Power Amplifier

Model: PA-15G-44G-0.1

15-44GHz 0.1W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 15-44GHz
- Input 1 dB Gain Compression Point, 0.1W Typ.
- High gain, 25 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-15G-44G-0.1 is a power amplifier with a typical small signal gain of 25 dB and a nominal P1dB of 0.1W across the frequency range of 15 to 44GHz. The DC power requirement for the amplifier is +12 VDC/210 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Electrical Specifications at 25℃:

Parameter	Min	Typ	Max	Units
Frequency range	15		44	GHz
Small Signal Gain		25		dB
Small Signal Gain Flatness		±2.5		dB
Output P1dB		20		dBm
Input VSWR			2.5	:1
Output VSWR			2.5	:1
DC Voltage	+10	+12	+13	V DC
DC Supply Current		210		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-40℃ to +60℃	
Non-operating Temperature*	-50℃ to +70℃	
Relative humidity	95%	
RF Input/Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Solder Pin	
Altitude	10,000	feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis	
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions	
Dimensions W x H x D	44*36*12	mm

*Note: For a wider temperature range, please consult the manufacturer.

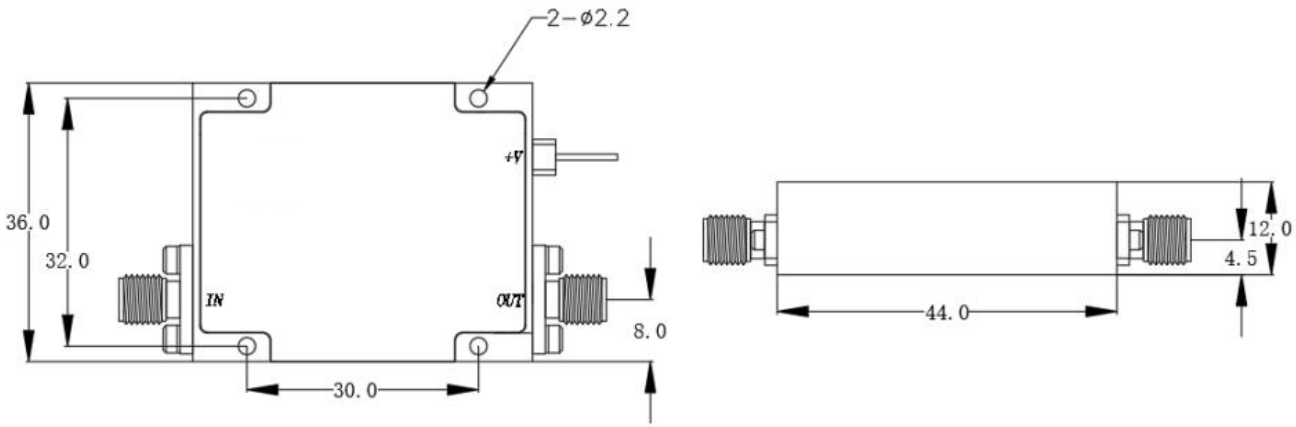
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

PA-15G-44G-0.1

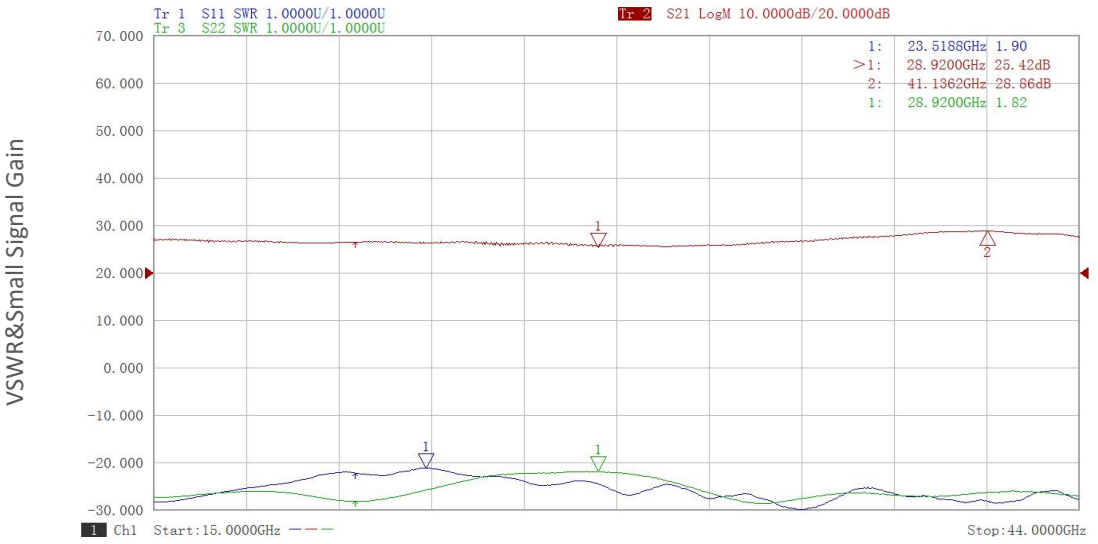


Ordering Information:

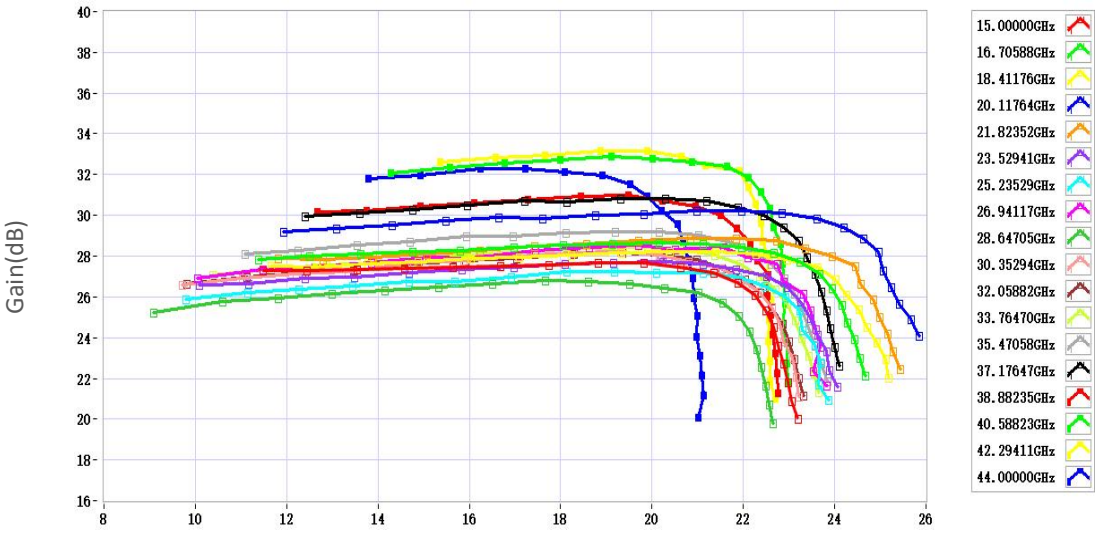
Base Number	Description	Optional
PA-15G-44G-0.1	Power Amplifier, 15-44GHz, Gain:25dB,Psat:0.1W,+12V DC	Without Heatsink
PA-15G-44G-0.1-HS	Power Amplifier, 15-44GHz, Gain:25dB,Psat:0.1W,+12V DC	With Heatsink

Typical Performance Data:

VSWR&Small Signal Gain vs Frequency



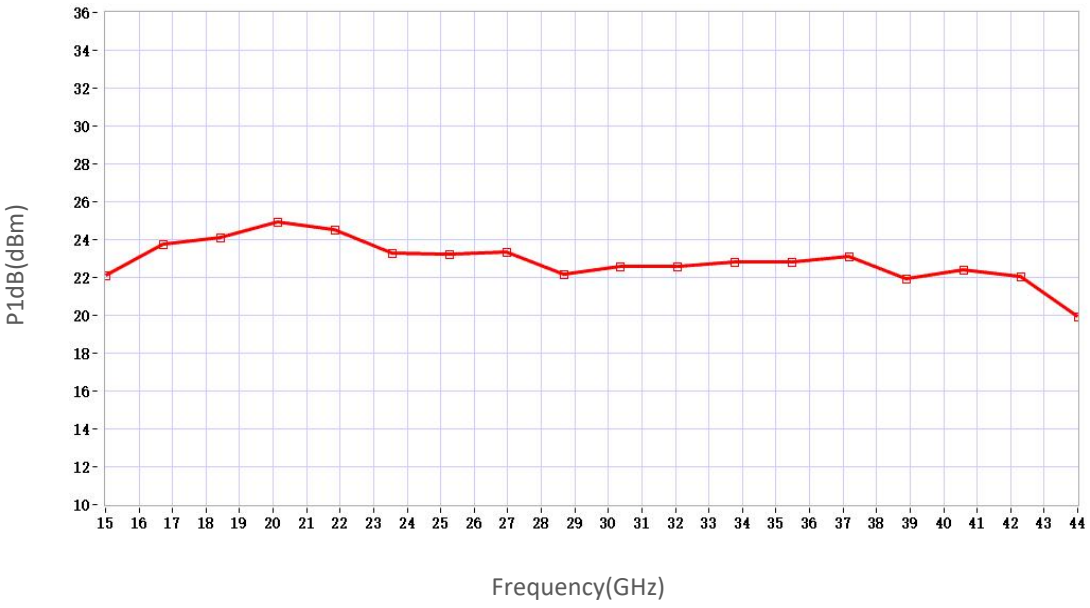
Gain vs Output Power



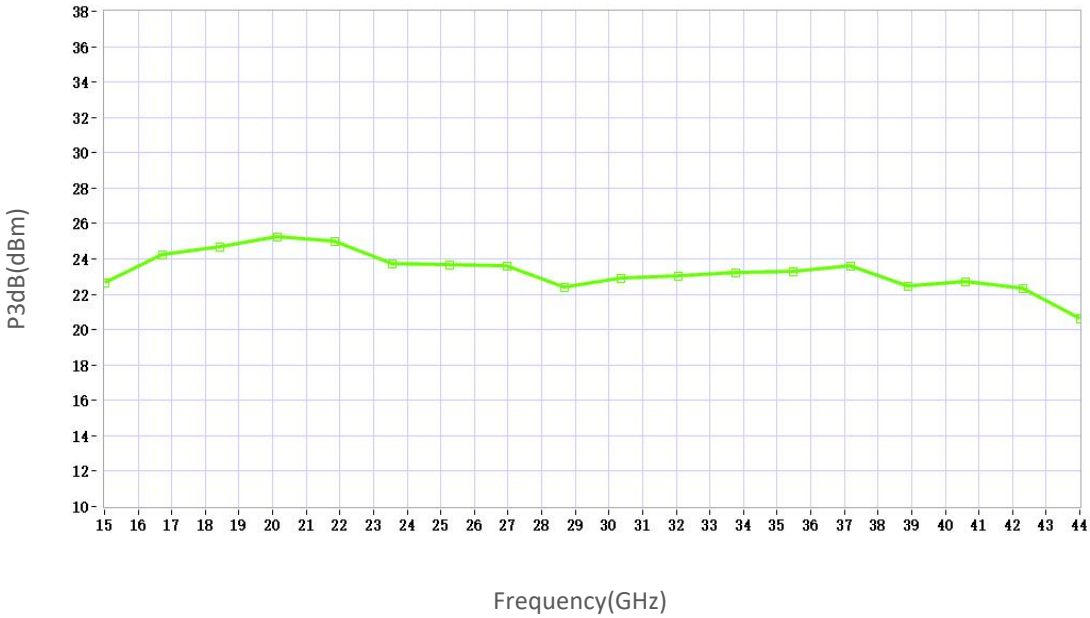
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency



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