



Power Amplifier

Model: PA-18G-40G-20

18-40GHz 20W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 18-40GHz
- High output power at saturation, 20W Min.
- High gain, 43 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-18G-40G-20 is a power amplifier with a minimum power gain of 43 dB and a minimum Psat of 20W across the frequency range of 18 to 40GHz. The DC power requirement for the amplifier is +18 VDC/25 A. The input port configuration offers coax adapter structure with 2.92mm female and output port configuration offers coax adapter structure with 2.92mm /WRD180C24.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	18		40	GHz
Small Signal Gain		50		dB
Power Gain	43			dB
Small Signal Gain Flatness		±5		dB
Output Psat	43	44		dBm
Spurious@Pout=43dBm			-50	dBc
Input VSWR		2	2.5	:1
DC Voltage		+18	+19	V DC
DC Supply Current			25	A
DC Supply Current@Pout=43dBm		20		A
Working Mode	CW/PULSE compatible			
Impedance		50		Ohms

Mechanical Specifications:

ParameterKg	Value	Notes
Operating Temperature*	-40°C to +50°C	
Non-operating Temperature*	-50°C to +60°C	
Relative humidity	95%	
RF Input Connector	2.92mm Female	
RF Output Connector	WRD180C24 or 2.92mm	
DC Supply Interface	J30J-21ZKP	*Pin1:on/off switch Pin2~11:+18V Pin12~21:GND
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	190*160*30(Without Heatsink)	mm

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

*Note: The power supply on-off pin can also be used for pulse modulation. Low level (0-0.8V) and floating are invalid, while high level (3.3-5V) is valid.



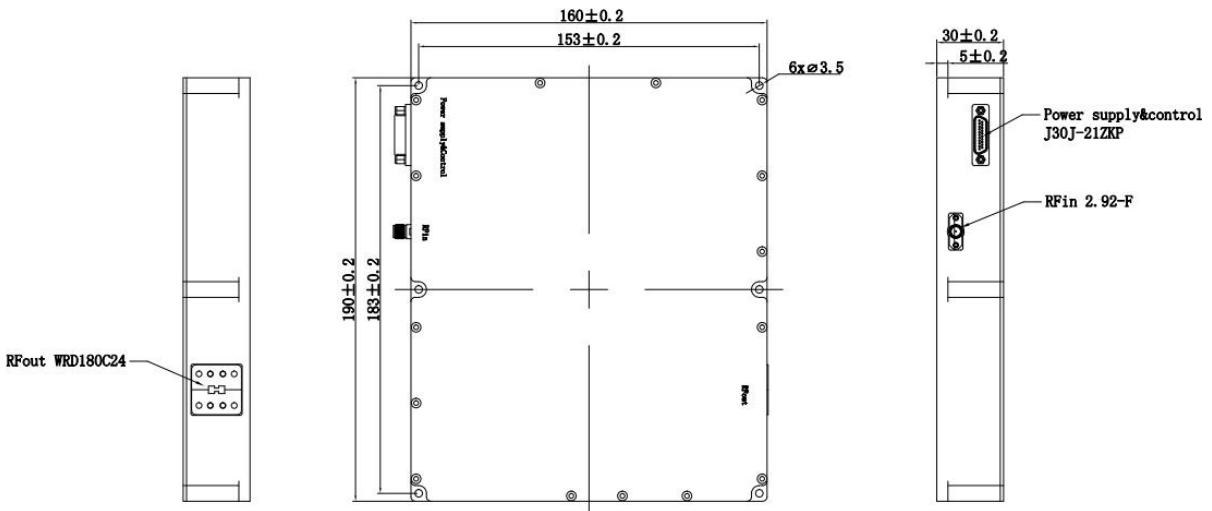
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+19 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

PA-18G-40G-20



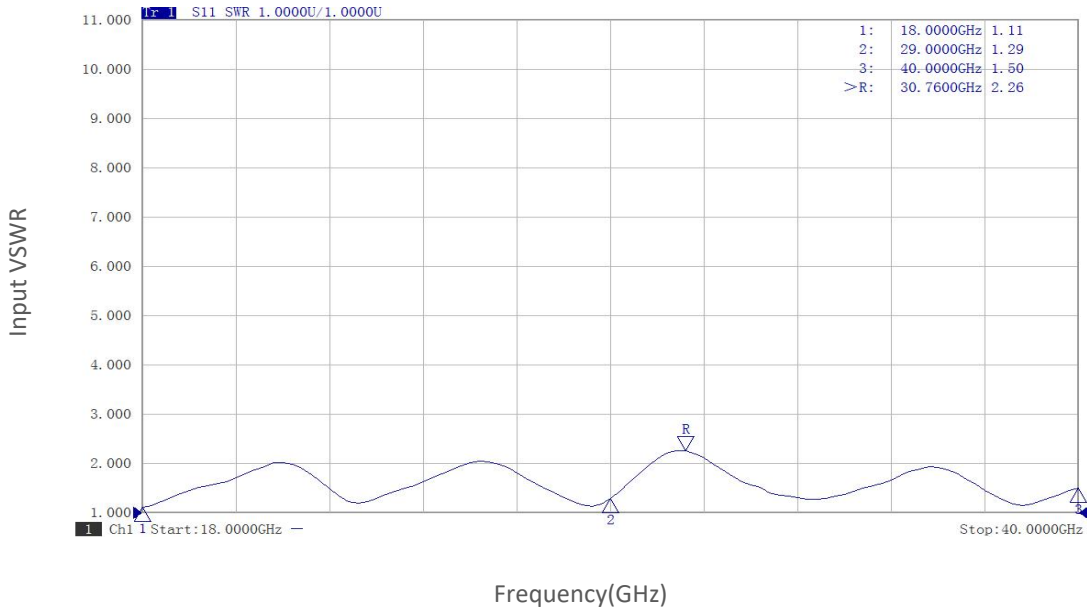
Ordering Information:

Base Number	Description	Optional
PA-18G-40G-20	Power Amplifier, 18-40GHz, Gain:43dB,Psat:20W,+18V DC	Without Heatsink
PA-18G-40G-20-HS	Power Amplifier, 18-40GHz, Gain:43dB,Psat:20W,+18V DC	With Heatsink

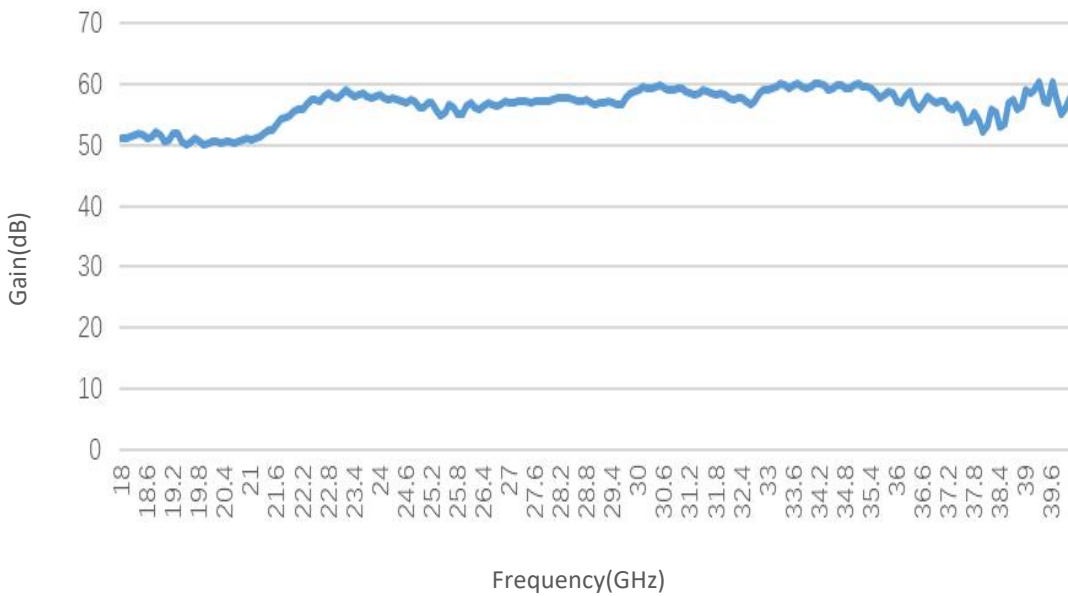


Typical Performance Data:

Input VSWR vs Frequency



Small Signal Gain vs Frequency

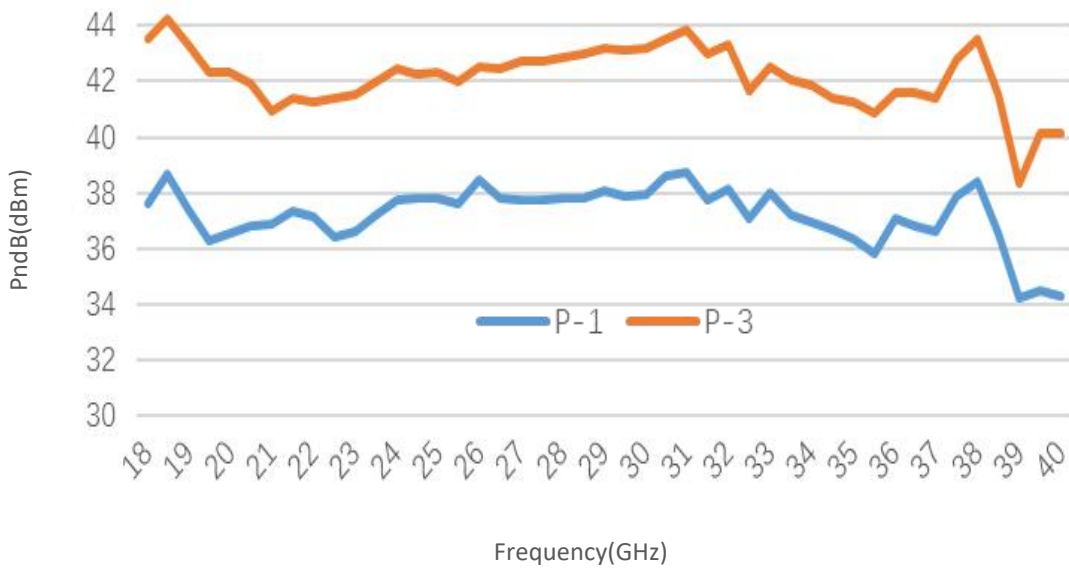


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

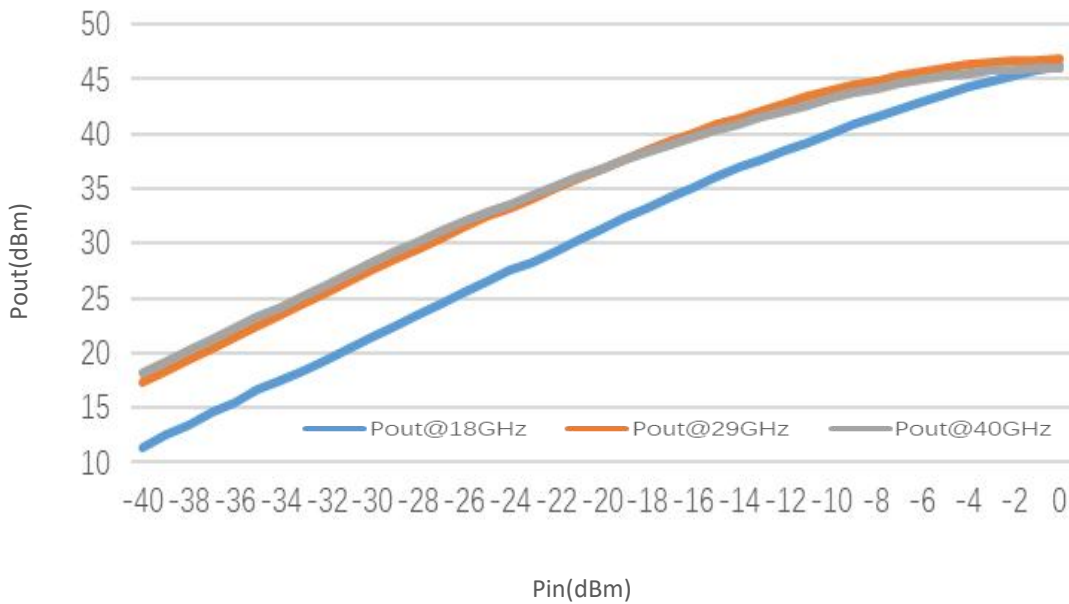


Typical Performance Data:

PndB vs Frequency



Pout@Pin

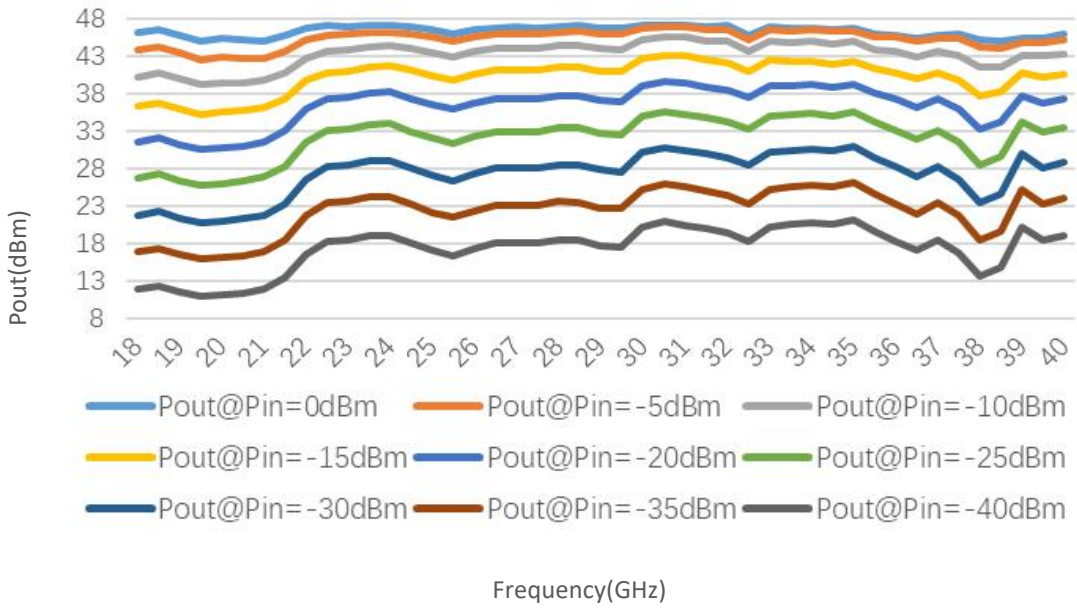


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

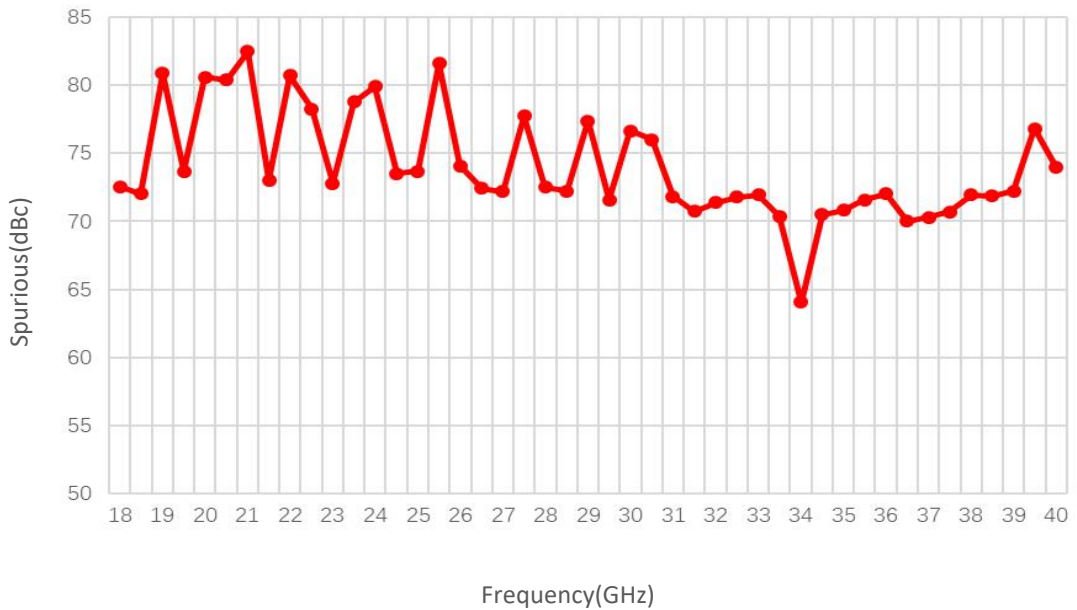


Typical Performance Data:

Pout@Equal_Pin



Spurious vs Frequency

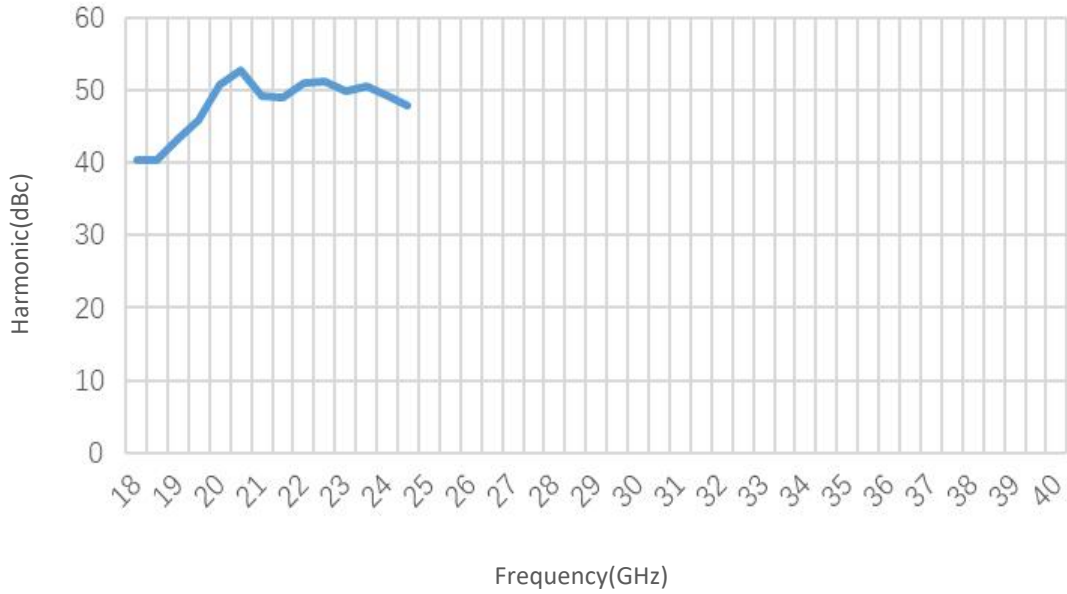


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



Typical Performance Data:

Harmonic vs Frequency



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