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High Power Amplifier

GPA-0030-0080-50

Main Features:

- Frequency Range: 0.3 to 0.8 GHz.
- Typical values: Pout 50 dBm, Gain 40 dB
- Power Added Efficency: 28%
- Gain Flatness ±1.5 dB typ
- RF connectors (I/O): SMA Female
- Several mounting options

GPA-0030-0080-50

The GPA-0030-0080-50 is a High Power Amplifier providing an output power of 50 dBm and a gain of 40 dB. The compact size and modularity makes it ideal for a wide range of applications.

Typical applications:

- Wireless communication equipment
- Test and measurement equipment
- Navigation and aerospace
- Commercial radars
- General-purpose transmitter amplification

Performance

Parameter	Value			Units
	Min	Typ	Max	
Frequency	0.3	-	0.8	GHz
Output Power		50		dBm
Small Signal Gain	38.5	40	41.5	dB
Gain Flatness	-	±1.5	-	dB
VSWR input	1.4	-	1.9	-
DC Voltage		28		V
RF Connectors	SMA Female IN/OUT			
Operating Temperature	-45 to +85 ℃			
Storage Temperature	-55 to 125 ℃			

Specifications at a case temperature of 25℃ at 32 V

Saturated Output Power

Figure 1 shows saturated output power measurement as a function of frequency at low (-45℃), normal (25℃) and high (70℃) temperatures.

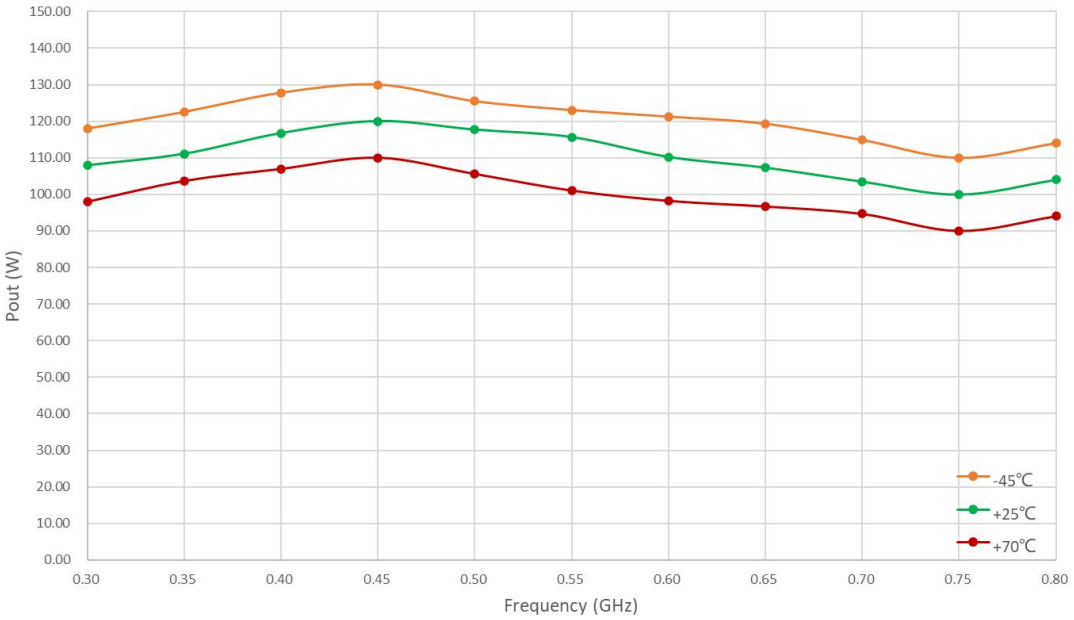


Figure 1: GPA-0030-0080-50 Psat

Small Signal Gain Vs Temperature

Figure 2 shows small signal gain measurement as a function of frequency at low (-45℃), normal (25℃) and high (70℃) temperatures.

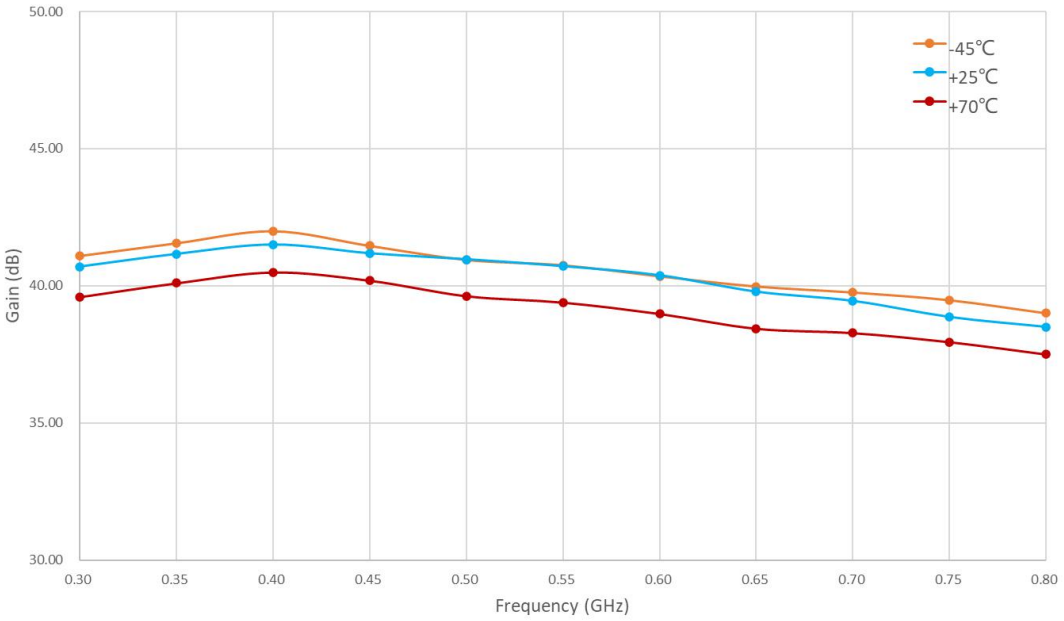


Figure 2: GPA-0030-0080-50 Small Signal Gain Vs Temperature

Input VSWR

Figure 3 shows input (S11) VSWR as a function of frequency at environment temperature (25℃).

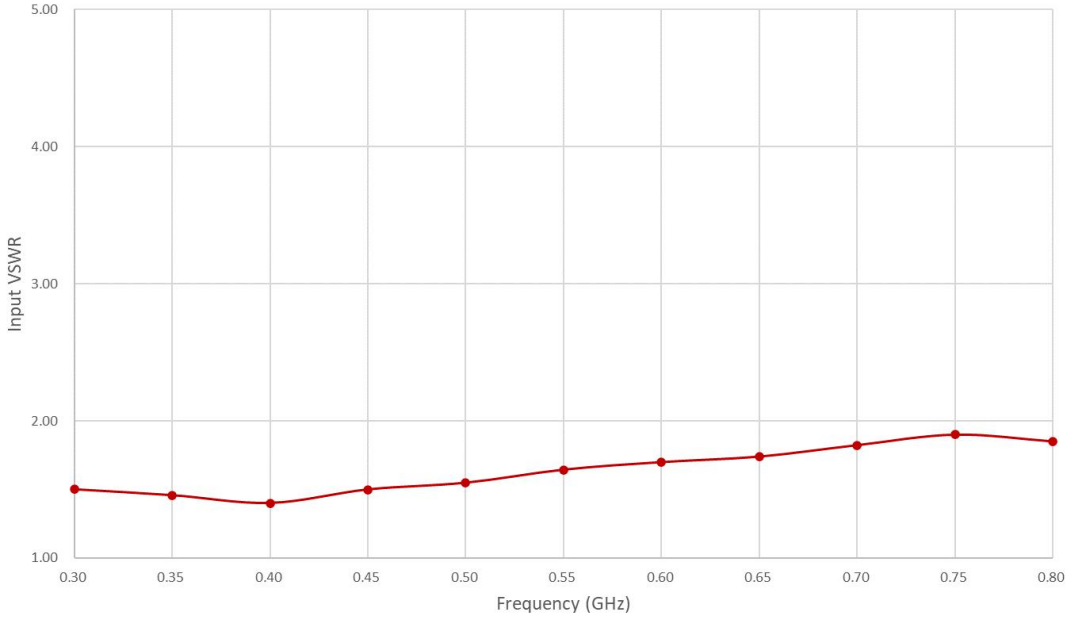


Figure 3: GPA-0030-0080-50 Input VSWR

P.A.E

Figure 4 shows P.A.E as a function of frequency at environment temperature (25℃)

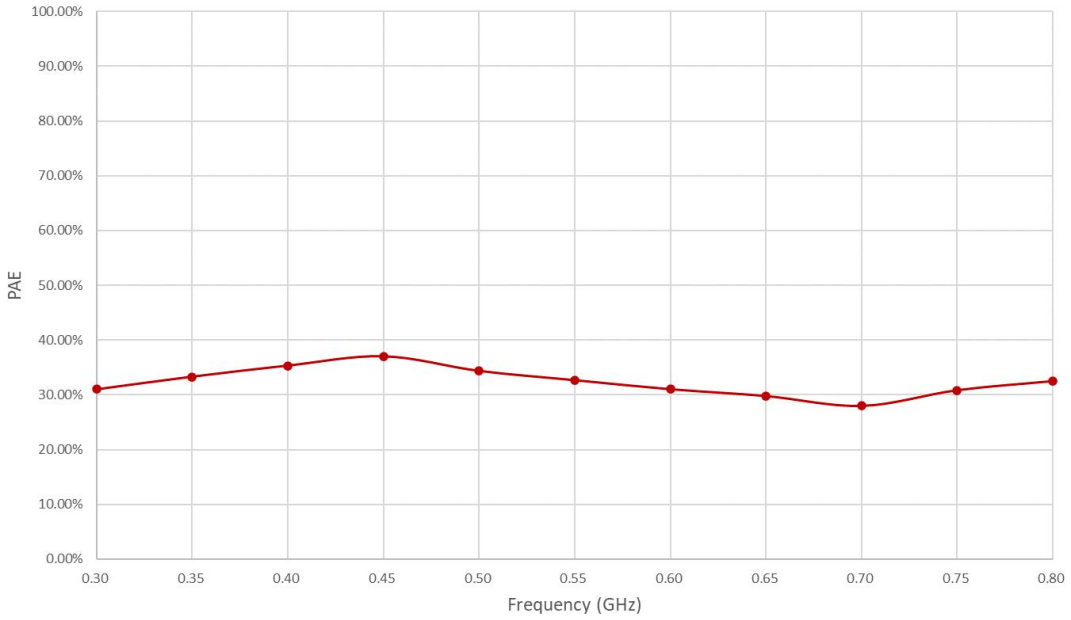


Figure 4: GPA-0030-0080-50 P.A.E

Absolute Maximum Ratings

Condition	Value
DC Voltage	+35 VDC
Maximum Input Power (CW)	+20 dBm
Operation temperature (at case)	-40 to 70 ℃
Storage temperature	-55 to 125 ℃

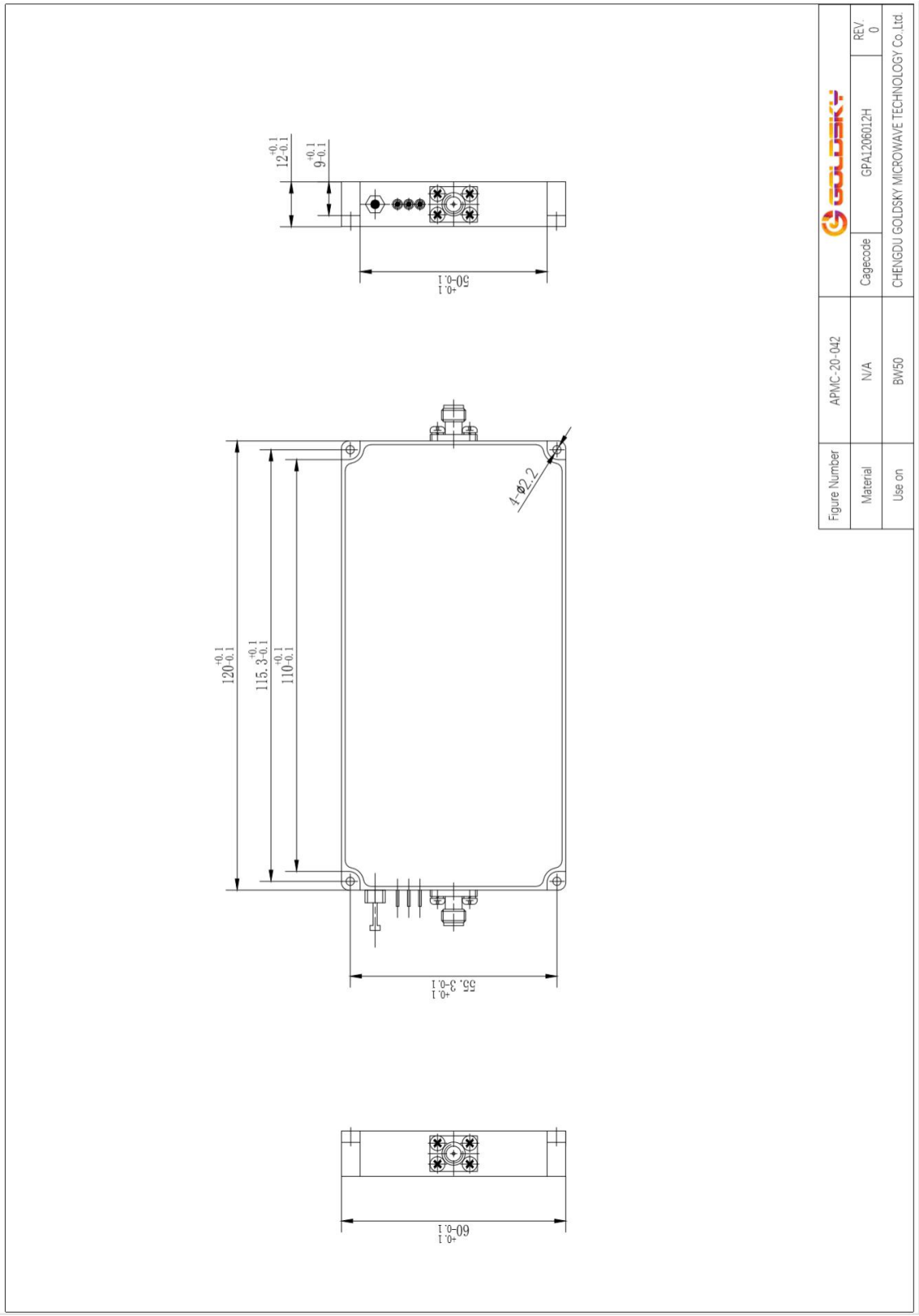
- Stress above these ratings may cause permanent damage to the device.
- It is final user responsibility to maintain the amplifier within the specified ranges.

Measurements Conditions

All measurements provided in this report were performed at the following conditions:

Condition	Value
Temperature (DUT ON)	25 ℃ ± 1℃
Humidity	44% ± 10%
DUT Warm up time	30 min
DUT minimum operation time	24 hours
Test equipment warm up time	2 hours
Additional temperature cycles in climatic chamber (DUT OFF)	-40℃ to 85℃

Mechanics and Housing



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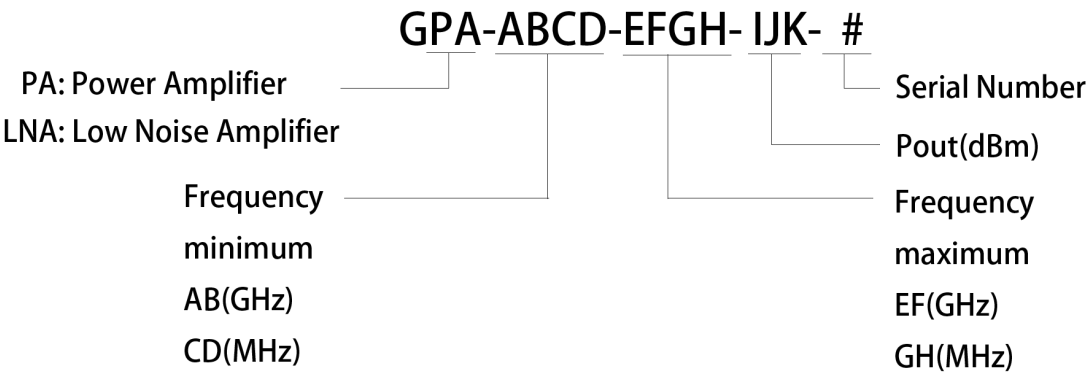
Identifier	Specification
IN	Signal Input
OUT	Power Output
GND	Ground
Vcc1	DC Supply +28V
Vcc2	DC Supply +28V
EN	ENABLE (can be used for pulse modulation)

Model Number Codification

Model Number



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