Wide Band Power Amplifier
0.5GHz~6GHz

RoHS Compliant

Features

- Gain: 33dB Typical
- Noise Figure: 3.0dB Typical
- Output P1dB: 30dBm Typical
- Supply Voltage: +12V
- 50 Ohm Matched

Typical Applications

- Wireless Infrastructure
- RF Microwave & VSAT
- Military & Aerospace
- Test Instrument
- Fiber Optics

Electrical Specifications, TA = +25°C, Vcc = +12V

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.5		4	4		6	GHz
Gain	30	33		28	31		dB
Gain Flatness		±2	±2.5		±2.5	±3	dB
Gain Variation Over Temperature (-45 to +85)		±1.0			±1.0		dB
Input VSWR		2.0	2.2		1.8	2.0	: 1
Output Power for 1 dB Compression (P1dB)	28	30		28	30		dBm
Saturated Output Power (Psat)		32			32		dBm
Output Third Order Intercept (IP3)		36	37		36	38	dBm
Supply Current (Vcc=+12V)		270	400		270	400	mA
Isolation S12		-60			-60		dB
Weight	5.64						ounces
Impedance	50						Ohms
Input / Output Connectors	SMA-Female						
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness						
	Option: Gold 80 micron; Nickel 180 micron thickness						
Material	Aluminum						
Package Sealing	Epoxy Sealing (Standard)						
	Hermetically Sealed (Optional)						

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Absolute Maximum Ratings

Operating Voltage	+12.5V
RF Input Power (Vcc=+12V)	+5dB m

Biasing Up Procedure

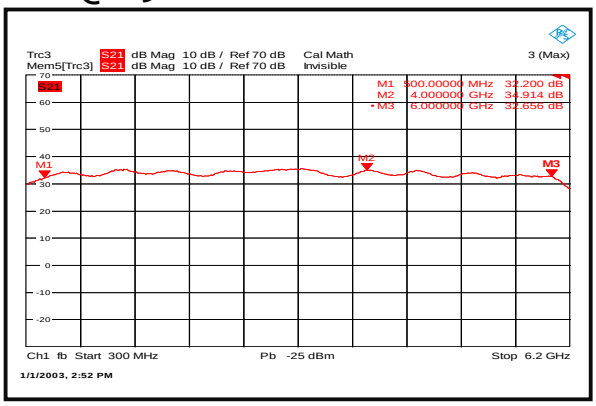
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

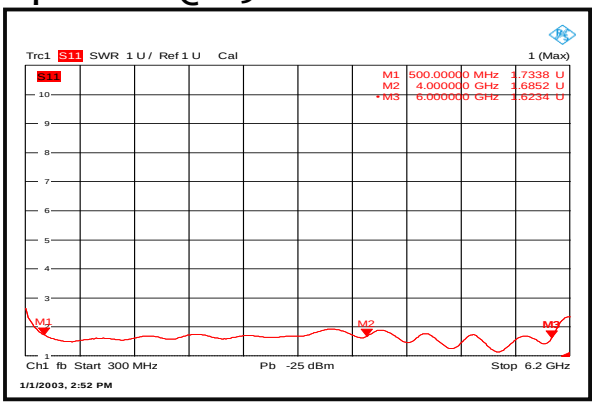
Operational Temperature (°C)	-45 ~ +85 (Case Temperature)
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msec half sine wave, 3 axis both directions

Typical Performance Plots

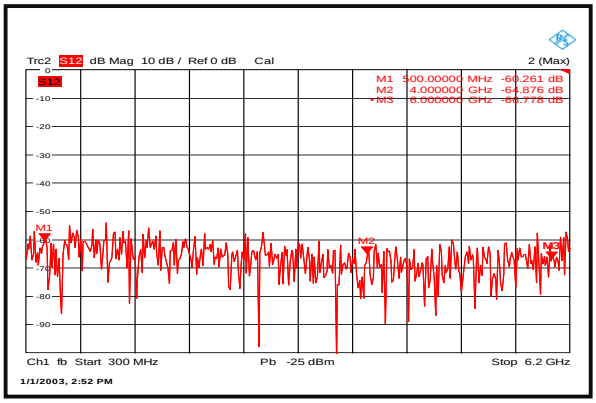
Gain @+25°C



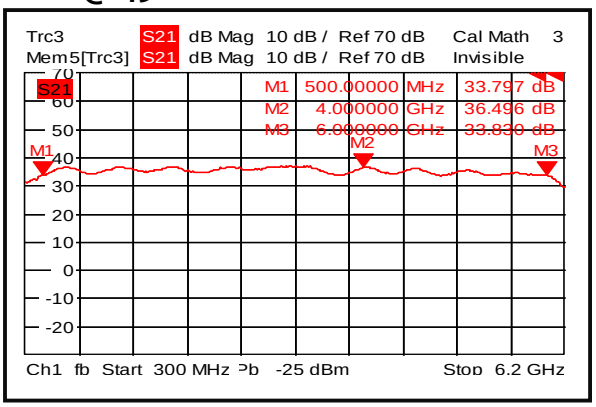
Input VSWR @+25°C



Isolation @+25°C

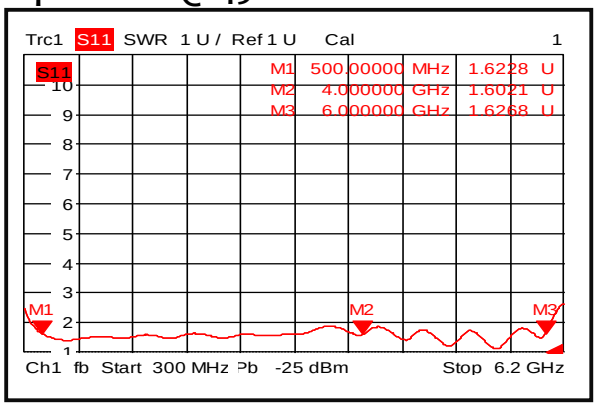


Gain @-45°C

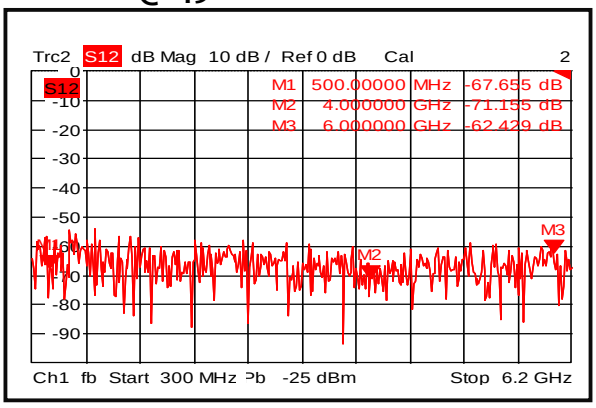


Wide Band Power Amplifier 0.5GHz~6GHz

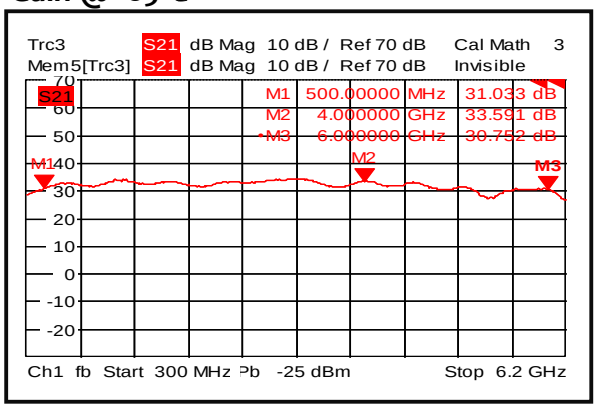
Input VSWR @-45℃



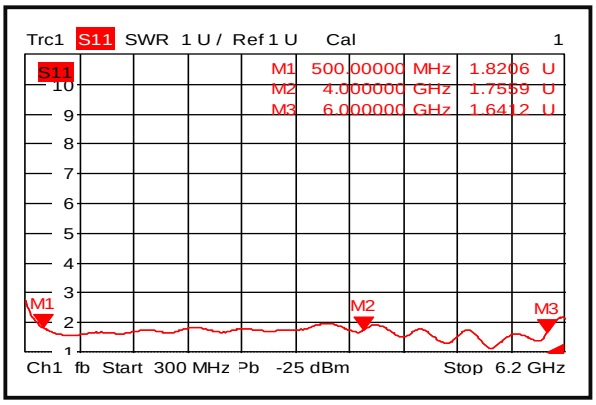
Isolation @-45℃



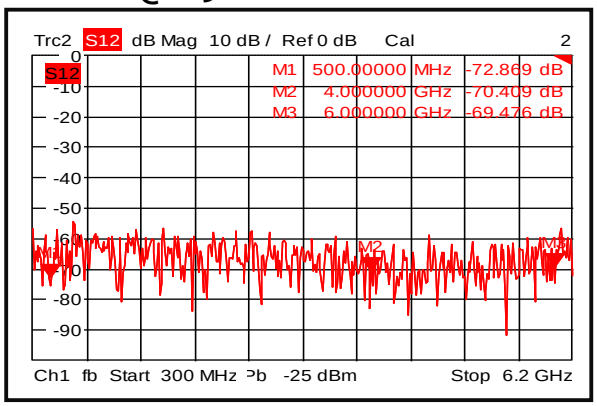
Gain @+85℃



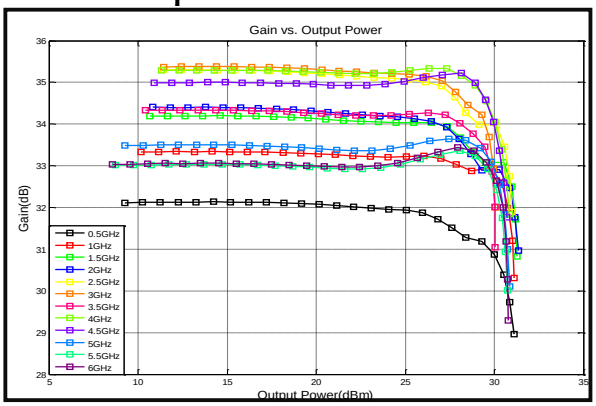
Input VSWR @+85℃



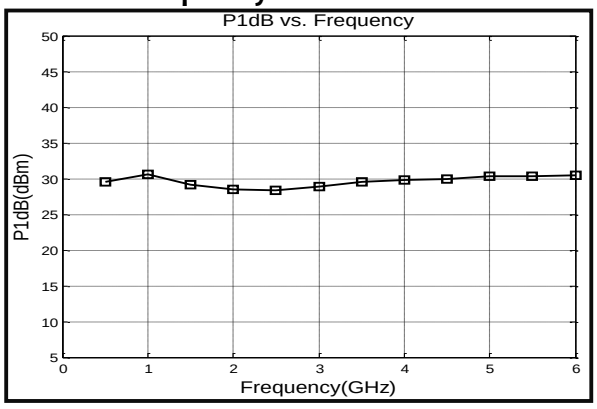
Isolation @+85℃



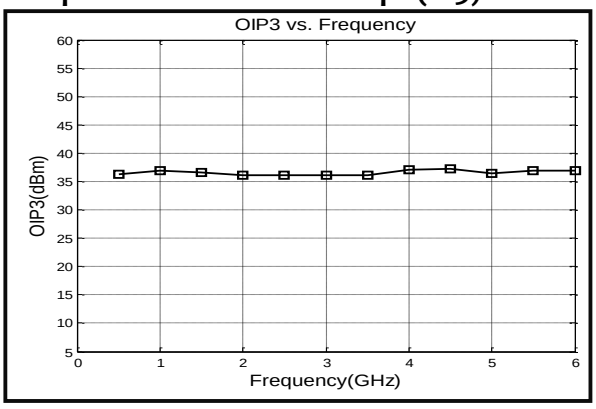
Gain vs. Output Power



P1dB vs. Frequency



Output Third Order Intercept (IP3)



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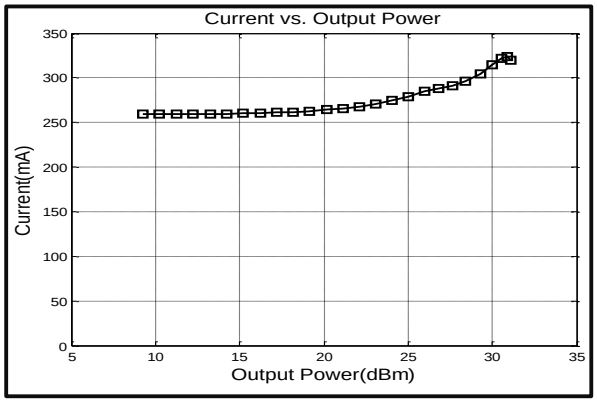
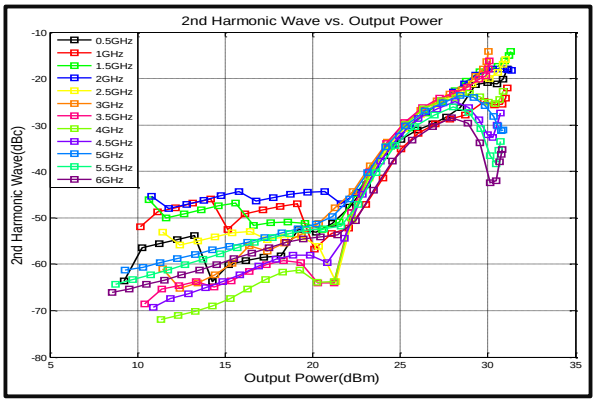
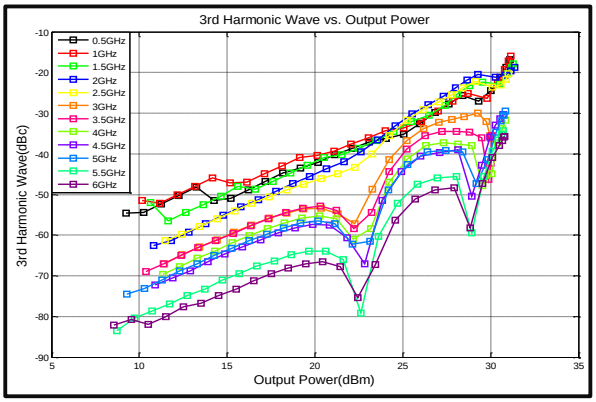
Current vs. Pout



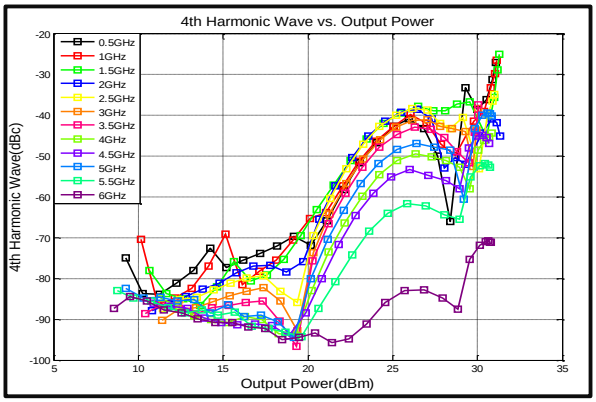
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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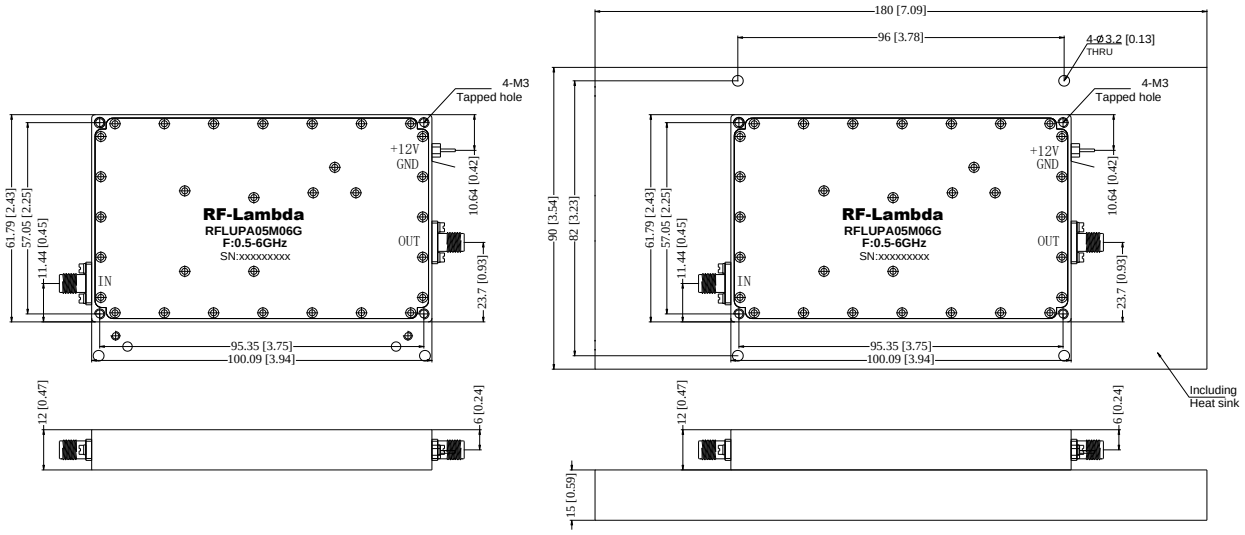
Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)

Ordering Information

Part No.	ECCN	Description
RFLUPA05M06G	EAR99	0.5-6GHz Power Amplifier

Important Notice

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