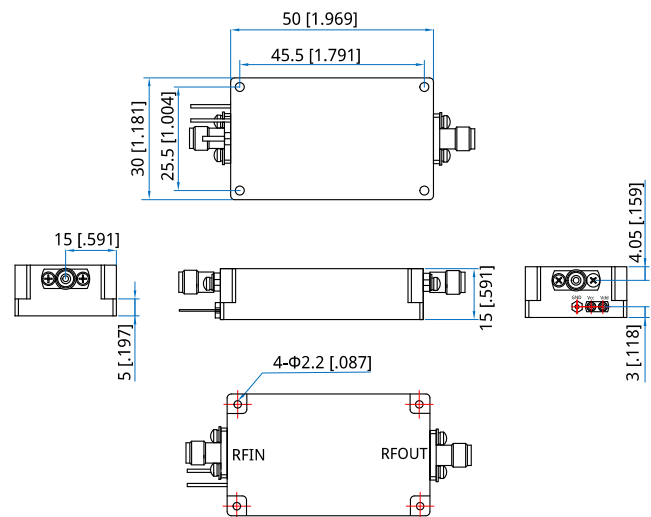
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[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

NPA-18000-40000-30-20

Customization is available upon request.

NPA-18000-40000-30-23S

18~40GHz, 30dB, 23dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (Psat):	23dBm min.
Noise Figure:	4dB typ.
Spurious:	-60dBc max.
VSWR:	2.5 typ.
Voltage:	+12V DC
Current:	600mA typ.
Input Power:	+5dBm max.
Impedance:	50Ω

Mechanical

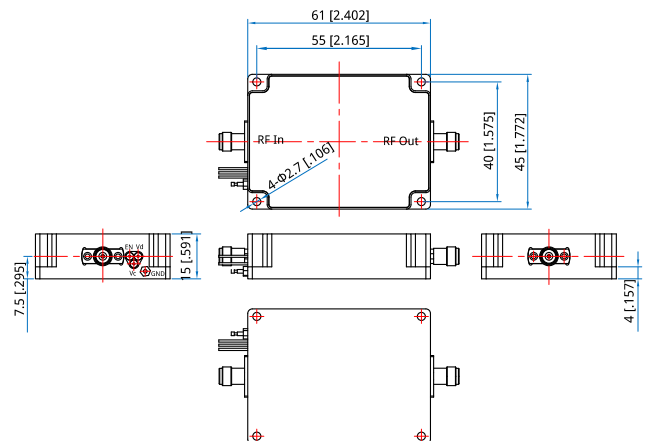
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-18000-40000-30-23S

Customization is available upon request.

NPA-18000-40000-30-27

18~40GHz, 30dB, 27dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	27dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.0 typ.
Voltage:	+12V DC
Current:	1.5A typ.
Input Power:	10dBm max.
Impedance:	50Ω

Mechanical

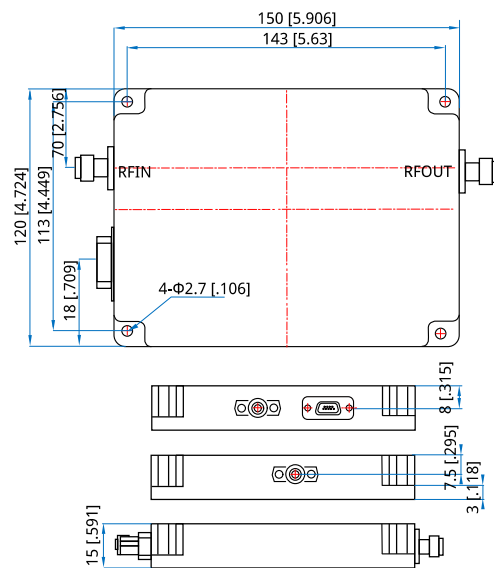
Size*1:	150*120*15mm 5.906*4.724*0.591in
Weight:	600g max.
RF Connector:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-18000-40000-30-27

Customization is available upon request.



NPA-18000-40000-30-30

18~40GHz, 30dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	18~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	30dBm typ.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2 typ.
Input Power:	+10dBm max.
Voltage:	+6V DC
Current:	5.5A typ.
Impedance:	50Ω

Outline Drawings

To Be Done

Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

[NPA-18000-40000-30-30](#)

Customization is available upon request.

Mechanical

Size*1:	180*150*40mm 7.087*5.506*1.575in
Weight:	TBD
Interface:	WR-28

[1] Exclude connectors.

Environmental

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

NPA-1800-2200-46-45S

1.8~2.2GHz, 46dB, 45dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	1.8~2.2GHz
Gain:	46dB min.
Gain Flatness:	±1.0dB typ.
Output Power (Psat):	45dBm typ.
Spurious:	-55dBc max.
Harmonic:	-20dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	1.5 typ.
Voltage:	+30V DC
Current:	3A typ.

Mechanical

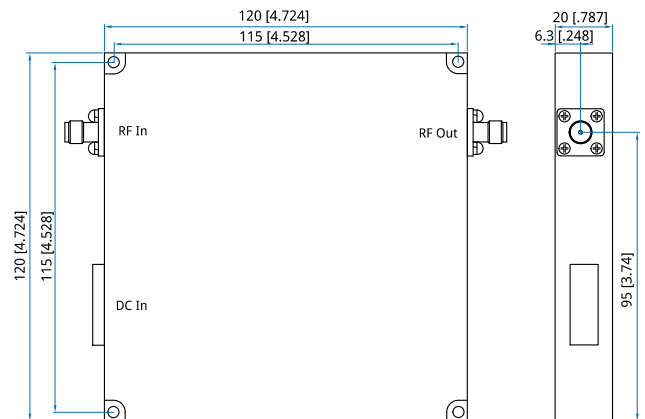
Size*1:	120*120*20mm 4.724*4.724*0.787in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

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



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-1800-2200-46-45S

Customization is available upon request.

NPA-1805-1880-45-40

1805~1880MHz, 45dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	1805~1880MHz
Power Gain:	45dB typ.
Gain Flatness:	±0.75dB typ.
Output Power (P1dB):	40dBm typ.
Spurious:	-60dBc typ. (DC~10GHz@Pout=40dBm)
2 th Harmonic:	-40dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+30V DC
Input Power:	-2dBm max.

Mechanical

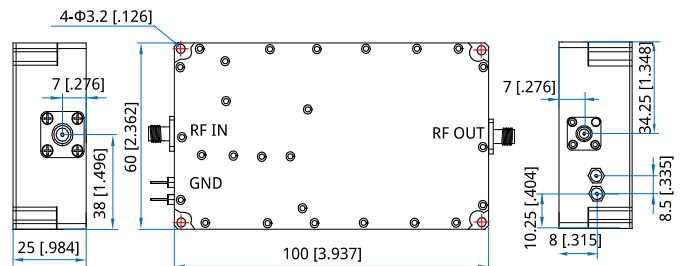
Size ^{*1} :	100*60*25mm 3.937*2.362*0.984in
RF Connectors:	SMA female
Power Supply Interface:	Feed through
Mounting:	4-Φ3.2mm through-hole
Cooling:	Forced Air

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-1805-1880-45-40

Customization is available upon request.

NPA-19000-21000-40-30

19~21GHz, 40dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	19~21GHz
Gain:	40dB min.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	30dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+8V DC
Current:	1.5A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

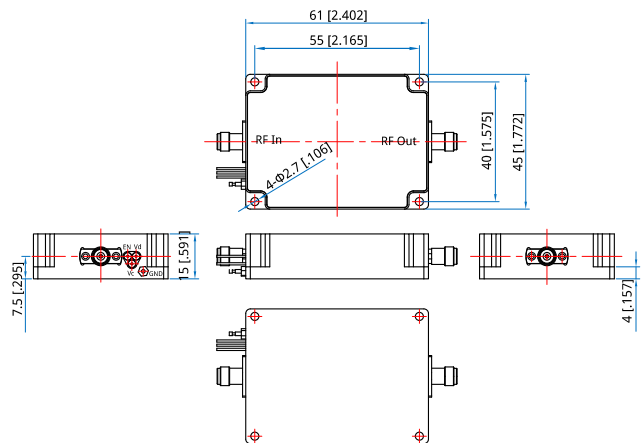
Size* ¹ :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-19000-21000-40-30

Customization is available upon request.

NPA-20000-32000-22-21

20~32GHz, 22dB, 21dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	20~32GHz
Gain:	22dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	21dBm min.
Noise Figure:	3dB max.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+5V DC
Current:	500mA typ.

Mechanical

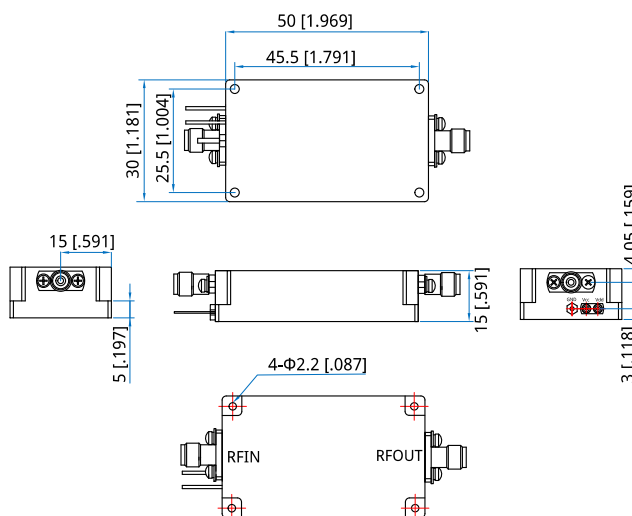
Size*1:	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+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

NPA-20000-32000-22-21

Customization is available upon request.

NPA-20000-32000-25-21

20~32GHz, 25dB, 21dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	20~32GHz
Gain:	25dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	21dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	1.5 typ.
Output VSWR:	1.5 typ.
Voltage:	+8V DC
Current:	500mA typ.

Mechanical

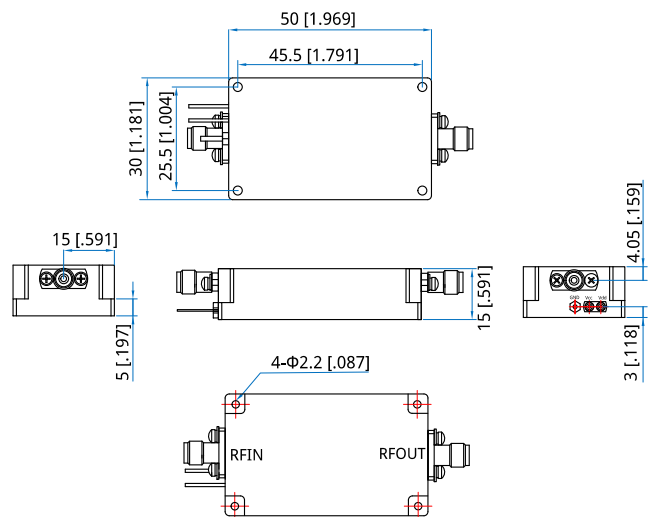
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-20000-32000-25-21

Customization is available upon request.

NPA-20000-40000-33-29S

20~40GHz, 33dB, 29dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	20~40GHz
Gain:	30dB min.
Gain Flatness:	±2.5dB typ.
Output Power (Psat):	29dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	5A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

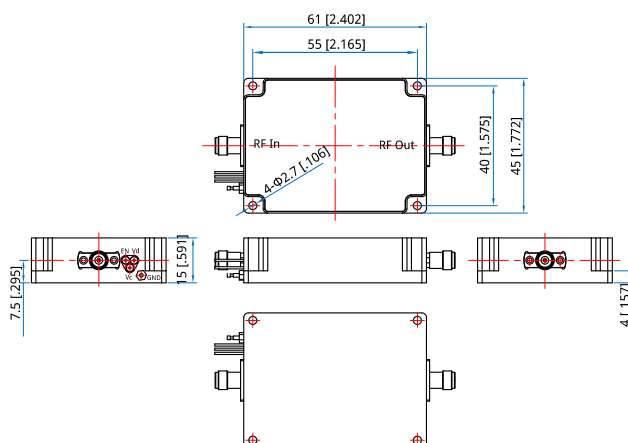
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-20000-40000-33-29S

Customization is available upon request.

NPA-2000-18000-40-40S

2~18GHz, 40dB, 40dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2~18GHz
Gain:	40dB min.
Gain Flatness:	±3dB typ.
Output Power (Psat):	40dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2 typ.
Voltage:	+32V DC max.
Current:	3A typ.
Input Power:	+10dBm max.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off

Mechanical

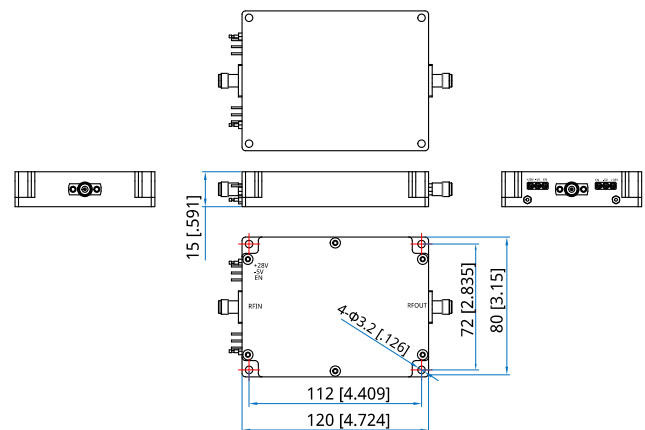
Size* ¹ :	120*80*15mm 4.724*3.15*0.591in
Weight:	500g max.
RF Connectors:	SMA Female
Power Supply & Control Connectors:	PIN
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-2000-18000-40-40S

Customization is available upon request.

NPA-2000-3000-33-33

2~3GHz, 33dB, 33dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2~3GHz
Gain:	33dB typ.
Gain Flatness:	±3dB typ.
Output Power (P1dB):	33dBm min.
Spurious:	-50dBc max.
Harmonic:	-15dBc max.
Input VSWR:	2 max.
Output VSWR:	2 max.
Voltage:	30~32V DC
Current:	2.6A max.
Impedance:	50Ω

Mechanical

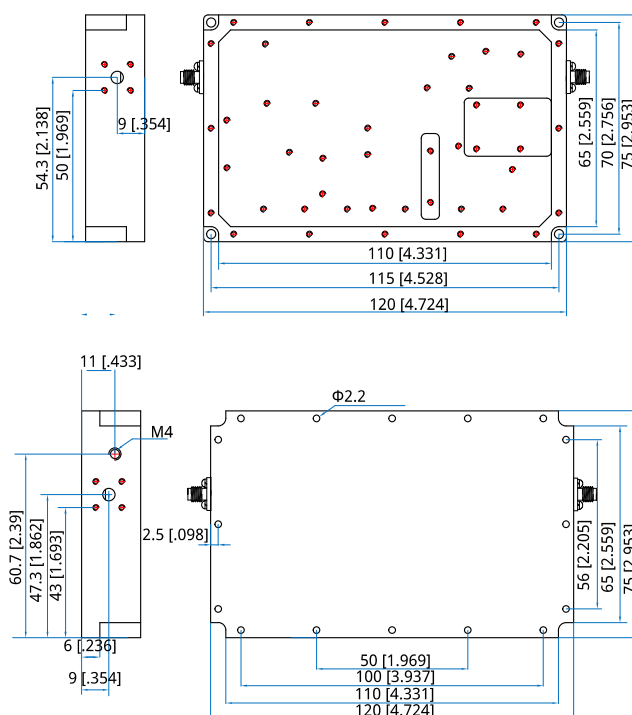
Size*1:	120*75*18mm 4.724*2.953*0.709in
RF Connectors:	SMA Female
Mounting:	Φ2.2mm

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-20~+65°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-2000-3000-33-33

Customization is available upon request.

NPA-2000-6000-35-33S

2~6GHz, 35dB, 33dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2~6GHz
Gain:	35dB min.
Gain Flatness:	±4dB max.
Output Power (Psat):	33dBm min.
Spurious:	-60dBc max.
Harmonic:	-20dBc max.
VSWR:	2 max.
Voltage:	+28V DC
Current:	0.4A typ
Impedance:	50Ω
Input Power:	5dBm max.

Mechanical

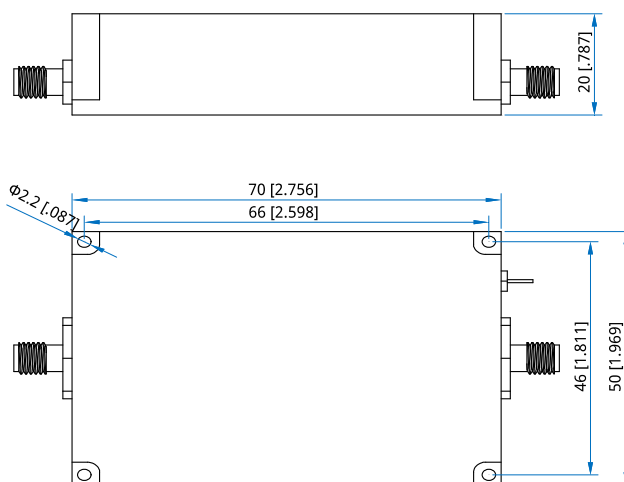
Size*1:	70*50*20mm 2.756*1.969*0.787in
RF Connectors:	SMA female
Power Supply & Control Interface:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-2000-6000-35-33S

Customization is available upon request.

NPA-2000-6000-40-39

2~6GHz, 40dB, 39dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2~6GHz
Gain:	40dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	39dBm typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	28V DC
Current:	3.5A typ.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off
Input Power:	+10dBm max.

Mechanical

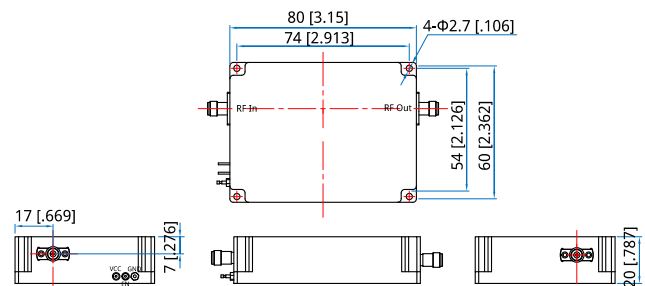
Size*1:	80*60*20mm 7.784*3.504*0.984in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-2000-6000-40-39

Customization is available upon request.

NPA-20-6000-40-36

0.02~6GHz, 40dB, 36dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.02~6GHz
Small Signal Gain:	40dB typ.
Gain Flatness:	±4dB typ. @Psat
Input Power:	0dBm typ.
Output Power (Psat):	38dBm min.
Output Power (P1dB):	36dBm min.
Noise Figure:	8dB typ.
Current:	1A typ.
Voltage:	+15V DC
Harmonic:	-10dBc max.@Output Power
	37dBm
VSWR:	2.5 typ.
Impedance:	50Ω

Mechanical

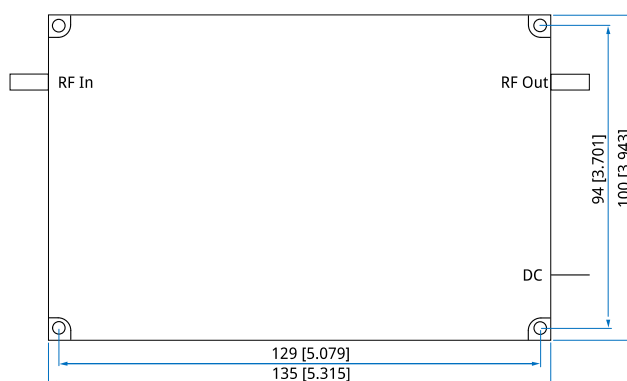
Size*1:	135*100*25mm
	5.315*3.943*0.985in
RF Connectors:	SMA Female
Control Interface:	DB9

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-20-6000-40-36

Customization is available upon request.

NPA-2300-4200-53-47.8S

2.3~42.GHz, 53dB, 47.8dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2.3~4.2GHz
Gain:	53dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (Psat):	47.8dBm typ.
Spurious:	-50dBc typ.
Harmonic:	-45dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Input Power:	0~3dBm
Voltage:	50V DC
Current:	4.5A typ.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off
Indicator:	TTL High: Error

Mechanical

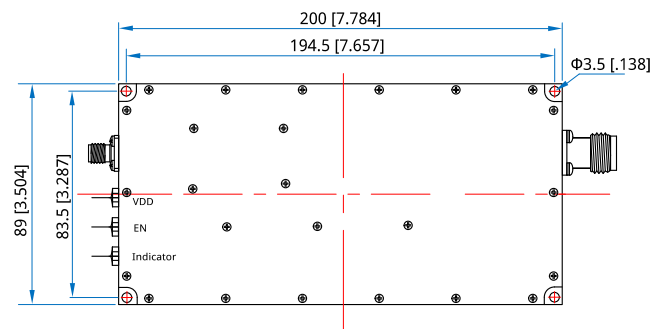
Size*1:	200*89*25mm 7.784*3.504*0.984in
Weight:	2Kg typ.
Input Connectors:	SMA Female
Output Connectors:	N Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.5mm through-hole
Cooling:	Forced air

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-2300-4200-53-47.8S

Customization is available upon request.

NPA-2-30-58-60S

2~30MHz, 58dB, 60dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Power Amplifier

Electrical

Frequency:	2~30MHz
Power Gain:	58dB min.
Gain Range:	30~60dB
Step:	1dB
Gain Flatness:	±2dB typ.
Output Power (Psat):	60dBm min.
Spurious:	-60dBc max.
Harmonic:	-10dBc
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+50V DC
Current:	40A max.
Impedance:	50Ω
Input Power:	+5dBm max.

Mechanical

Size*1:	240*125*45mm 9.449*4.921*1.772in
Weight:	3000g max.
RF Connectors:	N Female
Supply Connectors:	Feed Through
Mounting:	6-Φ3.2mm through-hole

[1] Exclude connectors.

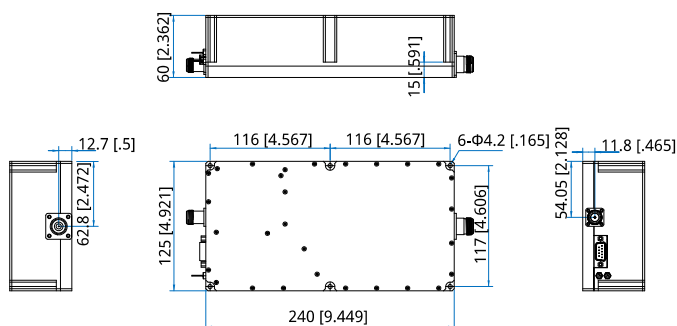
Pin Numbering

Pin	Function	Description information
1	RS485 communication port	T/R+(A)
2	RS485 communication port	T/R-(B)
3~5	GND	GND
6	Working voltage alarm	TTL level, abnormal output high level (+ 5V), normal output low level
7	Working current alarm	TTL level, abnormal output high level (+ 5V), normal output low level
8	Operating temperature alarm	TTL level, abnormal output high level (+ 5V), normal output low level
9	RF switch	TTL High - 1 TTL Low/NC - 0

Environmental

Operating Temperature: -10~+50°C

Outline Drawings



Unit: mm [in]

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

How To Order

NPA-2-30-58-60S

Customization is available upon request.

NPA-24000-26000-30-30

24~26GHz, 30dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	24~26GHz
Gain:	30dB min.
Output Power (P1dB):	30dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.0 typ.
Voltage:	+8V DC
Current:	2.1A typ.
Impedance:	50Ω

Mechanical

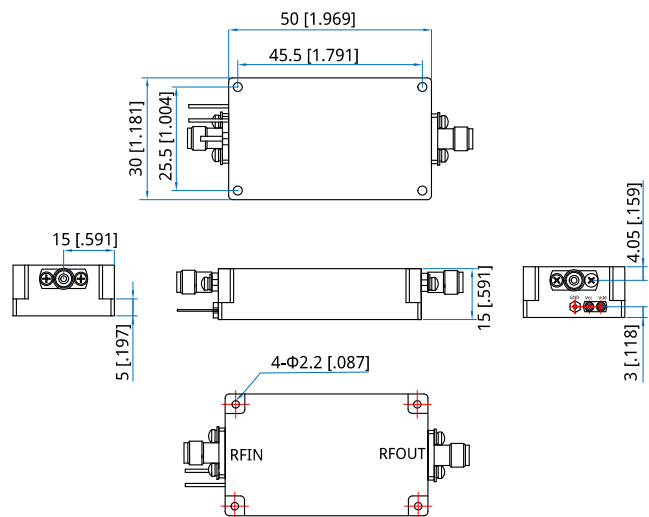
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-24000-26000-30-30

Customization is available upon request.

NPA-24000-26000-30-32

24~26GHz, 30dB, 32dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	24~26GHz
Gain:	30dB min.
Output Power (P1dB):	32dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.0 typ.
Voltage:	+8V DC
Current:	2.5A typ.
Impedance:	50Ω

Mechanical

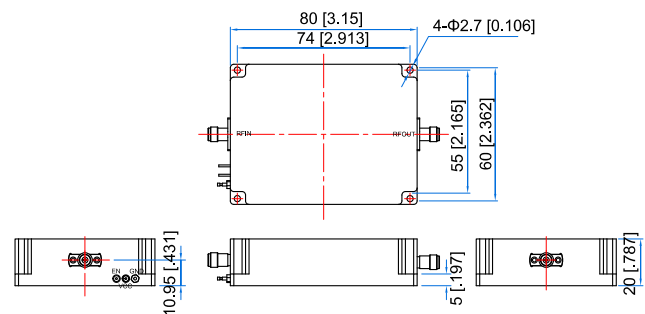
Size*1:	80*60*20mm 3.15*2.362*0.787in
Weight:	200g max.
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.7mm through-hole

[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-24000-26000-30-32

Customization is available upon request.

NPA-25000-28000-18-25

25~28GHz, 18dB, 25dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	25~28GHz
Gain:	18dB typ.
Output Power (P1dB):	25dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.0 typ.
Voltage:	+6V DC
Current:	1.0A typ.
Impedance:	50Ω

Mechanical

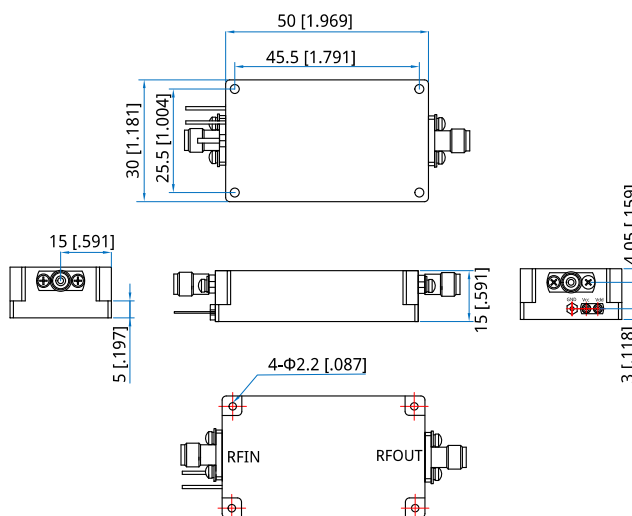
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-25000-28000-18-25

Customization is available upon request.

NPA-2500-2700-50-47.8S

2.5~2.7GHz, 50dB, 47.8dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2.5~2.7GHz
Gain:	50dB typ.
Gain Flatness:	±1dB typ.
Output Power (Psat):	47.8dBm typ.
Spurious:	-50dBc typ.
Harmonic:	-45dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Input Power:	0~3dBm
Voltage:	+32V DC
Current:	5A typ.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off
Indicator:	TTL High: Error

Mechanical

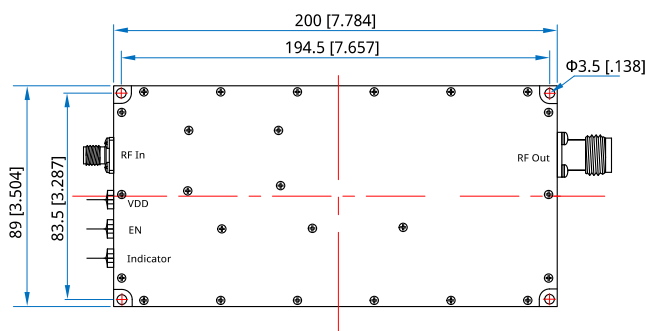
Size*1:	200*89*25mm 7.784*3.504*0.984in
Weight:	2Kg typ.
Input Connectors:	SMA Female
Output Connectors:	N Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.5mm through-hole
Cooling:	Forced air

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-2500-2700-50-47.8S

Customization is available upon request.

NPA-2570-2620-45-40

2570~2620MHz, 45dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2570~2620MHz
Power Gain:	45dB typ.
Gain Flatness:	± 0.75 dB typ.
Output Power (P1dB):	40dBm typ.
Spurious:	-60dBc typ. (DC~10GHz@Pout=40dBm)
2 th Harmonic:	-45dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+30V DC
Input Power:	-2dBm max.

Mechanical

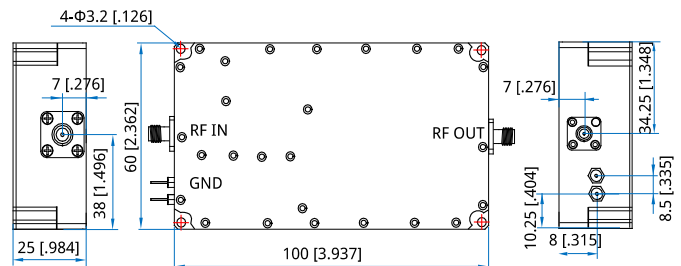
Size*1:	100*60*25mm 3.937*2.362*0.984in
RF Connectors:	SMA female
Power Supply Interface:	Feed through
Mounting:	4- $\Phi 3.2$ mm through-hole
Cooling:	Forced Air

[1] Exclude connectors.

Environmental

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



Unit: mm [in]

Tolerance: ± 0.2 mm [± 0.008 in]

How To Order

NPA-2570-2620-45-40

Customization is available upon request.

NPA-26000-40000-30-30S

26~40GHz, 30dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	26~40GHz
Gain:	30dB min.
Gain Flatness:	±4dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
Harmonic:	-18dBc typ.
VSWR:	2.5 typ.
Voltage:	+8V DC
Current:	3A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

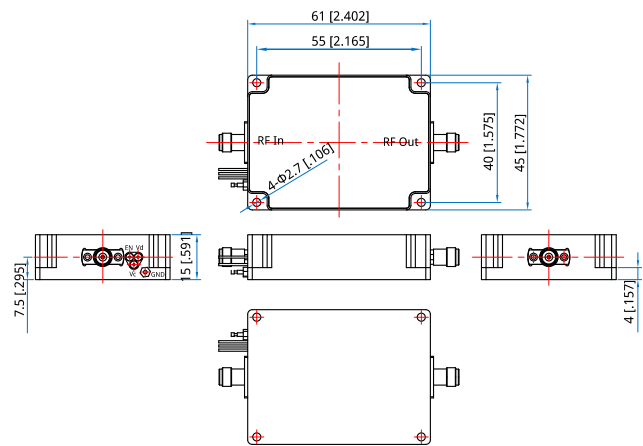
Size*1:	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-45~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-26000-40000-30-30S

Customization is available upon request.

NPA-2620-2690-45-40

2620~2690MHz, 45dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2620~2690MHz
Power Gain:	45dB typ.
Gain Flatness:	± 0.75 dB typ.
Output Power (P1dB):	40dBm typ.
Spurious:	-60dBc typ. (DC~10GHz@Pout=40dBm)
2 th Harmonic:	-45dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+30V DC
Input Power:	-2dBm max.

Mechanical

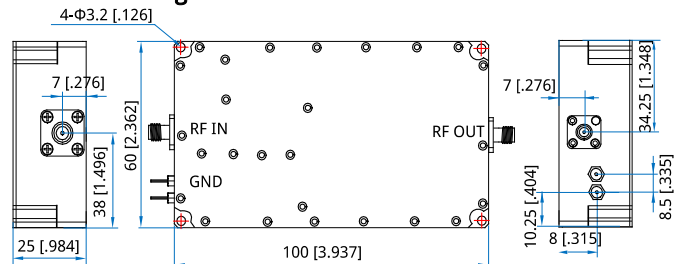
Size ^{*1} :	100*60*25mm 3.937*2.362*0.984in
RF Connectors:	SMA female
Power Supply Interface:	Feed through
Mounting:	4- $\Phi 3.2$ mm through-hole
Cooling:	Forced Air

[1] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ± 0.2 mm [± 0.008 in]

How To Order

NPA-2620-2690-45-40

Customization is available upon request.

NPA-26500-40000-18-23

26.5~40GHz, 18dB, 23dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	26.5~40GHz
Gain:	18dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	23dBm min.
Harmonic:	-15dBc typ.
Spurious:	-60dBc max.
VSWR:	1.8 typ.
Voltage:	+6V DC
Current:	0.5A typ.
Input Power Without Damage:	15dBm max.

Mechanical

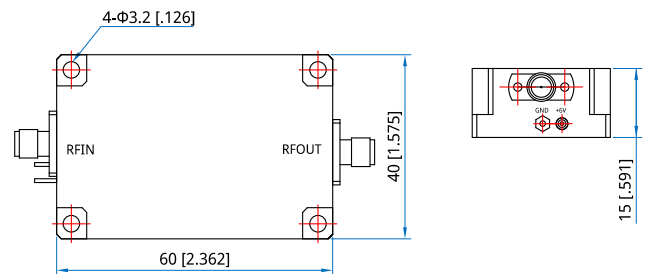
Size ^{*1} :	60*40*15mm 2.362*1.575*0.591in
Weight:	300g
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ3.2mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-26500-40000-18-23

Customization is available upon request.

NPA-26500-40000-25-30S

26.5~40GHz, 25dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

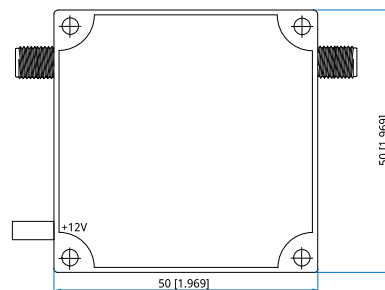
Frequency:	26.5~40GHz
Power Gain:	25dB min.
Gain Flatness:	±5dB typ.
Output Power (Psat):	30dBm typ.
Spurious:	-60dBc typ.
VSWR:	2 max.
Voltage:	+12V DC
Current:	2A

Mechanical

Size*1:	50*50*15mm 1.969*1.969*0.591in
RF Connectors:	2.92mm female
Power Supply Interface:	Feed through

[1] Exclude connectors.

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-26500-40000-25-30S

Customization is available upon request.

NPA-26500-40000-27-27

26.5~40GHz, 27dB, 27dBm

- Features:

 - * Small Size
 - * Low Power Consumption
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test

Electrical

Frequency:	26.5~40GHz
Gain:	27dB min.
Gain Flatness:	±2.0dB typ.
Output Power (P1dB):	27dBm min.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+6.5V DC max.
Current:	2.2A typ.
Input Power:	10 dBm max.

Mechanical

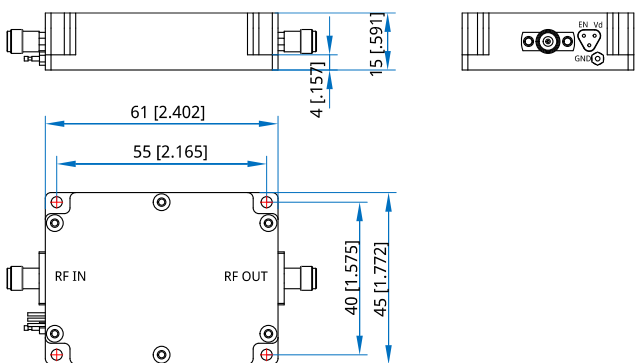
Size* ¹ :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female

[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

NPA-26500-40000-27-27

Customization is available upon request.

NPA-26500-40000-30-26S

26.5~40GHz, 30dB, 26dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	26.5~40GHz
Gain:	30dB min.
Gain Flatness:	±2.0dB typ.
Output Power (Psat):	26dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+6V DC typ.
Current:	1A typ.
Input Power:	+10dBm max.
EN:	TTL High: On TTL Low/NC: Off
Impedance:	50Ω

Mechanical

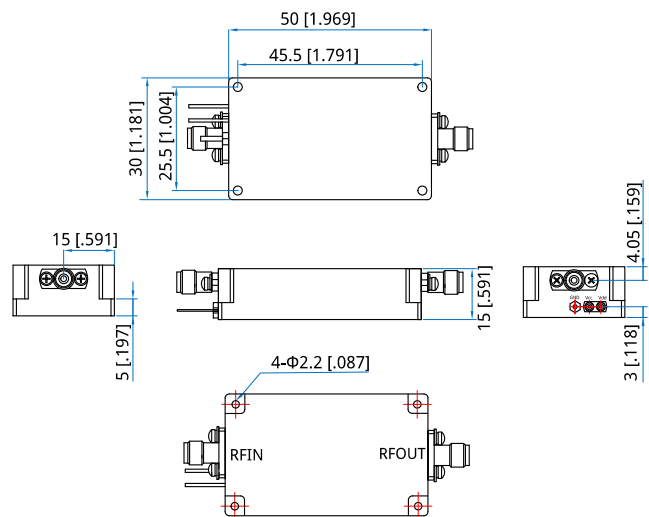
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-45~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-26500-40000-30-26S

Customization is available upon request.

NPA-27000-31000-30-23

27~31GHz, 30dB, 23dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	27~31GHz
Gain:	30dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	23dBm min.
Spurious:	-60dBc max.
Input VSWR:	1.8 typ.
Output VSWR:	2 typ.
Voltage:	+12V DC
Current:	300mA typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

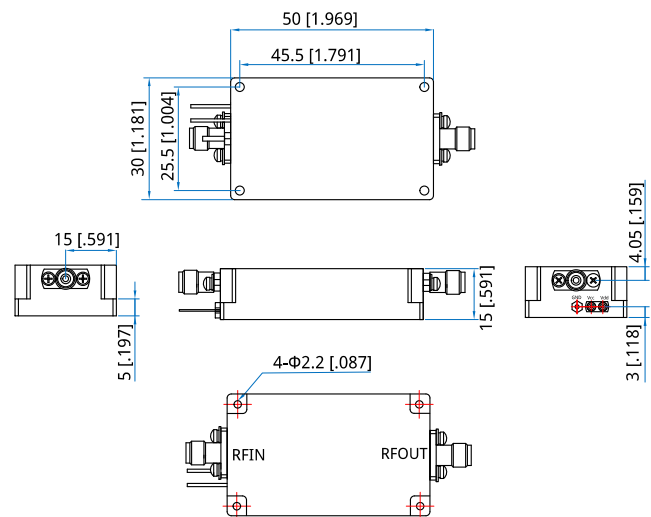
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-27000-31000-30-23

Customization is available upon request.

NPA-2700-2900-42-50S

2.7~2.9GHz, 42dB, 50dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	2.7~2.9GHz
Gain:	42dB min.
Gain Flatness:	±1dB typ.
Input Power:	8dBm
Output Power (Psat):	50dBm typ.
Pulse Width:	100us max.
Duty Cycle:	10% max.
Pass Rise Time:	50ns max.
Pulse Fall Time:	50ns max.
Pulse Top Drop:	1dB max.
Spurious:	-65dBc max.
Harmonic:	-18dBc max.
VSWR:	1.8 typ.
Voltage:	+32V DC
Current:	10A max..

Mechanical

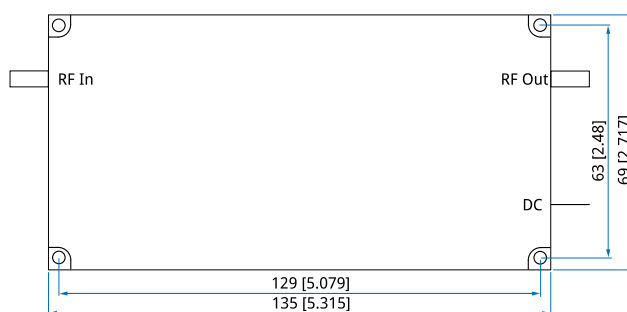
Size*1:	135*69mm 5.315*2.717in
RF Connectors:	SMA Female
Power Supply Interface:	Feed Through/Terminal Post

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+45°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-2700-2900-42-50S

Customization is available upon request.

NPA-27500-31200-25-25

27.5~31.2GHz, 25dB, 25dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	27.5~31.2GHz
Gain:	25dB min.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	25dBm min.
Spurious:	-60dBc max.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+12V DC
Current:	500mA typ.
Input Power:	+15dBm max.
Impedance:	50Ω

Mechanical

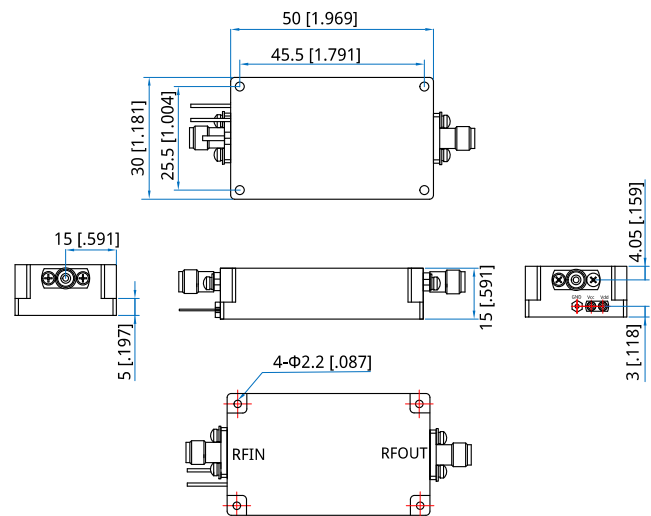
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.2mm through-hole

[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

NPA-27500-31200-25-25

Customization is available upon request.

NPA-29000-31000-35-30

29~31GHz, 35dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	29~31GHz
Gain:	35dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	30dBm min.
Noise Figure:	7.0dB max.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+6V DC
Current:	0.9A typ.

Mechanical

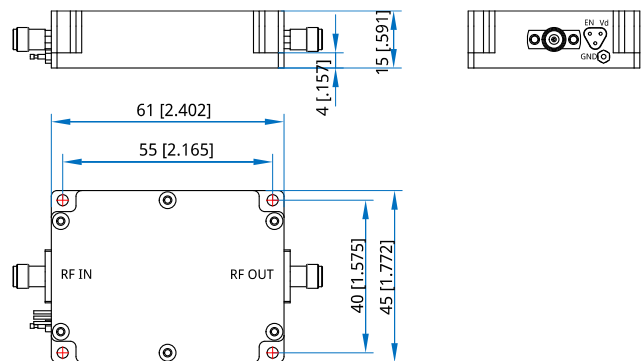
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-29000-31000-35-30

Customization is available upon request.

NPA-29500-31500-20-30

29.5~31.5GHz, 20dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	29.5~31.5GHz
Small Signal Gain:	20dB min.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	30dBm min.
Spurious:	-60dBc max.
VSWR:	2 max.
Voltage:	+12V DC
Current:	0.8A typ.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off

Mechanical

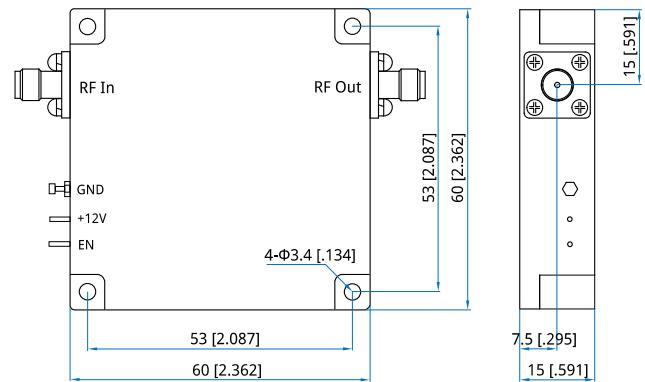
Size*1:	60*60*15mm 2.362*2.362*0.591in
Weight:	400g max.
RF Connectors:	2.92mm female
Power Supply Interface:	Feed through
Mounting:	4-Φ3.4mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-10~+50°C
Non-operating Temperature:	-20~+60°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-29500-31500-20-30

Customization is available upon request.

NPA-30-1000-45-30S

0.03~1GHz, 45dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.03~1GHz
Gain:	40~45dB.
Gain Flatness:	±2.5dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+28V DC
Current:	500mA typ.
Input Power:	0dBm max.
Impedance:	50Ω

Mechanical

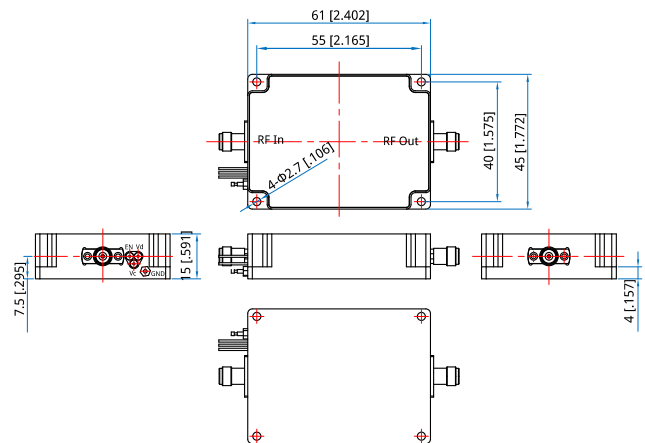
Size* ¹ :	61*45*15mm 3.15*2.362*0.591in
Weight:	300g max.
RF Connectors:	SMA Female

[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

NPA-30-1000-45-30S

Customization is available upon request.

NPA-30-500-32-37S

0.03~0.5GHz, 32dB, 37dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.03–0.5GHz
Gain:	32dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P _{sat}):	37dBm min.
Spurious:	-70dBc max.
VSWR:	2 max.
Voltage:	+12V DC
Current:	1.5A typ.
Input Power:	8dBm max.
Impedance:	50Ω

Mechanical

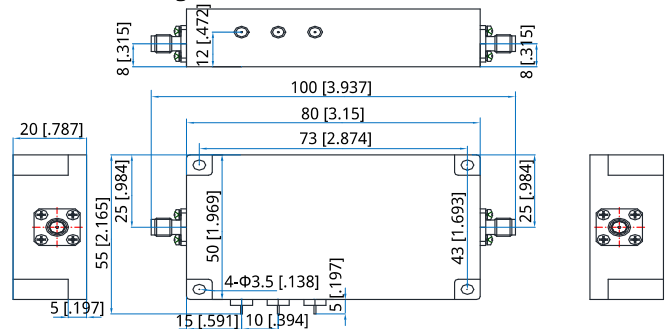
Size*1:	80*50*20mm 2.953*0.709*0.472in
RF Connectors:	SMA Female
Power Supply Interface:	Feed Through/Terminal Post
Mounting:	4-Φ3.5mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+50℃

Outline Drawings



Unit: mm [in]

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

How To Order

NPA-30-500-32-37S

Customization is available upon request.

NPA-32000-36000-35-35S

32~36GHz, 35dB, 35dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	32~36GHz
Gain:	35dB min.
Gain Flatness:	±2.5dB typ.
Output Power (Past):	35dBm typ.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+24~28V DC
Impedance:	50Ω
Input Power:	+10dBm max.

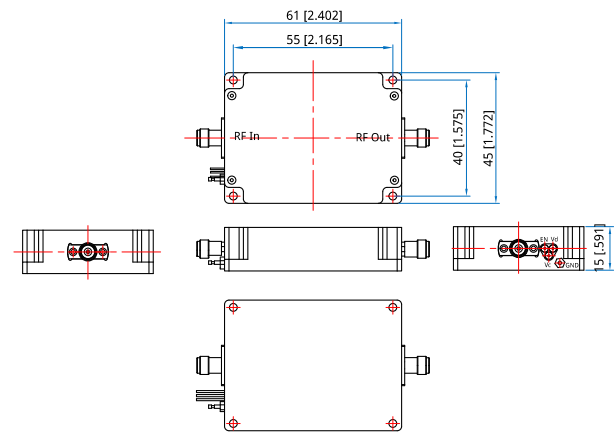
Mechanical

Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	2.92mm female
Power Supply Connectors:	Feed Through

[1] Exclude connectors.

Environmental

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



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-32000-36000-35-35S

Customization is available upon request.

Outline Drawings



NPA-3500-5000-47-47S

3.5~5GHz, 47dB, 47dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Power Amplifier

Electrical

Frequency:	3.5~5GHz
Gain:	47dB min.
Output Power (Psat):	47dBm
Voltage:	+32V

Mechanical

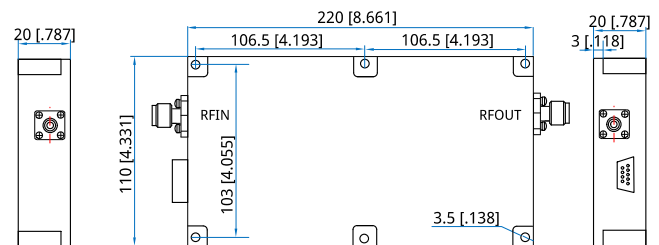
Size:	220*110*20mm
	8.661*4.331*0.787in
RF Connectors:	SMA Female

Pin Numbering

Pin	Function	Pin	Function
1	+32V	6	GND
2	+32V	7	GND
3	+32V	8	GND
4	NC	9	+5V
5	PE*1		

[1]High for work, low for no work

Outline Drawings



Unit: mm [in]

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

How To Order

NPA-3500-5000-47-47S

Customization is available upon request.



NPA-3500-5000-50-50S

3.5~5GHz, 50dB, 50dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	3.5~5GHz
Gain:	50dB min.
Output Power (Psat):	50dBm
Voltage:	+32V

Mechanical

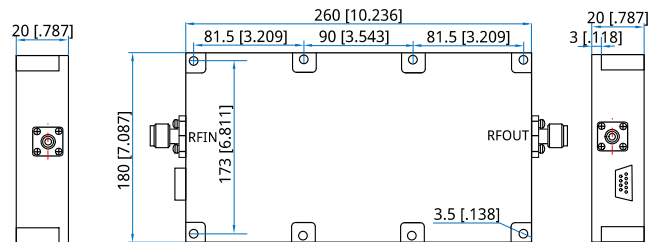
Size:	260*180*20mm 10.236*7.087*0.787in
RF Connectors:	SMA Female

Pin Numbering

Pin	Function	Pin	Function
1	+32V	6	GND
2	+32V	7	GND
3	+32V	8	GND
4	NC	9	+5V
5	PE* ^[1]		

[1]High for work, low for no work

Outline Drawings



Unit: mm [in]

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

How To Order

NPA-3500-5000-50-50S

Customization is available upon request.

NPA-36000-50000-20-30

36~50GHz, 20dB, 30dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	36~50GHz
Gain:	19dB min. 20dB typ.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	29dBm min. 30dBm typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	3.5A typ.
Input Power:	+15dBm max.
Impedance:	50Ω

Mechanical

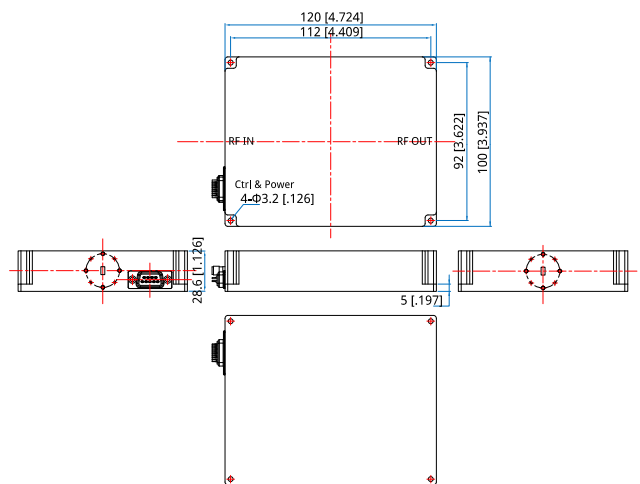
Size*1:	120*100*28.6mm 4.724*3.937*1.126in
Weight:	600g max.
RF Connectors:	WR22
Power supply & Control	J30J-9ZK
Interface:	
Mounting:	4-Φ3.2mm through-hole

[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

NPA-36000-50000-20-30

Customization is available upon request.

NPA-37000-40000-45-34-F

37~40GHz, 45dB, 34dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	37~40GHz
Gain:	45dB min.
Output Power (P1dB):	34dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+6V DC
Current:	4.5A typ.
Impedance:	50Ω

Mechanical

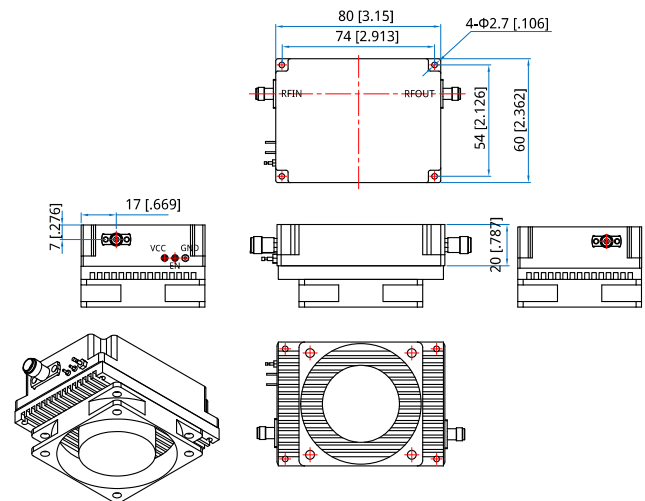
Size ^{*1} :	80*60*20mm 3.15*2.362*0.787in
Weight:	0.5kg max.
RF Connectors:	2.92mm Female
Housing Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole
Cooling:	Forced Air

[1] Exclude connectors, heatsink, fan.

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-37000-40000-45-34-F

Customization is available upon request.

NPA-37000-43000-10-15

37~43GHz, 10dB, 15dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	37~43GHz
Gain:	10dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	15dBm min.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+6V DC
Current:	400mA typ.
Input Power:	0dBm max.

Mechanical

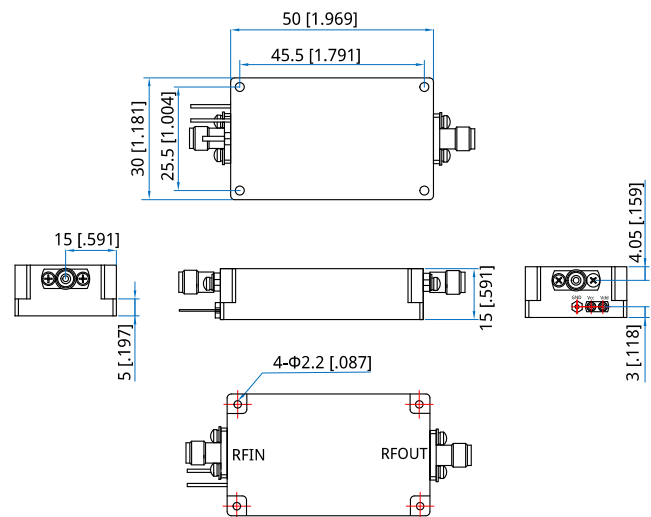
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	2.92mm Female
Control Interface:	Feed Through
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-30~+70°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-37000-43000-10-15

Customization is available upon request.

NPA-38000-42000-25-30

38~42GHz, 25dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	38~42GHz
Gain:	25dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	29dBm min. 30dBm typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+6V DC
Current:	2.2A typ.
Input Power:	+15dBm max.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off

Mechanical

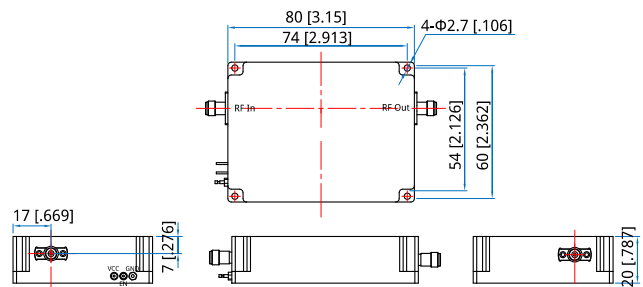
Size* ¹ :	80*60*20mm 3.15*2.362*0.787in
Weight:	300g max.
RF Connectors:	2.92mm Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-38000-42000-25-30

Customization is available upon request.

NPA-39000-40000-40-33

39~40GHz, 40dB, 33dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	39~40GHz
Gain:	40dB min.
Output Power (P1dB):	33dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+6V DC
Current:	4.5A typ.
Impedance:	50Ω

Mechanical

Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
Weight:	0.5kg max.
RF Connectors:	2.92mm Female
Housing Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors, heatsink, fan.

Environmental

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

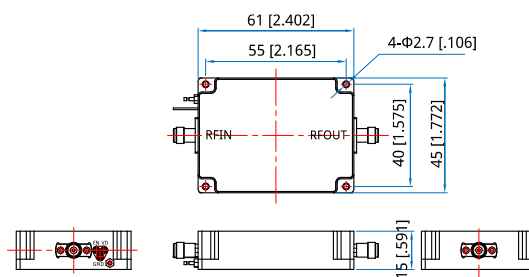
How To Order

NPA-39000-40000-40-33 - Outline A

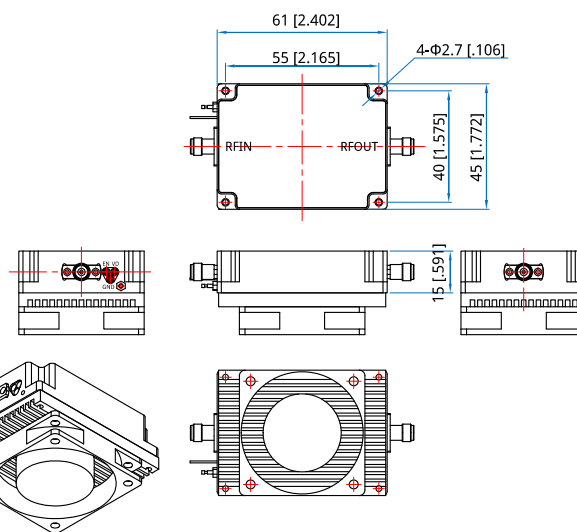
NPA-39000-40000-40-33-F - Outline B

Customization is available upon request.

Outline Drawings



Outline A



Outline B

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

NPA-40000-50000-20-20

40~50GHz, 20dB, 20dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	40~50GHz
Gain:	20dB typ.
Output Power (P1dB):	20dBm typ.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2 typ.
Output VSWR:	2 typ.
Voltage:	+6V DC
Current:	300mA typ.

Mechanical

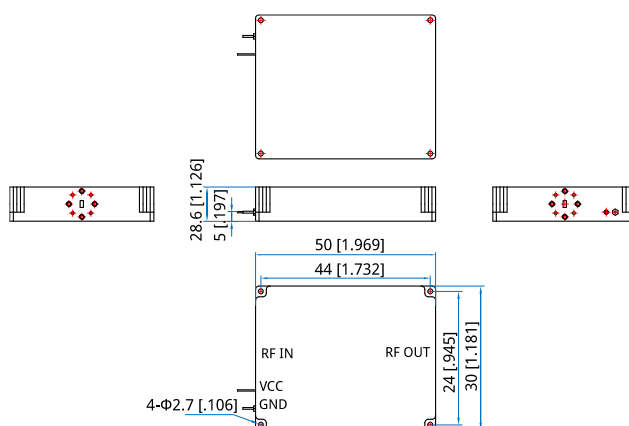
Size*1:	50*30*28.6mm 1.969*1.181*1.126in
Weight:	300g max.
Interface:	WR-22
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole
Cooling:	External Heatsink (supplied on request only)

[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

NPA-40000-50000-20-20

Customization is available upon request.

NPA-40000-50000-45-29S

40~50GHz, 45dB, 29dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	40~50GHz
Gain:	45dB typ.
Gain Flatness:	±2dB max.
Output Power (Psat):	29dBm min.
Input VSWR:	1.8 max.
Output VSWR:	2 max.
Voltage:	5~6V
Power:	20W max.
Protection:	Turn off automatically on temperature or voltage exception.
EN:	TTL High: ON TTL Low/NC: OFF

Mechanical

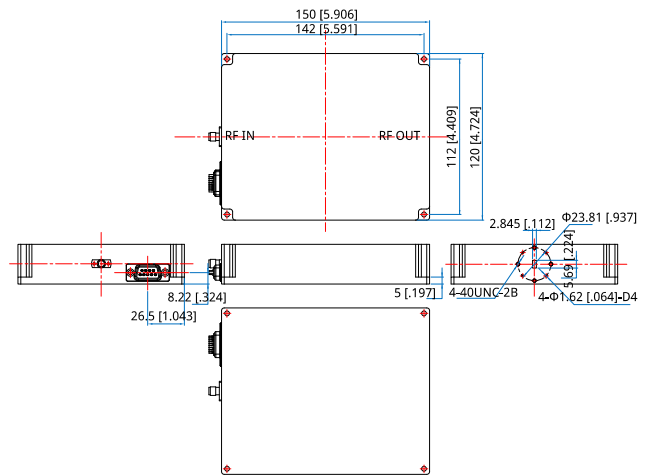
Size ^{*1} :	150*120*30mm 2.362*1.969*0.669in
Weight:	1000g max.
RF In Connectors:	2.4mm Female
RF Out Connectors:	WR-22
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	0~+45°C
Non-operating Temperature:	0~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-40000-50000-45-29S

Customization is available upon request.

NPA-40000-53000-40-18S

40~53GHz, 40dB, 18dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	40~53GHz
Gain:	40dB min.
Gain Flatness:	±2dB typ.
Output Power (Psat):	18dBm min.
Noise Figure:	8dB max.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	0.9A typ.
Input Power:	0dBm max.
Impedance:	50Ω

Mechanical

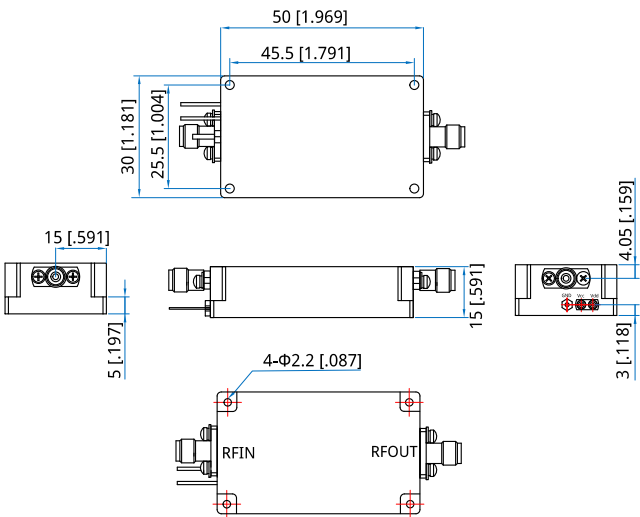
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	300g max.
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.2mm through-hole

[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

NPA-40000-53000-40-18S

Customization is available upon request.

NPA-40000-60000-35-20S

40~60GHz, 35dB, 20dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	40~60GHz
Small Signal Gain:	35dB min..
Gain Flatness:	±5dB max.
Output Power (Psat):	20dBm min.
VSWR:	2 typ.
Voltage:	+7V DC
Current:	1.2A typ.
Input Power:	-5dBm max.
Impedance:	50Ω

Mechanical

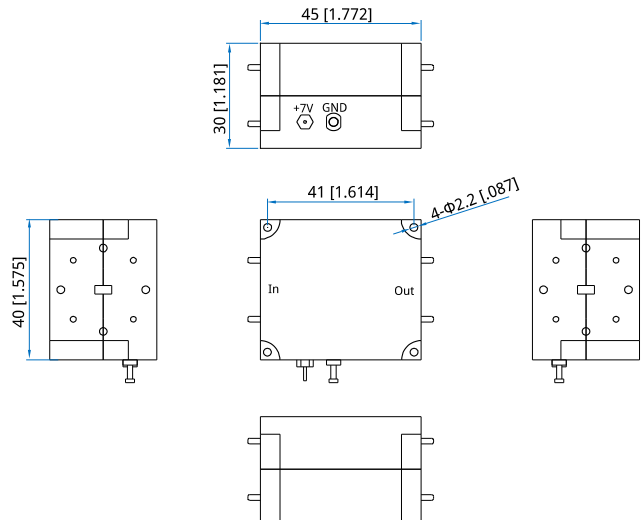
Size*1:	45*30*40mm 1.772*1.181*1.575in
Interface:	WR19
Mounting:	4-Φ2.2mm through-hole

[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

NPA-40000-60000-35-20S

Customization is available upon request.

NPA-40000-60000-36-20S

40~60GHz, 36dB, 20dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	40~60GHz
Gain:	36dB min.
Output Power (P1dB):	18dBm typ.
Output Power (Psat):	20dBm typ.
Noise Figure:	5dB typ.
Input VSWR:	2.6 typ.
Output VSWR:	2.6 typ.
Voltage:	+5V DC
Current:	500mA typ. @No RF 720mA typ @Psat
Input Power:	+5dBm max.

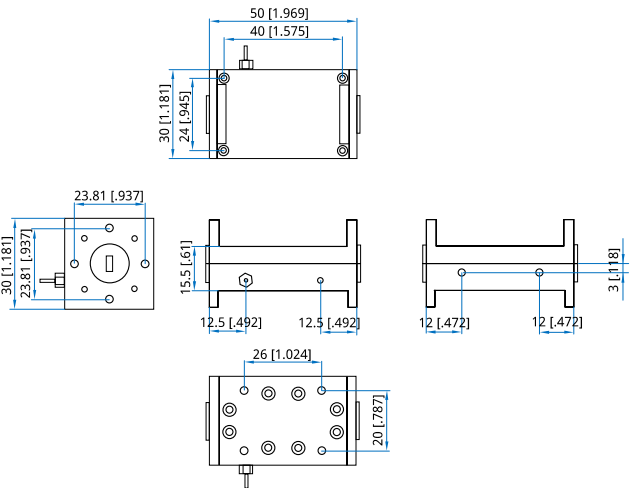
Mechanical

Size:	50*30*30mm 1.969*1.181*1.181in
Weight:	100g
Interface:	WR-19

Environmental

Operating Temperature:	0~+50°C
Non-operating Temperature:	-65~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-40000-60000-36-20S

Customization is available upon request.

NPA-40000-60000-40-20S

40~60GHz, 40dB, 20dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	40~60GHz
Gain:	40dB typ.
Gain Flatness:	±2.5dB typ.
Output Power (Psat):	19dBm min. 20dBm typ.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
VSWR:	2.0 typ.
Voltage:	+15V DC
Current:	0.8A typ.
Impedance:	50Ω

Mechanical

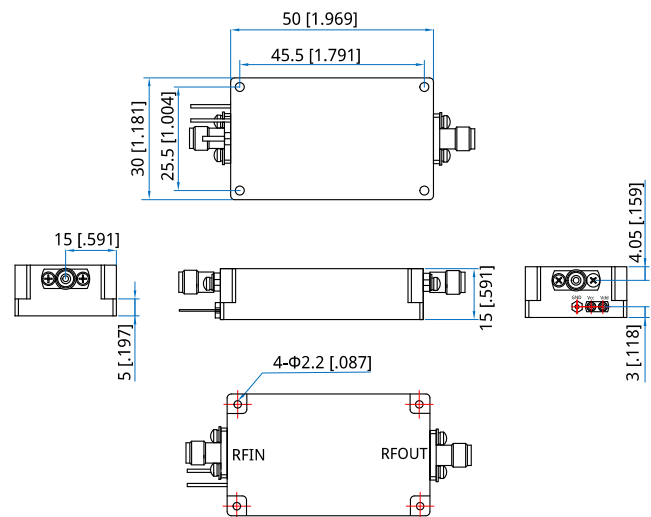
Size* ¹ :	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	1.85mm Female
Mounting:	4-Φ2.2mm through-hole

[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-40000-60000-40-20S

Customization is available upon request.

NPA-4000-5000-42-41.7S

4~5GHz, 42dB, 41.7dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	4~5GHz
Gain:	42dB min.
Gain Flatness:	±2dB typ.
Output Power (Psat):	41.7dBm typ.
Spurious:	-60dBc max.
VSWR:	2 max.
Voltage:	+24V DC
Current:	2.1A typ
Impedance:	50Ω
Input Power:	5dBm max.

Mechanical

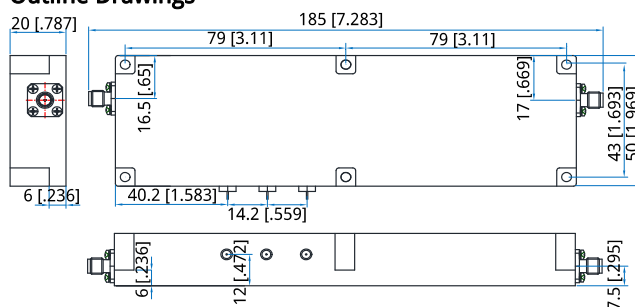
Size ^{*1} :	165*50*20mm 6.496*1.969*0.787in
RF Connectors:	SMA female
Power Supply & Control	DB-9
Interface:	
Mounting:	6-Φ3.5mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -40~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-4000-5000-42-41.7S

Customization is available upon request.

NPA-400-6000-30-25

0.4~6GHz, 30dB, 25dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.4~6GHz
Small Signal Gain:	30dB min.
Gain Flatness:	±2dB max.
Output Power (P1dB):	25dBm min.
Input VSWR:	2.0 max.
Voltage:	+12V DC
Current:	0.6A typ.
Impedance:	50Ω

Mechanical

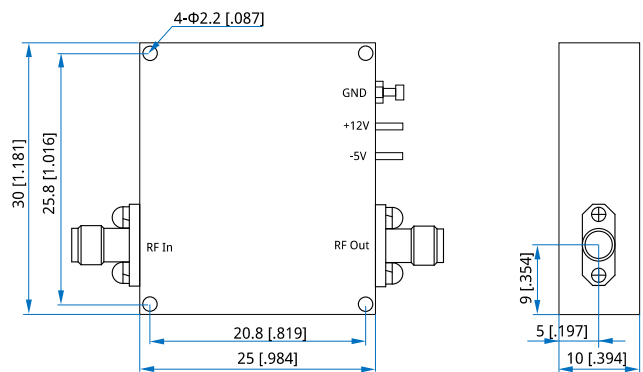
Size ^{*1} :	30*25*10mm 1.181*0.984*0.394in
RF Connector:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60°C
Non-operating Temperature:	-55~+100°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-400-6000-30-25

Customization is available upon request.

NPA-400-8000-40-22

0.4~8GHz, 40dB, 22dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.4~8GHz
Gain:	40dB min.
Gain Flatness:	±1.5dB max.
Output Power (P1dB):	22dBm min.
Noise Figure:	4dB max.
Spurious:	-60dBc max.
Input VSWR:	2 typ.
Output VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	400mA typ.
Input Power:	+15dBm max.
Impedance:	50Ω

Mechanical

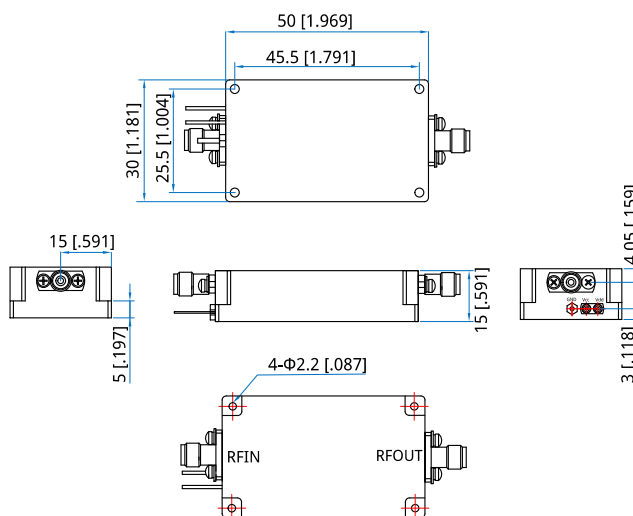
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	200g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-400-8000-40-22

Customization is available upon request.

NPA-410-950-45-47S

0.41~0.95GHz, 45dB, 47dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.41~0.95GHz
Gain:	45dB typ.
Gain Flatness:	±2dB typ.
Output Power (Psat):	47dBm typ.
Spurious:	-50dBc typ.
Harmonic:	-10dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Input Power:	5~7dBm
Voltage:	+28V DC
Current:	6A typ.
Impedance:	50Ω
EN:	TTL High: On
	TTL Low/NC: Off

Mechanical

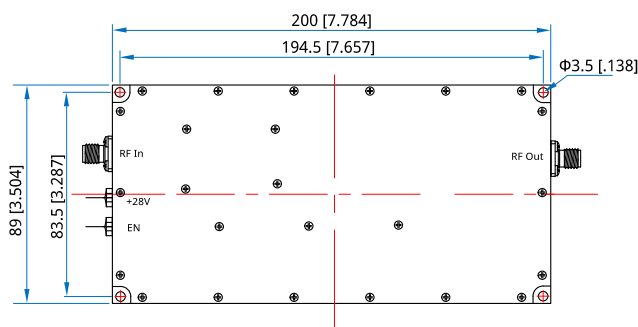
Size*1:	200*89*25mm
	7.784*3.504*0.984in
Weight:	2Kg typ.
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.5mm through-hole
Cooling:	Forced air

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
------------------------	-----------

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-410-950-45-47S

Customization is available upon request.

NPA-4400-5000-35-33

4.4~5GHz, 35dB, 33dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	4.4~5GHz
Power Gain:	35dB typ.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	33dBm typ.
Spurious:	-60dBc typ.
	DC~10GHz@Pout=33dBm
Harmonic:	-30dBc typ.
	2 th @Pout=33dBm
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+30V DC
Input Power:	+3dBm max.

Mechanical

Size*1:	162*72*26mm
	6.378*2.756*1.024in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.2mm through-hole

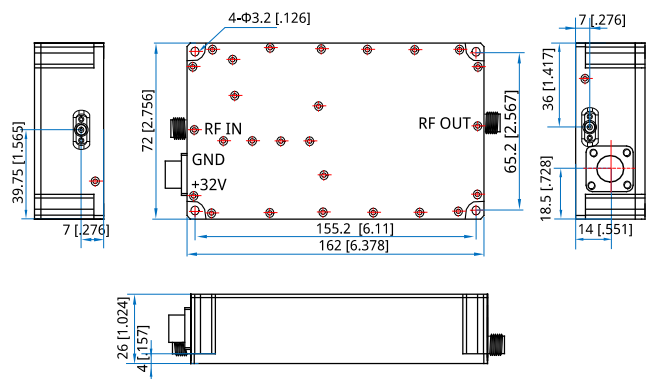
[1] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings

(Reference dimension, subject to the real object)



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-4400-5000-35-33

Customization is available upon request.

NPA-47000-52000-20-30S

47~52GHz, 20dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	47~52GHz
Gain:	20dB min.
Gain Flatness:	± 1.5 dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+15V DC
Current:	0.5A typ.
Input Power:	+10dBm max.
Impedance:	50 Ω

Mechanical

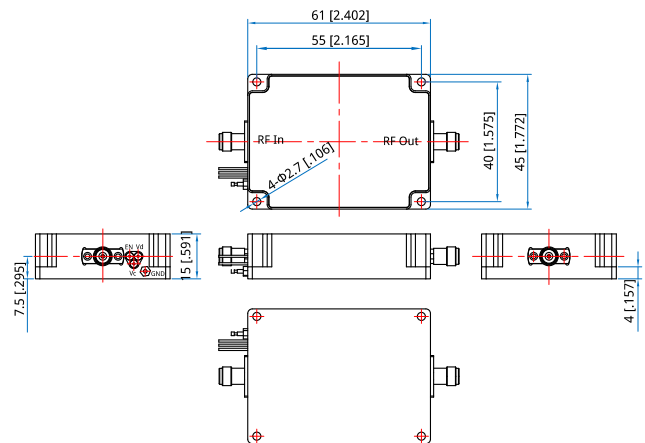
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.4mm Female
Mounting:	4- Φ 2.7mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ± 0.2 mm [± 0.008 in]

How To Order

NPA-47000-52000-20-30S

Customization is available upon request.

NPA-47000-52000-25-30S

47~52GHz, 25dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	47~52GHz
Gain:	25dB min..
Gain Flatness:	±1.5dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+15V DC
Current:	0.5A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

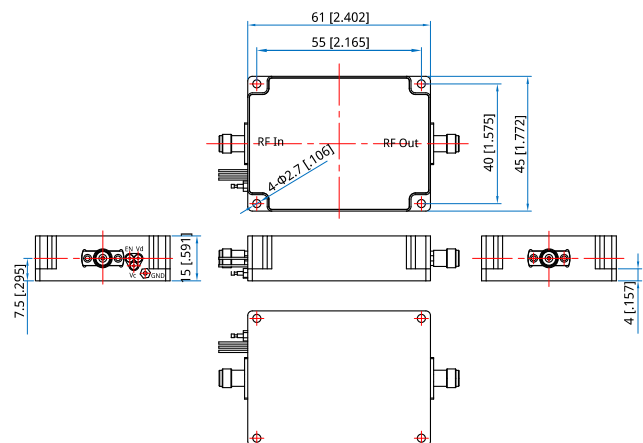
Size* ¹ :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	2.4mm Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-47000-52000-25-30S

Customization is available upon request.

NPA-47000-52000-30-30S

47~52GHz, 30dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	47~52GHz
Gain:	30dB min..
Gain Flatness:	±2dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+15V DC
Current:	1A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

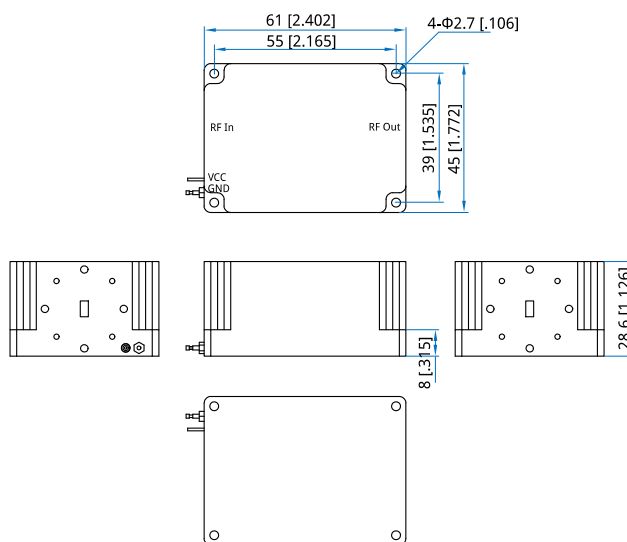
Size*1:	61*45*28.6mm 2.402*1.772*1.126in
Weight:	300g
Interface:	WR19
Mounting:	4-Φ2.7mm through-hole

[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

NPA-47000-52000-30-30S

Customization is available upon request.

NPA-50000-75000-35-20S

50~75GHz, 35dB, 20dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	50~75GHz
Gain:	35dB min.
Output Power (P1dB):	18dBm typ.
Output Power (Psat):	20dBm typ.
Noise Figure:	5dB typ.
Input VSWR:	2.6 typ.
Output VSWR:	2.6 typ.
Voltage:	+5V DC
Current:	600mA typ.
Input Power:	+10dBm max.

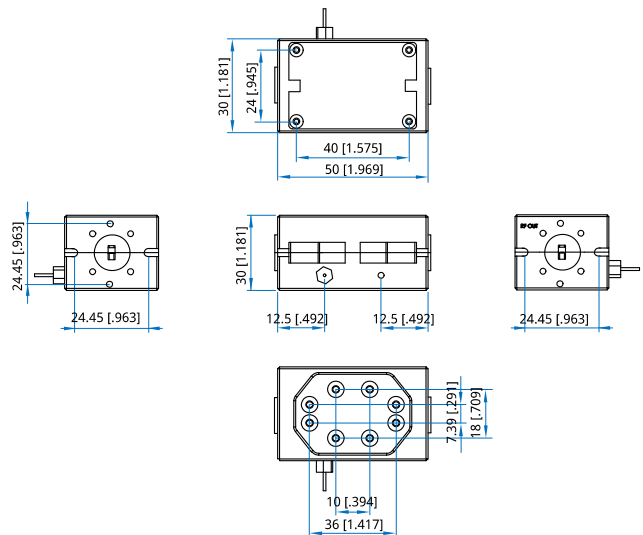
Mechanical

Size:	50*30*30mm 1.969*1.181*1.181in
Weight:	100g
Interface:	WR-15

Environmental

Operating Temperature:	0~+50°C
Non-operating Temperature:	-65~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-50000-75000-35-20S

Customization is available upon request.



NPA-500-2000-30-40S

0.5~2GHz, 30dB, 40dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Power Amplifier

Electrical

Frequency:	0.5~2GHz
Gain:	30dB min.
Gain Flatness:	±2dB typ.
Output Power (Psat):	40dBm min.
Spurious:	-55dBc max.
Input VSWR:	2 max.
Voltage:	+28V DC
Control interface:	PE(high: +3.3V)
Input Power:	10dBm max.

Mechanical

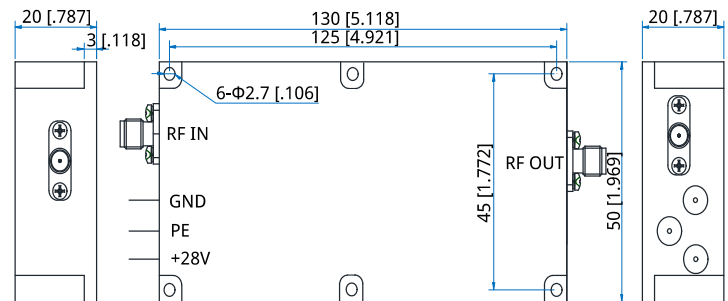
Size*1:	130*50*20mm 5.118*1.969*0.787in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	6-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+50°C
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Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-500-2000-30-40S

Customization is available upon request.

NPA-500-2500-46-43

0.5~2.5GHz, 46dB, 43dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.5~2.5GHz
Gain:	46dB min.
Gain Flatness:	±2.5dB typ.
Output Power (P1dB):	43dBm min.
Spurious:	-52dBc max.
Harmonic:	-13dBc max.
VSWR:	2 typ.
Voltage:	+32V DC
Current:	4A typ. 8A max.

Mechanical

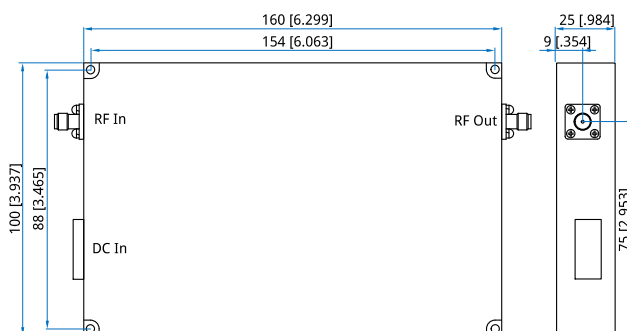
Size*1:	160*100*25mm 6.299*3.937*0.984in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-500-2500-46-43

Customization is available upon request.

NPA-500-6000-30-37

0.5~6GHz, 30dB, 37dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.5~6GHz
Gain:	30dB min.
Gain Flatness:	±3.5dB typ.
Output Power (P1dB):	37dBm typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+50V DC
Current:	1000mA typ.
Input Power:	+10dBm max.
Impedance:	50Ω
EN:	TTL High: On TTL Low/NC: Off

Mechanical

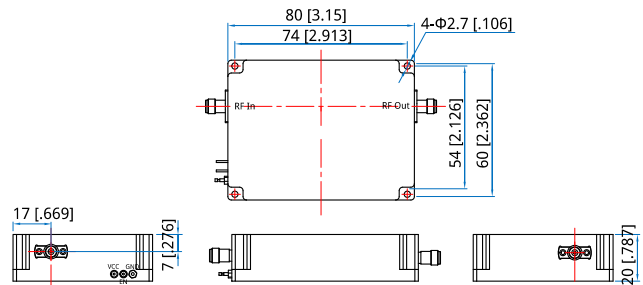
Size*1:	80*60*20mm 3.15*2.362*0.787in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-500-6000-30-37

Customization is available upon request.

NPA-5100-5900-33-40S

5.1~5.9GHz, 33dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	5.1~5.9GHz
Power Gain:	33dB min.
Gain Flatness:	±1.5dB typ.
Output Power (Psat):	40dBm typ.
Spurious:	-60dBc typ.
Harmonic:	-15dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+24V DC
Input Power:	13dBm max.

Mechanical

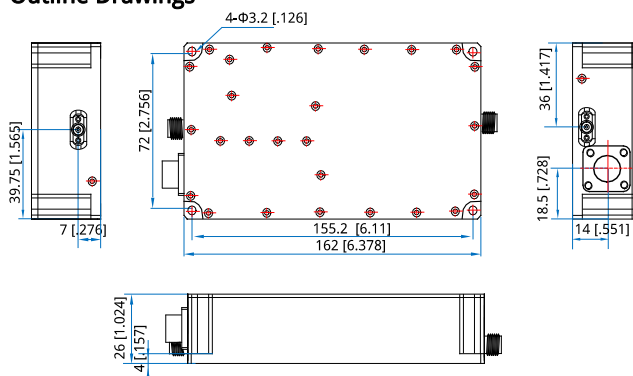
Size ^{*1} :	162*72*26mm 6.378*2.756*1.024in
Weight:	2kg
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-5100-5900-33-40S

Customization is available upon request.

NPA-5-500-46-37S

5~500MHz, 46dB, 37dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	5~500MHz
Gain:	46dB min.
Gain Flatness:	±2dB typ.
Input VSWR:	2 typ.
Output Power (Psat):	37dBm min.
Input Power:	10dBm max.
Impedance:	50Ω
Voltage:	+24~28V DC

Mechanical

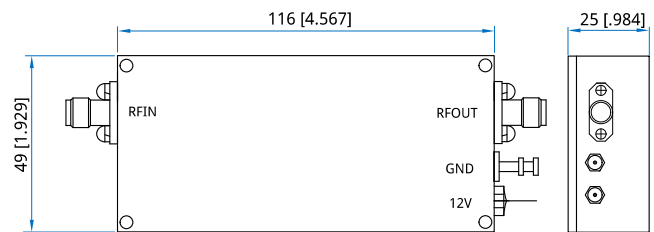
Size*1:	116*49*25mm 4.567*1.929*1.984in
RF Connectors:	SMA Female

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-45~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order [NPA-5-500-46-37S](#)

Customization is available upon request.

NPA-60000-67000-30-27

60~67GHz, 30dB, 27dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	60~67GHz
Gain:	30dB typ.
Gain Flatness:	±2dB typ.
Output Power (Psat):	30dBm typ.
Output Power (P1dB):	27dBm typ.
Spurious:	-60dBc max.
VSWR:	2.0 typ.
Voltage:	+4.5V DC
Current:	3A typ.
Input Power:	+10dBm max.

Mechanical

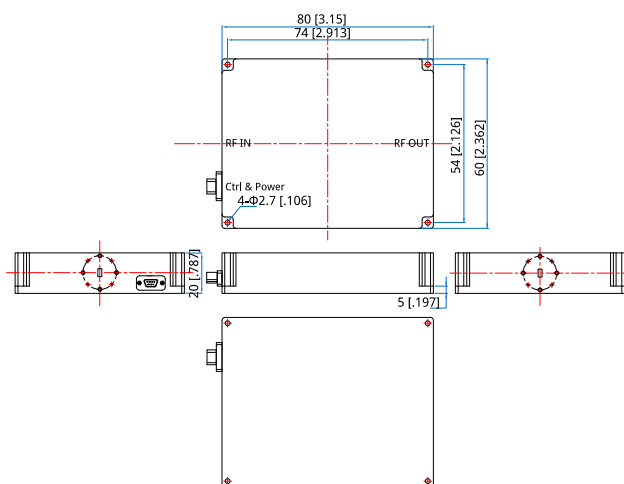
Size*1:	80*60*20mm 3.15*2.362*0.787in
RF Connectors:	WR15
Power Supply & Control Interface:	J30J-9ZK
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-40~+70°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Pin Numbering

Pin	Function	Pin	Function
1, 2, 3, 4, 5	+4.5V	6, 7, 8, 9	GND

How To Order

NPA-60000-67000-30-27

Customization is available upon request.

NPA-6000-18000-25-26S

6~18GHz, 25dB, 26dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	6~18GHz
Gain:	25dB min.
Gain Flatness:	±1dB typ.
Output Power (Psat):	26dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	0.4A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

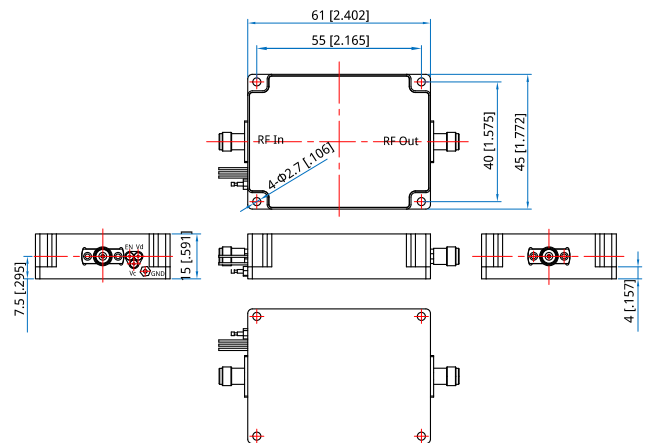
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-6000-18000-25-26S

Customization is available upon request.

NPA-6000-18000-33-26S

6~18GHz, 33dB, 26dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	6~18GHz
Gain:	33dB min.
Gain Flatness:	±1dB typ.
Output Power (Psat):	26dBm min.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+12V DC
Current:	0.4A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

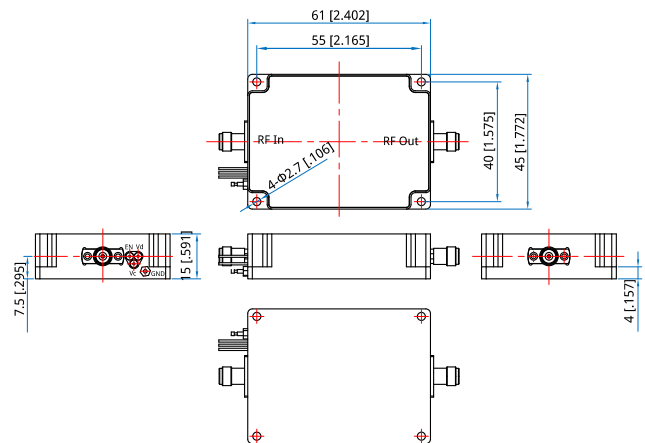
Size* ¹ :	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-6000-18000-33-26S

Customization is available upon request.



NPA-6000-18000-35-33S

6~18GHz, 35dB, 33dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	6~18GHz
Small Signal Gain:	35dB min.
Gain Flatness:	±3dB max.
Output Power (Psat):	33dBm min.
Spurious:	-60dBc max.
Input VSWR:	2 max.
Voltage:	+12V DC
Current:	3A max.
Impedance:	50Ω
Input Power:	+10dBm typ.

Mechanical

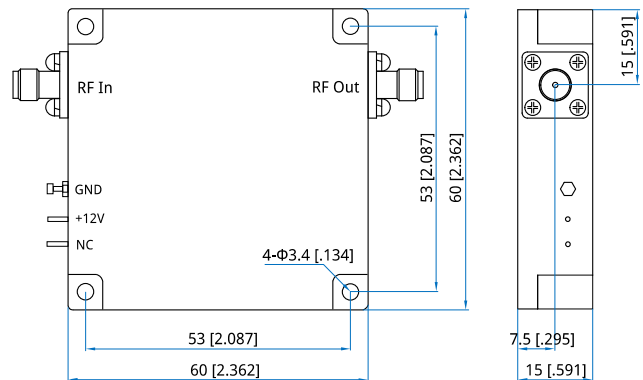
Size ^{*1} :	60*60*15mm 2.362*2.362*0.591in
Weight:	200g max.
RF Connectors:	SMA female
Power Supply Interface:	Feed through
Mounting:	4-Φ3.4mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-40~+70°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-6000-18000-35-33S

Customization is available upon request.

NPA-6000-18000-35-35S

6~18GHz, 35dB, 35dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	6~18GHz
Gain:	35dB min.
Gain Flatness:	±2.5dB typ.
Output Power (Psat):	35dBm typ.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+24~28V DC
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

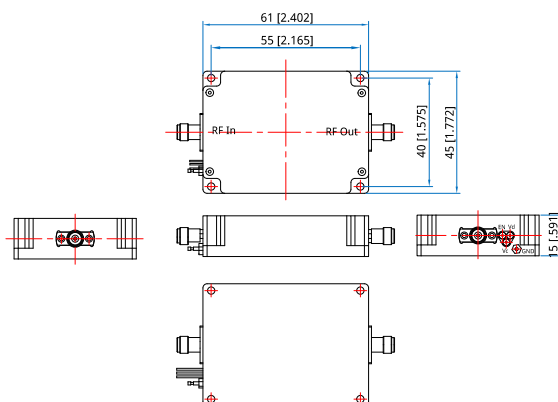
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	SMA

[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

NPA-6000-18000-35-35S

Customization is available upon request.



NPA-6000-18000-40-40S

6~18GHz, 40dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	6~18GHz
Gain:	40dB min.
Gain Flatness:	±3dB typ.
Output Power (Psat):	40dBm typ.
Spurious:	-60dBc max.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+24~28V DC
Impedance:	50Ω
Input Power:	+10dBm max.

Mechanical

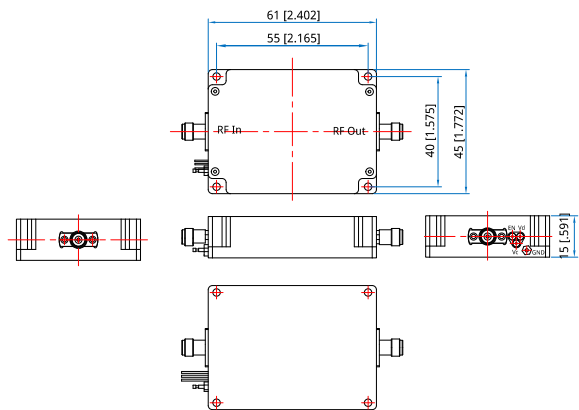
Size ^{*1} :	61*45*15mm 2.402*1.772*0.591in
RF Connectors:	SMA

[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

NPA-6000-18000-40-40S

Customization is available upon request.

NPA-6000-18000-45-47S

6~18GHz, 45dB, 47dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	6~18GHz
Gain:	45dB min.
Output Power (Psat):	47dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+28V DC
Current:	9A typ.
Impedance:	50Ω

Mechanical

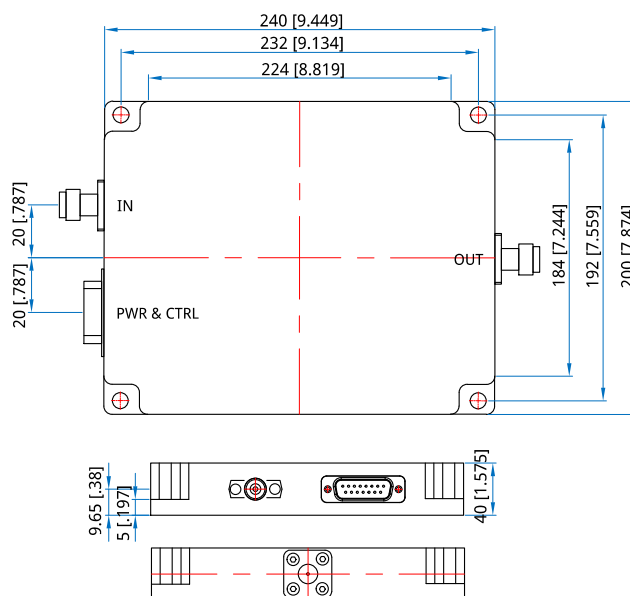
Size*1:	240*200*40mm 9.449*7.874*1.575in
Weight:	2Kg max.
RF Input Connector:	SMA Female
RF Input Connector:	N Female
Power Supply Connectors:	DB-9S
Housing Material:	Aluminum
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-6000-18000-45-47S

Customization is available upon request.

NPA-600-12000-30-20

0.6~12GHz, 30dB, 20dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.6~12GHz
Gain:	30dB typ.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	20dBm min.
Spurious:	-60dBc max.
VSWR:	1.8 typ.
Voltage:	+12V DC
Current:	0.3A typ.
Input Power:	10dBm max.
Impedance:	50Ω

Mechanical

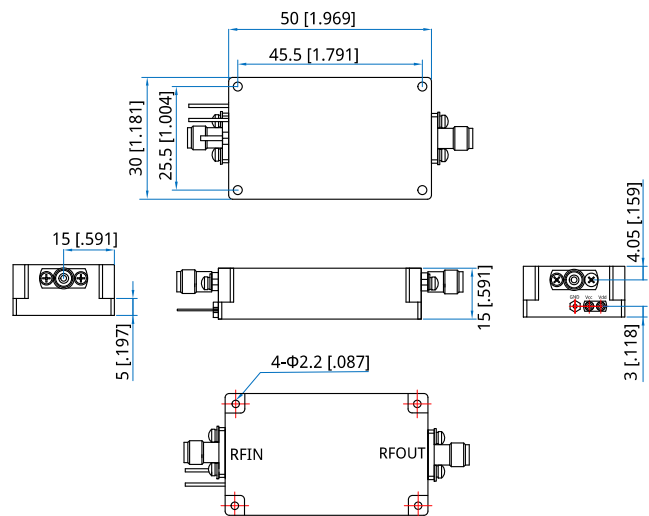
Size*1:	50*30*15mm 1.969*1.181*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.2mm through-hole

[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

NPA-600-12000-30-20

Customization is available upon request.

NPA-61000-65000-18-26S

61~65GHz, 18dB, 26dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	61~65GHz
Gain:	18dB typ.
Gain Flatness:	±1.0dB typ.
Output Power (Psat):	26dBm min.
Output Power (P1dB):	23dBm min.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC (+4.8V min., +5.5V max.)
Current:	2A typ.
Input Power Without Damage:	15 dBm max.

Mechanical

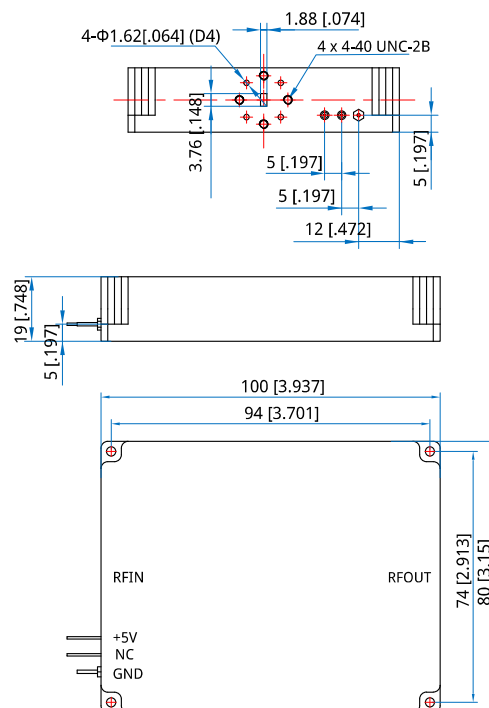
Size*1:	100*80*19mm 3.937*3.15*0.748in
Weight:	500g max.
Interface:	WR-15
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Cooling:	External Heatsink (supplied on request only)

[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

NPA-61000-65000-18-26S

Customization is available upon request.

NPA-61000-65000-20-20S

61~65GHz, 20dB, 20dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	61~65GHz
Gain:	20dB typ.
Gain Flatness:	±1.5dB typ.
Output Power (Psat):	20dBm min.
Output Power (P1dB):	17dBm min.
Input VSWR:	2.0 typ.
Output VSWR:	2.0 typ.
Voltage:	+5V DC (+4.8V min., +5.2V max.)
Current:	0.5A typ.
Input Power Without Damage:	10dBm max.

Mechanical

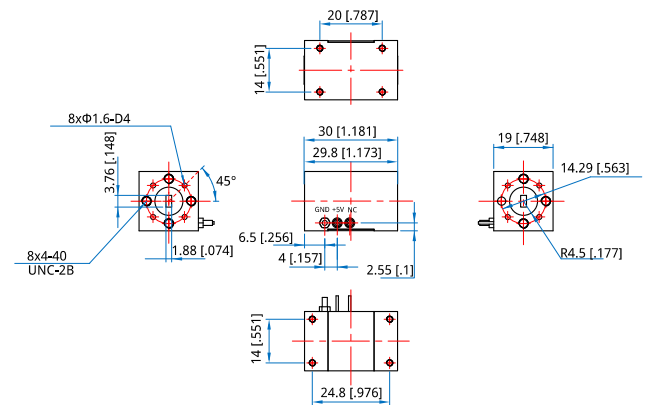
Size*1:	30*19*19mm 1.181*0.748*0.748in
Weight:	26g
Interface:	WR-15
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Cooling:	External Heatsink (supplied on request only)

[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

NPA-61000-65000-20-20S

Customization is available upon request.

NPA-700-4200-43-40S

0.7~4.2GHz, 43dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.7~4.2GHz
Power Gain:	43dB typ.
Gain Flatness:	±3dB typ.
Output Power (Psat):	40dBm min.
Spurious:	-60dBc typ.
Harmonic:	-15dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+30V DC
Input Power:	+3dBm max.

Mechanical

Size* ¹ :	162*72*26mm 6.378*2.756*1.024in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.2mm through-hole

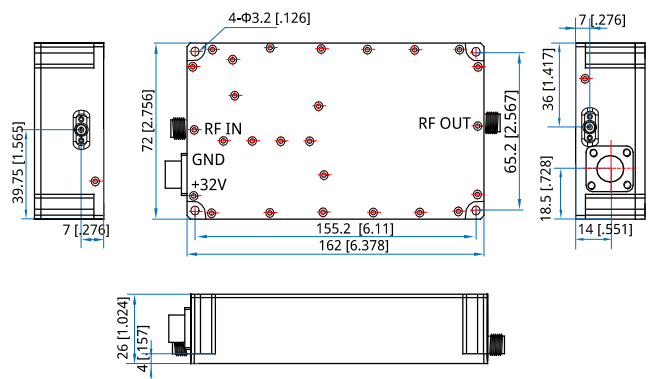
[1] Exclude connectors.

Environmental

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

(Reference dimension, subject to the real object)



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-700-4200-43-40S

Customization is available upon request.

NPA-750-6000-35-35

0.75~6GHz, 35dB, 35dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.75~6GHz
Gain:	35dB min.
Gain Flatness:	±3.5dB typ.
Output Power (Psat):	39dBm min.
Output Power (P1dB):	35dBm typ.
Spurious:	-60dBc max.
VSWR:	2 typ.
Voltage:	+50V DC
Current:	1000mA typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

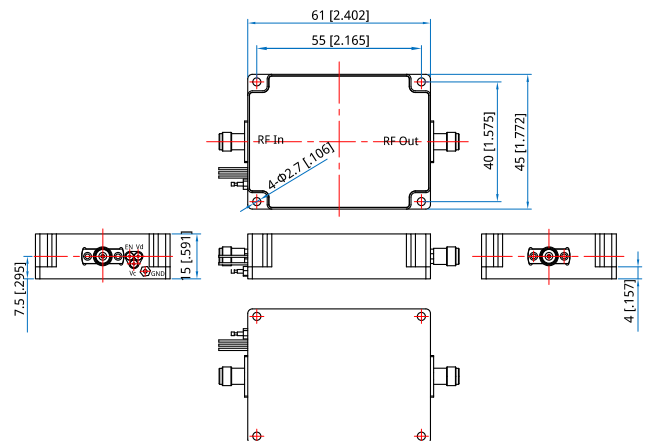
Size*1:	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[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

NPA-750-6000-35-35

Customization is available upon request.

NPA-791-821-45-40

791~821MHz, 45dB, 40dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	791~821MHz
Power Gain:	45dB typ.
Gain Flatness:	±0.5dB typ.
Output Power (P1dB):	40dBm typ.
Spurious:	-60dBc typ. (DC~10GHz@Pout=40dBm)
2 th Harmonic:	-30dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+30V DC
Input Power:	-2dBm max.

Mechanical

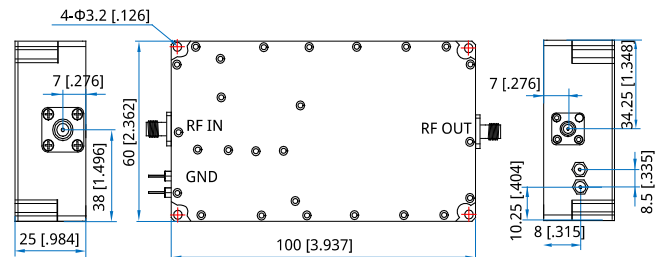
Size*1:	100*60*25mm 3.937*2.362*0.984in
RF Connectors:	SMA female
Power Supply Interface:	Feed through
Mounting:	4-Φ3.2mm through-hole
Cooling:	Forced Air

[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

NPA-791-821-45-40

Customization is available upon request.

NPA-8000-12000-45-46S

8~12GHz, 45dB, 46dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	8~12GHz
Gain:	45dB min.
Gain Flatness:	±2dB typ.
Output Power (Psat):	46dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+28V DC

Mechanical

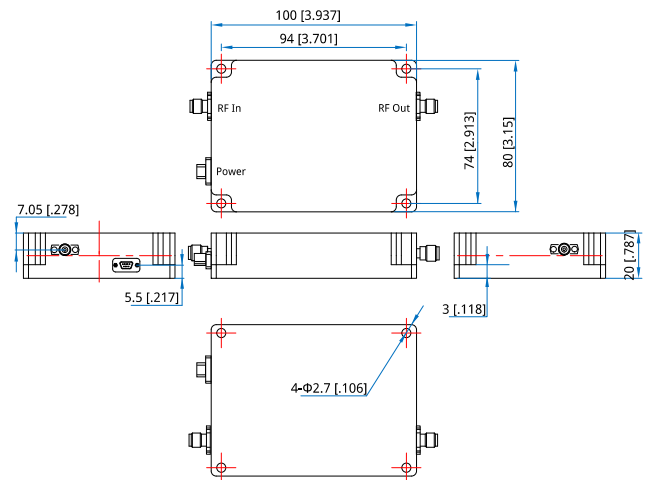
Size*1:	100*80*20mm 3.937*3.15*0.787in
RF In Connectors:	SMA Female
RF Out Connectors:	N Female
Power Supply Interface:	DB-9S

[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

NPA-8000-12000-45-46S

Customization is available upon request.

NPA-8000-18000-30-30S

8~18GHz, 30dB, 30dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	8~18GHz
Gain:	30dB min.
Gain Flatness:	±3dB typ.
Output Power (Psat):	30dBm min.
Spurious:	-60dBc max.
Harmonic:	-12dBc typ.
VSWR:	2 typ.
Voltage:	+8V DC
Current:	2.5A typ.
Input Power:	+10dBm max.
Impedance:	50Ω

Mechanical

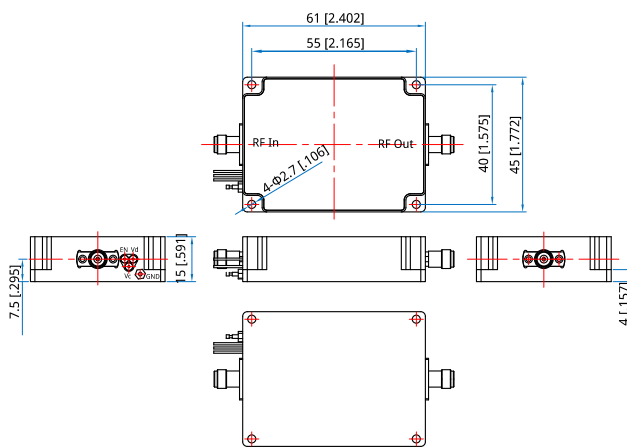
Size*1:	61*45*15mm 2.402*1.772*0.591in
Weight:	300g max.
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+60℃
Non-operating Temperature:	-45~+85℃

Outline Drawings



Unit: mm [in]

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

How To Order

NPA-8000-18000-30-30S

Customization is available upon request.

NPA-800-2000-40-39

0.8~2GHz, 40dB, 39dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.8~2GHz
Power Gain:	40dB typ.
Gain Flatness:	±2dB typ.
Output Power (P1dB):	39dBm typ.
Spurious:	-60dBc typ.
Harmonic:	-15dBc typ.
Input VSWR:	1.45 typ.
Output VSWR:	2 typ.
Voltage:	+32V DC
Input Power:	3dBm max.

Mechanical

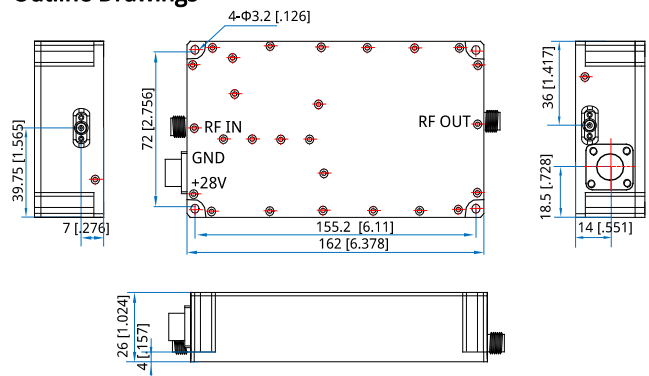
Size ^{*1} :	162*72*26mm 6.378*2.756*1.024in
Weight:	2kg
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature: -10~+50°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-800-2000-40-39

Customization is available upon request.

NPA-800-6000-25-15

0.8~6GHz, 25dB, 15dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.8~6GHz
Gain:	25dB min.
Gain Flatness:	±1.0dB typ.
Output Power (P1dB):	15dBm min.
Noise Figure:	4dB max.
Spurious:	-70dBc max.
Harmonic:	-20dBc typ.
Input VSWR:	1.8 max.
Output VSWR:	2.0 max.
Voltage:	+12V DC
Current:	150mA max.

Mechanical

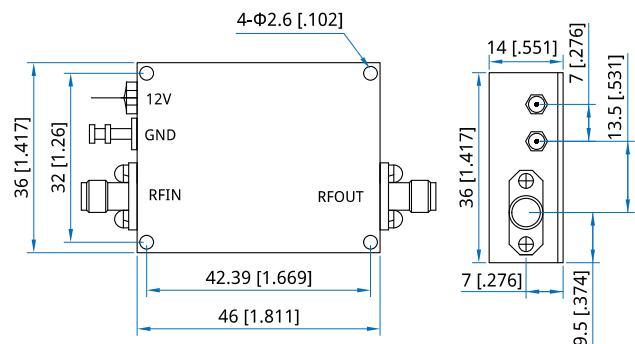
Size ^{*1} :	46*36*14mm 1.811*1.417*0.551in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.6mm through-hole
Cooling:	External Heatsink (supplied on request only)

[1] Exclude connectors

Environmental

Operating Temperature:	-30~+70°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-800-6000-25-15

Customization is available upon request.

NPA-8500-10500-25-43S

8.5~10.5GHz, 25dB, 43dBm

Power Amplifier

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	8.5~10.5GHz
Gain:	25dB typ.
Power Gain Flatness:	±0.5dB typ.
Output Power (Psat):	43dBm min.
Spurious:	-60dBc max.
Harmonic:	-15dBc typ.
Input VSWR:	1.5 typ.
Output VSWR:	2 typ.
Voltage:	+28V DC

Mechanical

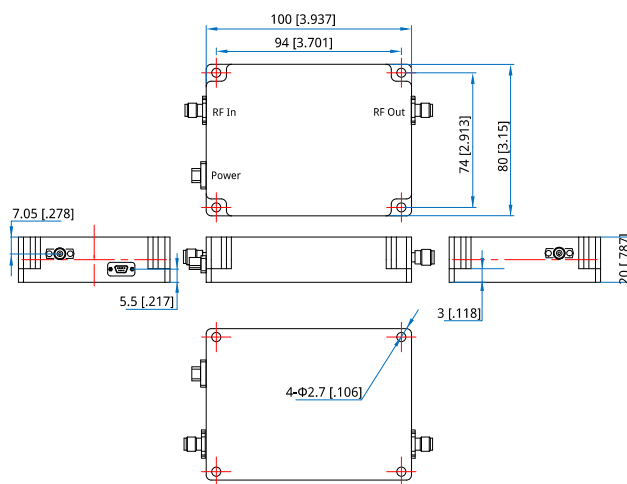
Size ^{*1} :	100*80*20mm 3.937*3.15*0.787in
RF Connectors:	SMA Female
Power Supply Interface:	DB-9S
Mounting:	4-Φ2.7mm through-hole

[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

NPA-8500-10500-25-43S

Customization is available upon request.

NPA-950-2150-25-25

0.95~2.15GHz, 25dB, 25dBm

Features:

- * Small Size
- * Low Power Consumption

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test

Electrical

Frequency:	0.95~2.15GHz
Gain:	25dB min.
Gain Flatness:	±1.5dB typ.
Output Power (P1dB):	25dBm min.
Spurious:	-60dBc max.
Harmonic:	-20dBc max.
VSWR:	2 typ.
Voltage:	+5V DC
Current:	0.25A typ.

Mechanical

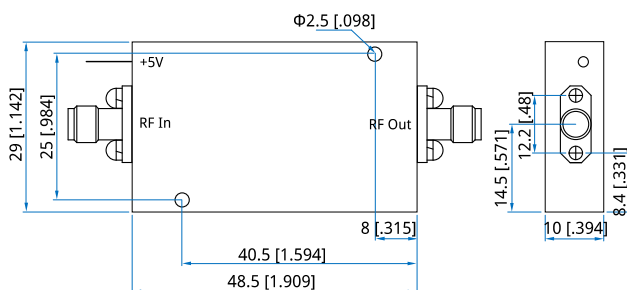
Size*1:	48.5*29*10mm 1.909*1.142*0.394in
RF Connectors:	SMA Female
Mounting:	2-Φ2.5mm through-hole

[1] Exclude connectors.

Environmental

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



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPA-950-2150-25-25

Customization is available upon request.