



# RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFLUPA0001GK

## 80W Broadband High Power Amplifier Module 20 - 1000MHz



### Features

- Broadband High Power
- High Efficiency
- Great Linearity
- Small Size & Light Weight
- Low Distortion

Electrical Specifications,  $T_A = +25^\circ\text{C}$ ,  $V_{DD} = +28\text{V}$

Parameter	Min.	Typ.	Max.	Units
Frequency Range	20		1000	MHz
RF Output Power	60	80		Watt
Power Gain		49		dB
Small Signal Gain Flatness		$\pm 2$		dB
Input Return Loss			-10	dB
Harmonics @50W		-10		dBc
Spurious Signals		-55		dBc
Impedance		50		$\Omega$
Operating Voltage	26	28	30	Volt
DC Current @80W		11	12.5	Amp

### Mechanical Specifications

Dimensions	150x90x25mm
Weight	1.2 Kg
RF Connectors Input	SMA - Female
RF Connectors Output	SMA - Female
DC Interface Connector	D-Sub 9-Pin, Male
Cooling	External Heatsink Required (Not Supplied)

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## Absolute Maximum Ratings

Input RF drive level without damage	+5dBm(Max)
Load VSWR @ POUT =30W	$\infty$ @ all load phase & amplitude for duration of 30 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85° C @ heatsink(restored @ 60° C )

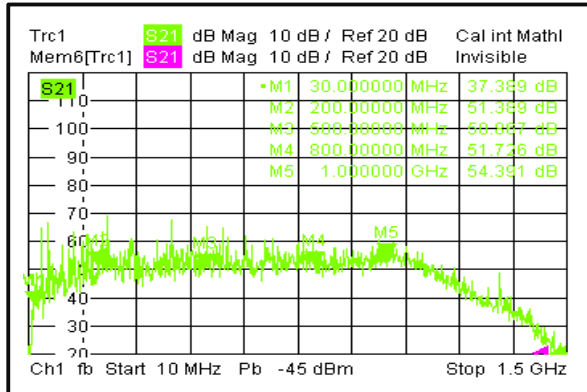
## Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-20°C~+60°C
Storage Temperature		-20°C~+65°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude		Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883	MIL-STD-883 (For Hermetically Sealed Units)

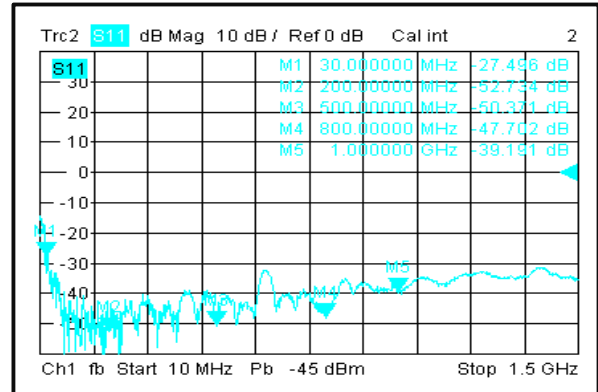


### Typical Performance Plots

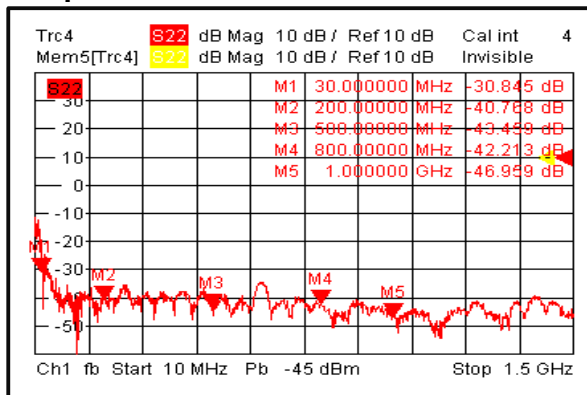
#### Gain



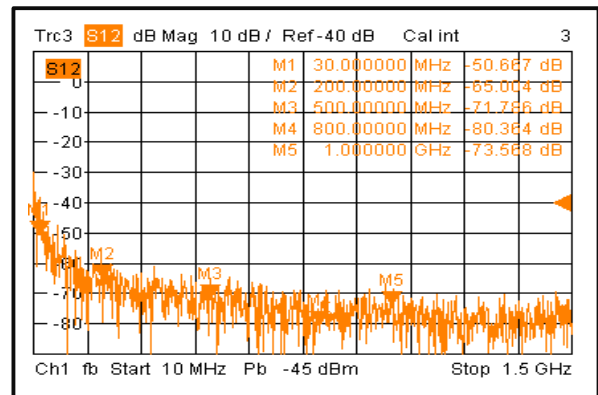
#### Input Return Loss



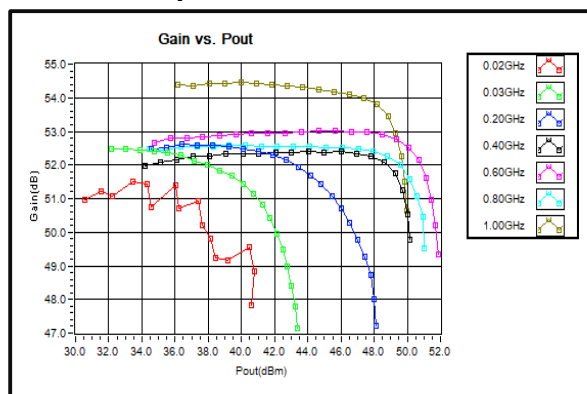
#### Output Return Loss



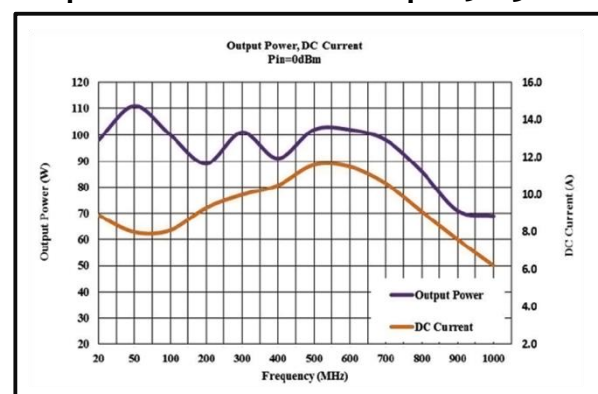
#### Isolation



#### Gain vs. Output Power

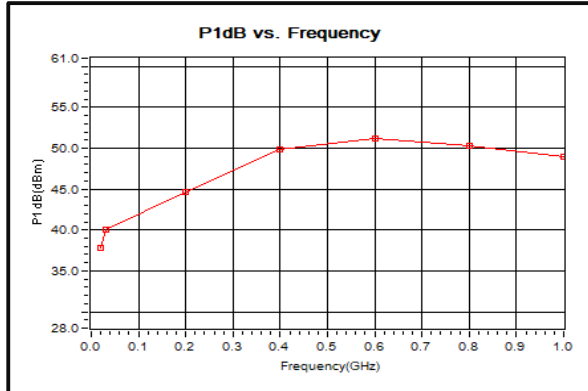


#### Output Power (Normal temp. +25 ± 3 °C)

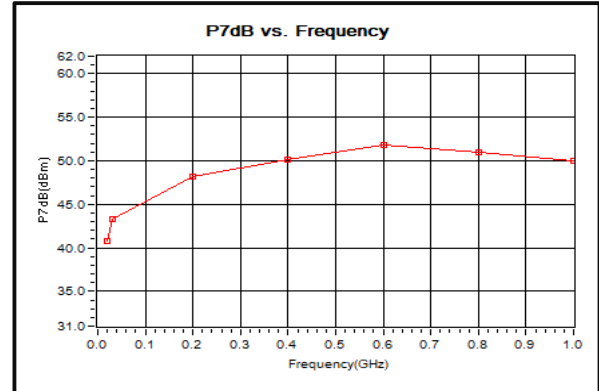




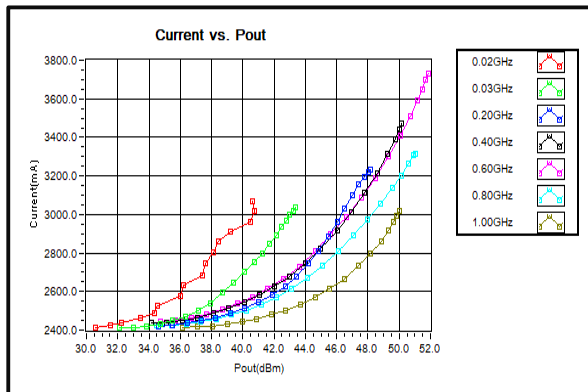
**P1dB vs. Frequency**



**P7dB vs. Frequency**



**Current vs. Pout**





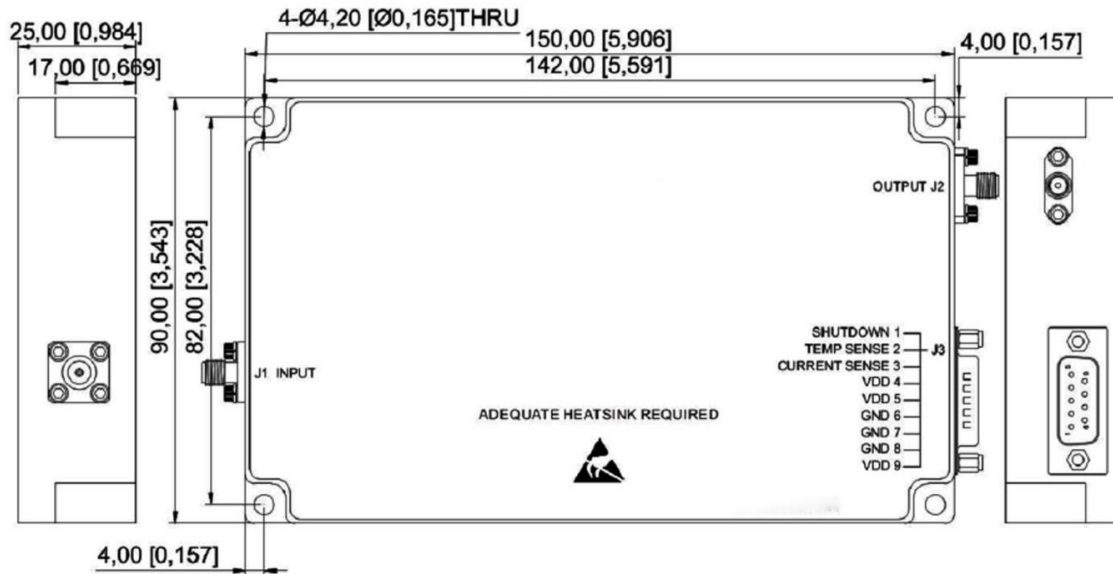
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## Outline Drawing:

All Dimensions in mm [inches]



## DC Interface Connector

Pin #	Description	Specifications
4,5,9	VDD	28V <sub>DC</sub>
6,7,8	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT MONITOR	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP MONITOR	Analog voltage relative to Module's Temperature @ 10 mV/°C



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