

Features

- Frequency Range: 500-2500MHz
- Small Signal Gain: 45dB
- P_{OUT}: +37dBm (5W)
- P_{SAT}: +39dBm (8W)
- Pulse Modulation
- DC Power: 28V @ 1300mA
- RF Connector: SMA-



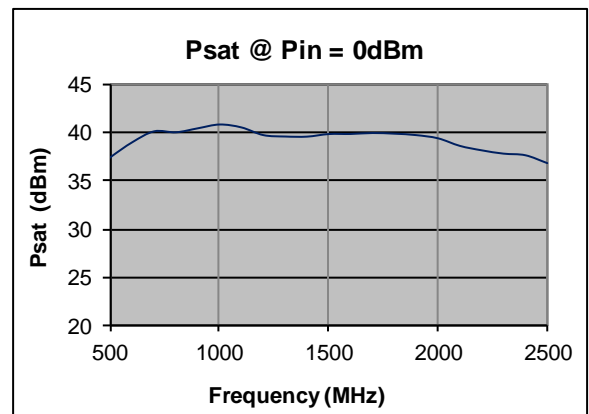
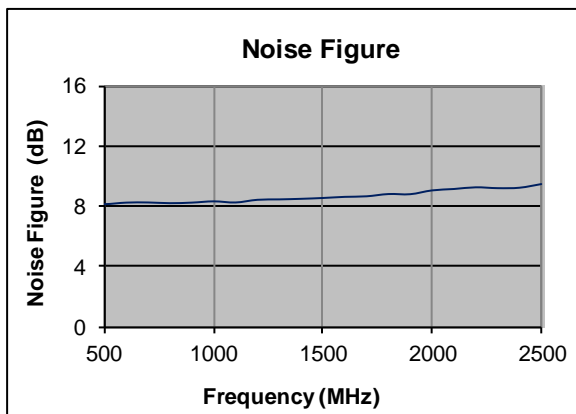
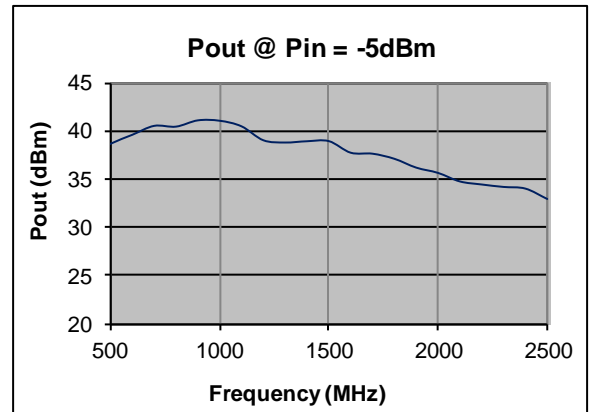
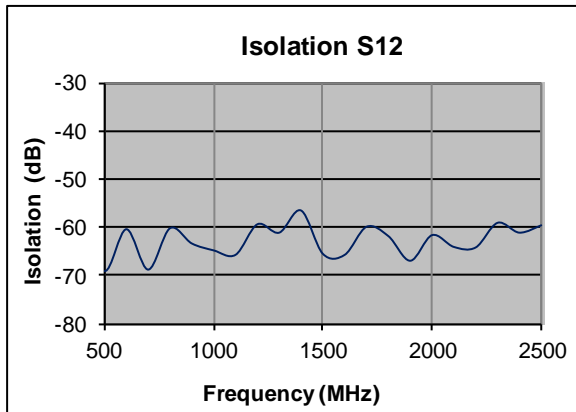
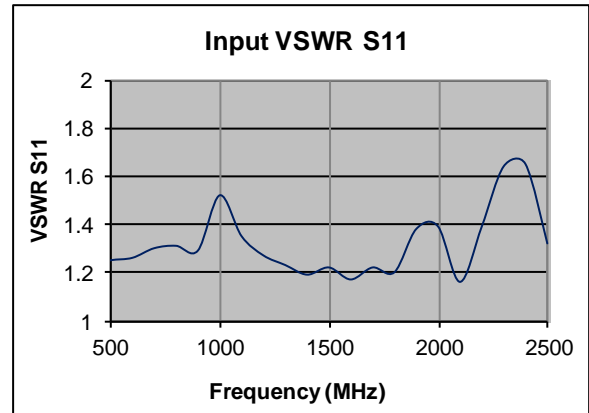
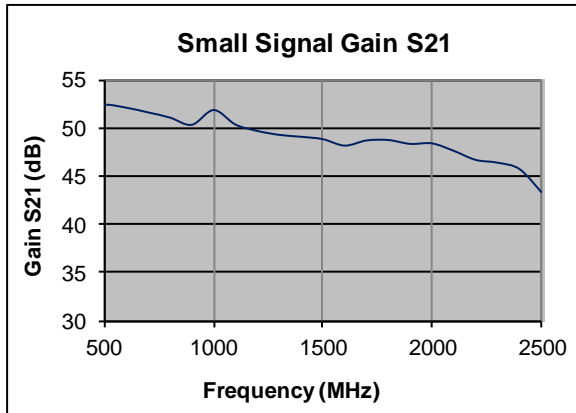
Description

VGPA-2500M-8W is a high performance RF power amplifier with operating frequency of 500 MHz to 2500 MHz including optional gain control and signal pulse control features.

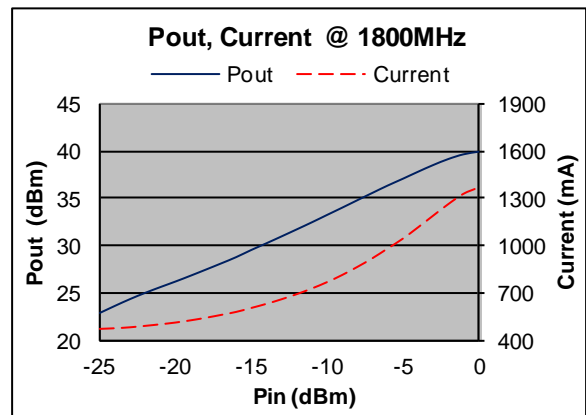
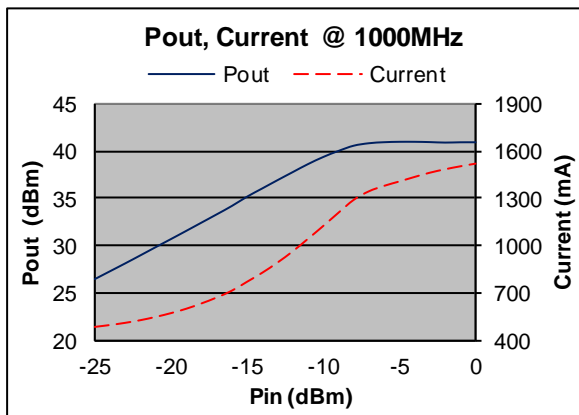
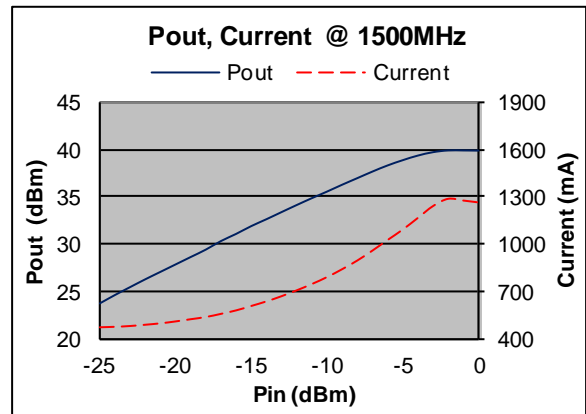
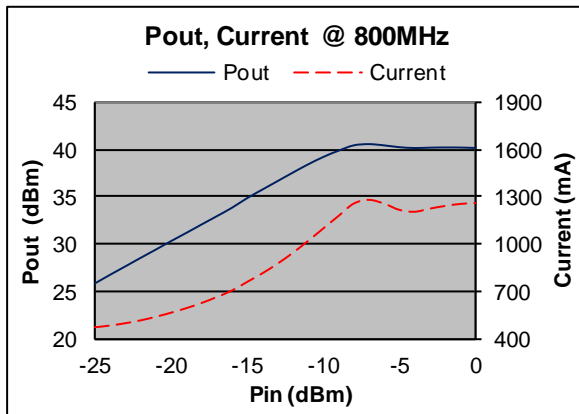
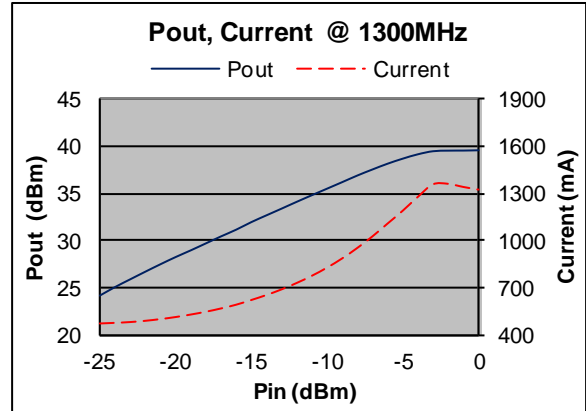
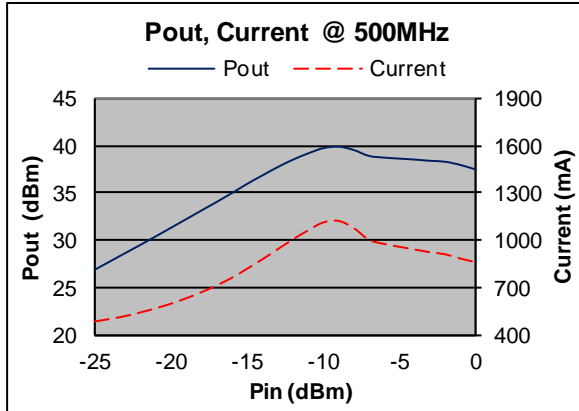
Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +28VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	500		2500
Gain (S21)	dB	40		
Gain Flatness	dB		±1.0	±1.5
Output Power P _{OUT} @ 1500MHz	dBm	+37	+38	
Output Power P _{SAT} @ 1500MHz	dBm	+39	+40	
Efficiency	%		30	
Noise Figure	dB		8.5	9.5
Isolation (S12)	dB		-55	
VSWR-Input (S11)	ratio:1		1.5:1	1.7:1
Pulse Modulation (BNC Input) Input Level = 5V Input Level = 0V			RF ON RF OFF	
Maximum Pulse Modulation Rate	MHz		15	
RF Turn On Time	ns		15	
RF Turn Off Time	ns		10	
DC Power Supply - voltage	V	24	28	32
DC Power Supply - current	mA		1300	1600
Size (RF/DC feedthru's excluded)	Inch/mm	4.75 x 2.75 x 0.75/120 x 70 x 19 (LxWxH)		
Weight	Oz	12 (340 grams)		

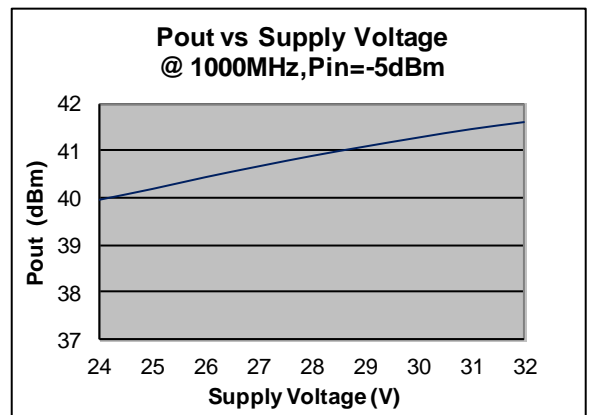
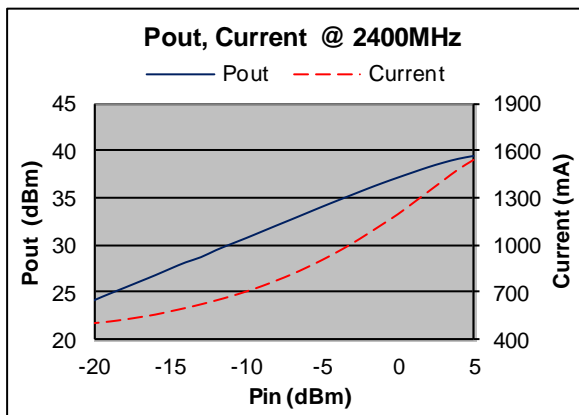
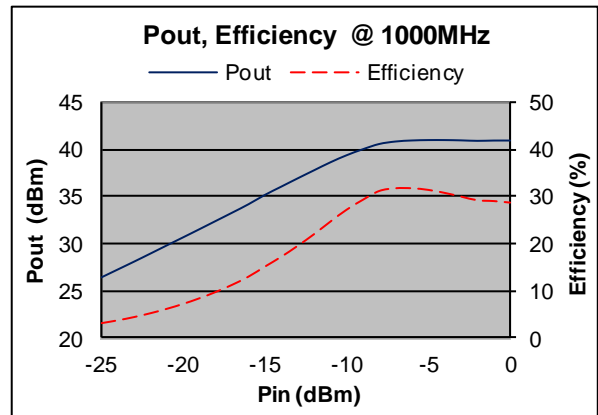
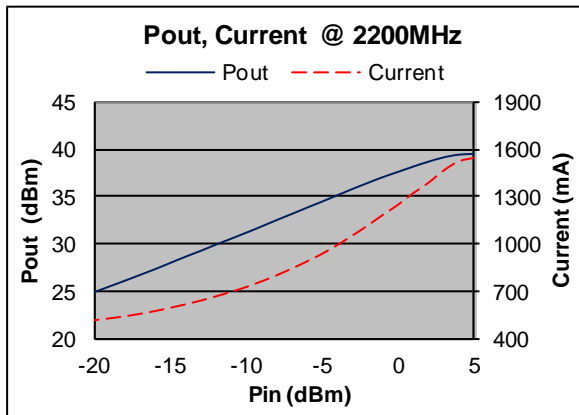
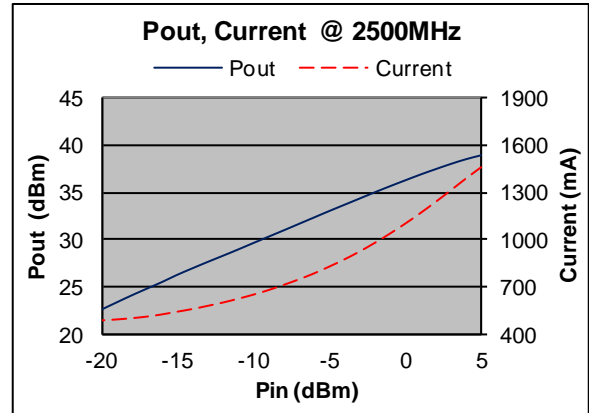
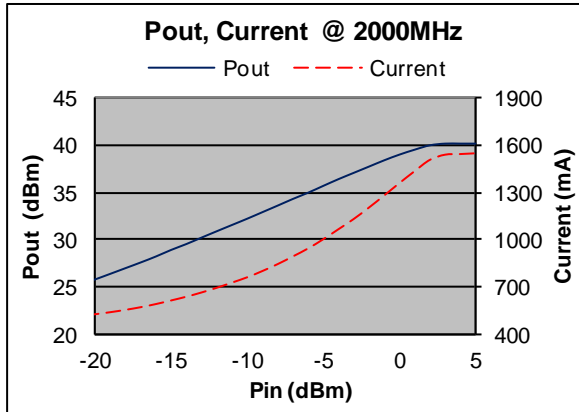
Typical Performance @ +25 °C



Typical Performance @ +25 °C



Typical Performance @ +25 °C



Male 15 Pin D-Sub Amplifier Connector Control Interface

This amplifier is designed to be used as either a traditional amplifier or one with sophisticated controls allowing the customer extensive flexibility in terms of control. Without any connections to the D-Sub connector, the default state of the product is a traditional amplifier. The amplifier is designed to allow the user the following control and sense functions across the connector interface:

- RF output signal attenuation control from 0 dB to 31.5 dB in 0.5 dB steps via a synchronous serial interface.
- RF signal pulse control from either the BNC connector or pin 12 of the DB15 connector interface
- Power Control to turn ON/OFF the amplifier
- Amplifier analog voltage temperature sensor output
- Alternate DC amplifier input bias

DB15 Connector Pin	Name	Description
1	GND	Ground
2	Temperature Sensor	0mV + 10.0mV/C (2 C to 150 C)
3	Power Control	0V – Amplifier OFF, 5V – Amplifier ON
4	NC	
5	NC	
6	NC	
7	NC	
8	NC	
9	DC Input Bias	Alternate DC input bias
10	GND	Ground
11	Pulse Select	Selects RF amplifier pulsing signal from either BNC connector or Pin 12
12	Pulse Input	Digital Pulse input signal (TTL Compatible)
13	LE	Latch Enable for amplifier digital attenuator (*)
14	Data	Serial 6-bit data to set digital attenuation in 0.5 dB LSB steps (*)
15	CLK	Serial synchronous clock for digital attenuator (*)

(*) Contact to obtain technical specifications to program the amplifier's digital attenuator

**WARNING: 1) MUST USE HEAT SINK.
2) LOAD MUST BE CONNECTED TO AMPLIFIER OUTPUT AT ALL TIME IF DC POWER IS ON.**

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+15dBm
Supply Voltage	+32V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

Outline

