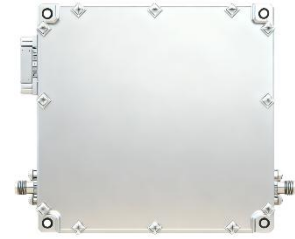


VMPA-2G18G-28-20-SMAF

FEATURES

- ◆ Frequency: 2GHz ~ 18GHz
- ◆ Gain: $\geq 40\text{dB}$
- ◆ Psat: $\geq 40\text{dBm}$ (CW)
- ◆ Quiescent Current: 1A @ +28V
- ◆ Size: 97mm $\times$ 90mm $\times$ 14mm



TYPICAL APPLICATIONS

- ◆ L, S, C, X, Ku band Radar
- ◆ Testing and Measurement
- ◆ General Amplification

PRODUCT OVERVIEW

The VMPA-2G/18G-28-20-SMAF is a broadband microwave solid-state power amplifier characterized by miniaturization, high efficiency, and high reliability. It delivers a saturated output power of over 10W across the entire frequency band at room temperature. The module features protection against over/under voltage, overcurrent, and overtemperature, and outputs TTL level signals. It is widely used in applications such as microwave testing equipment, communications, radar, and electromagnetic interference testing.

ABSOLUTE MAXIMUM RATINGS

Parameter	Max. Rating
Input Power (CW, 50 Ω , 25°C)	+10dBm
Load VSWR	5:1
Operating Voltage (Vd)	+30V
Power Dissipation (Pdiss)	50W
Operating Temperature	-40°C ~ +60°C
Storage Temperature	-55°C ~ +85°C

Note: Exceeding any one or more of the maximum ratings may cause permanent damage to the module. Long-term operation near the maximum ratings may reduce module reliability.

OPERATING CONDITIONS

Parameter	Min.	Typ.	Max.	Unit
Input Power (CW)	-	-	+10	dBm
Voltage (Vd)	-	+28	-	VDC
Operating Temperature	-40	-	+60	°C

Quiescent Current (CW)	-	2.2	-	A
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Note: Electrical parameters are measured under specified test conditions. Performance cannot be guaranteed if these conditions are exceeded.

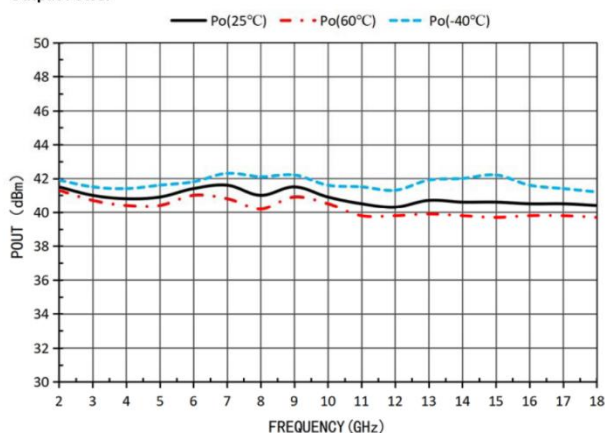
ELECTRICAL SPECIFICATIONS

Parameter	Test Condition	Min.	Typ.	Max.	Unit
Frequency	-	2	-	18	GHz
Psat	Pin=0dBm, CW, 25°C	40	-	42	dBm
Power Gain	Pin=0dBm, CW, 25°C	40	-	42	dB
Input VSWR	Pin=-30dBm, CW, 25°C	-	-	2	-
2nd Harmonic Suppression	Pin=0dBm, CW, 25°C	-10	-	-	dBc
Spurious Suppression	Pin=0dBm, CW, 25°C	-	-	-60	dBc
DC Power Consumption	Pin=0dBm, CW, 25°C	-	60	-	W

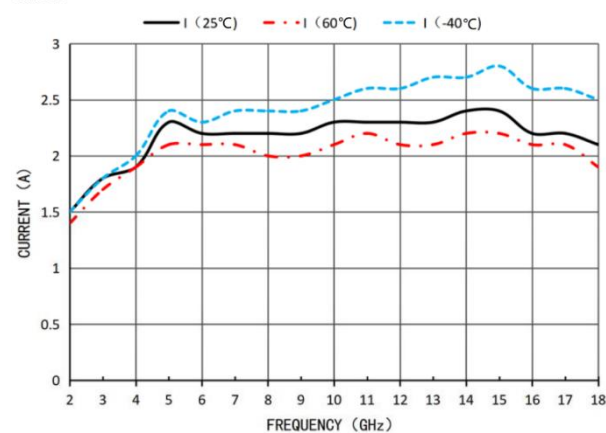
TYPICAL PERFORMANCE CURVES

Pin=0dBm, 50Ω

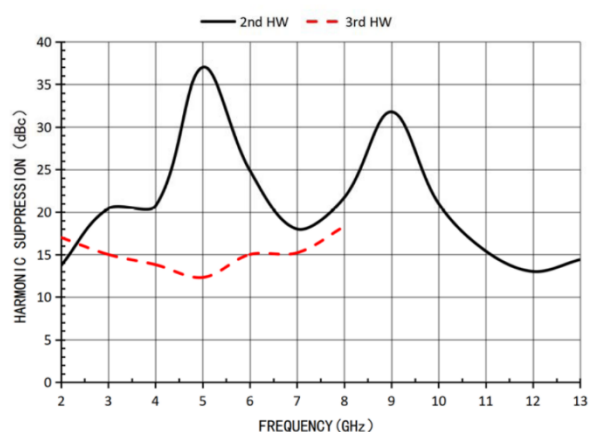
Output Power



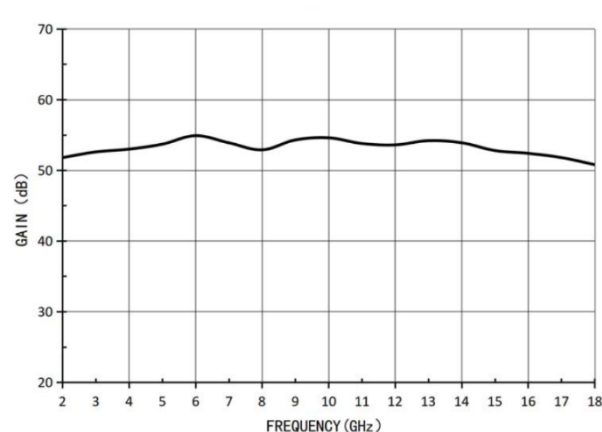
Current



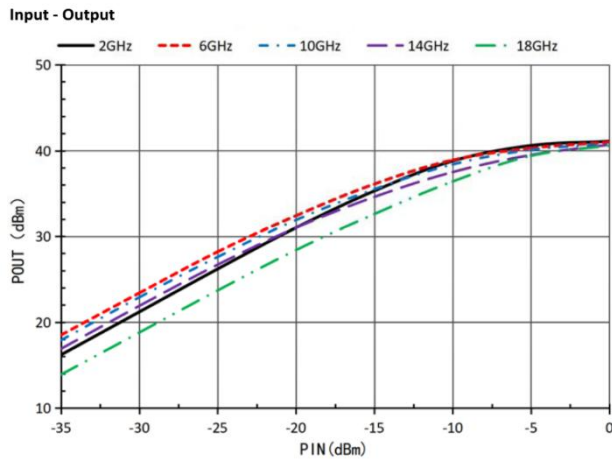
Harmonic suppression



Gain



Pin=-30dBm, 50 Ω



INTERFACE DEFINITIONS

Label	Number	Name	Function
J30J-15ZKP	1-5	+28V	
	6-10	GND	
	11	EN	TTL High
	12	Current Alarm	High level Alarm (3.6V)
	13	Temperature Alarm	High level Alarm (3.6V)
	14	Over/Under-Voltage Alarm	High level Alarm (3.6V)
SMA-K	RFin	SMA-K	RFin
SMA-K	RFout	SMA-K	RFout

OUTLINE DRAWING

All Dimensions in mm

