

500-2700MHz/50Watt/Module

Model Number: KB0527M47A

The model KB0527M47A is a multi-octave high power amplifier operating between 500 MHz and 2700 MHz and offering a wide dynamic Range with 50 Watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency. It is ideal for broadband high power RF, P&L&S applications.

FEATURES:

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

ELECTRICAL SPECIFICATIONS @ +28.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	500		2700	MHz
RF Output Power	P _{out}		50		Watt
Power Gain @ P _{SAT}	G _p		47		dB
Input Power for Rated P _{SAT}	P _{IN}		0		dBm
Power Gain Flatness	Δ G _p		±2		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @30W	H		-12		dBc
Spurious Signals	Spur		-70		dBc
Switch On/Off@10-90% Time	T _{ON/OFF}		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
DC Current @50W	IDD		6		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	162.56x86.36x25 [6.4 x 3.4 x 0.98]	mm[inch]	Maximum
Weight	0.8 [1.8]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink Required (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		60	°C	
Non-operating Temperature	-45		85	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ P _{OUT} =40W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C Graceful Degradation

Focus on Your Application

Chengdu KeyLink Wireless Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

>> www.keylinkmw.com

Specifications subject to change without notice

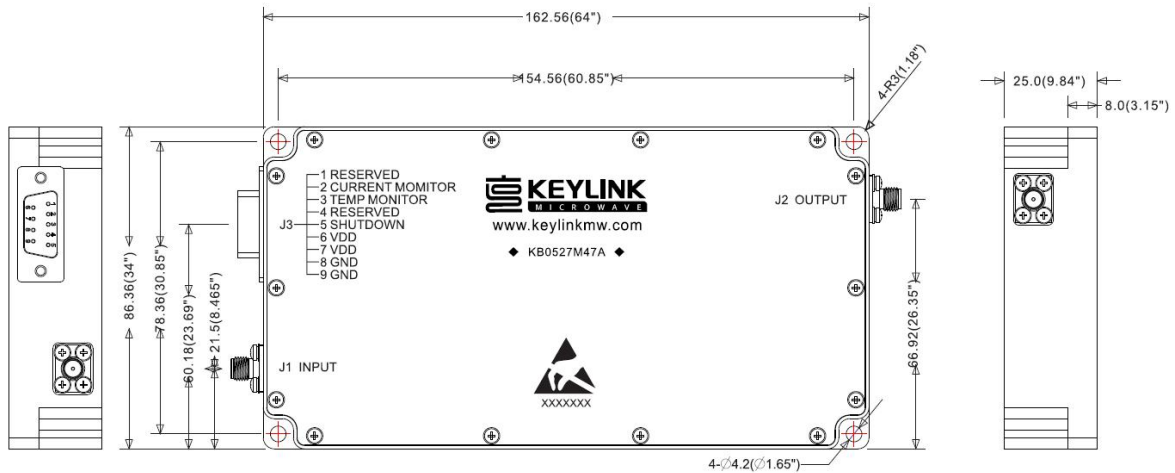
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	Reserved	No Connection
2	Current Monitor	Analog voltage relative to IDD @ 50mV/100mA
3	Temp Monitor	Analog voltage relative to module temperature @ 10mV/°C
4	Reserved	No Connection
5	Shutdown	Amplifier Disable: TTL Logic High (5V)
6,7	VDD	+28.0VDC
8,9	GND	Ground

OUTLINE DRAWING (All dimensions in mm [inch])



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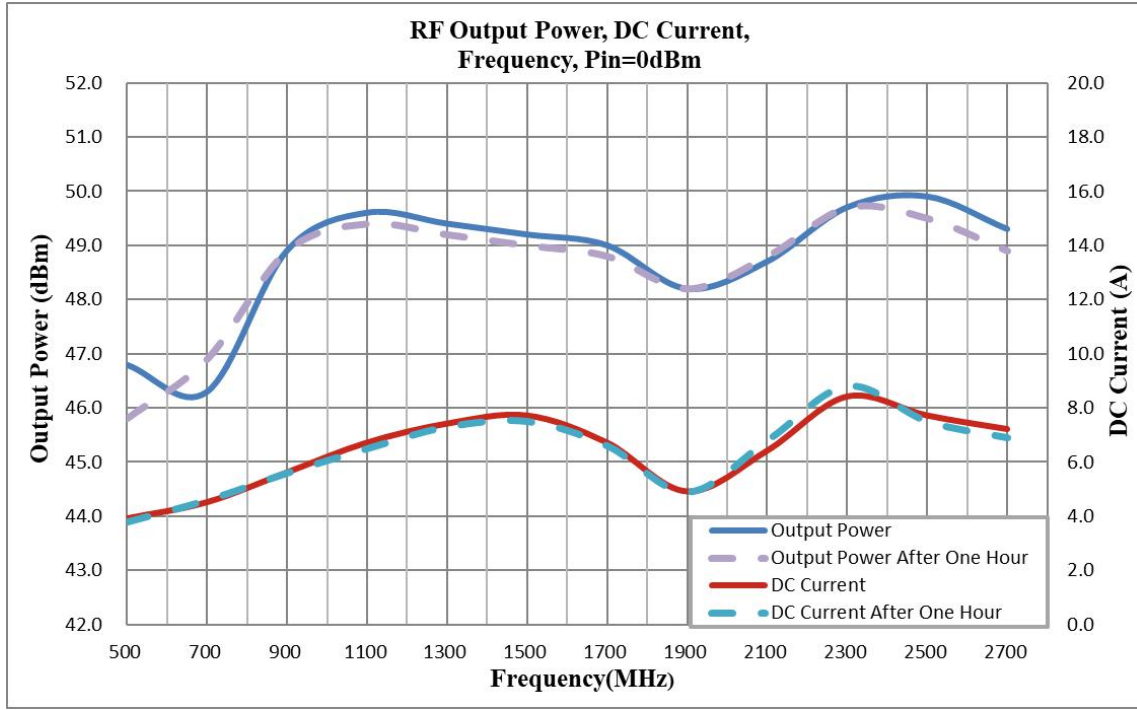
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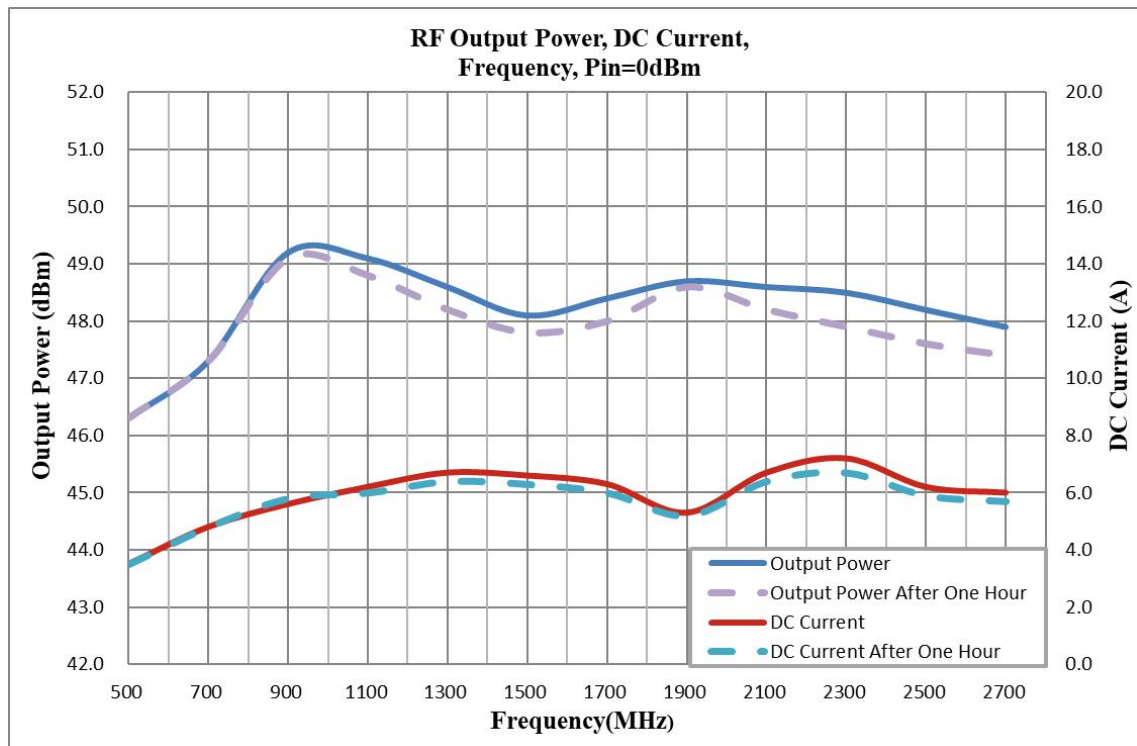
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TYPICAL PERFORMANCE PLOTS(For reference only)

Graph1: Output Power(Low temp.-20±3°C)



Graph2: Output Power(High temp.+60±3°C)



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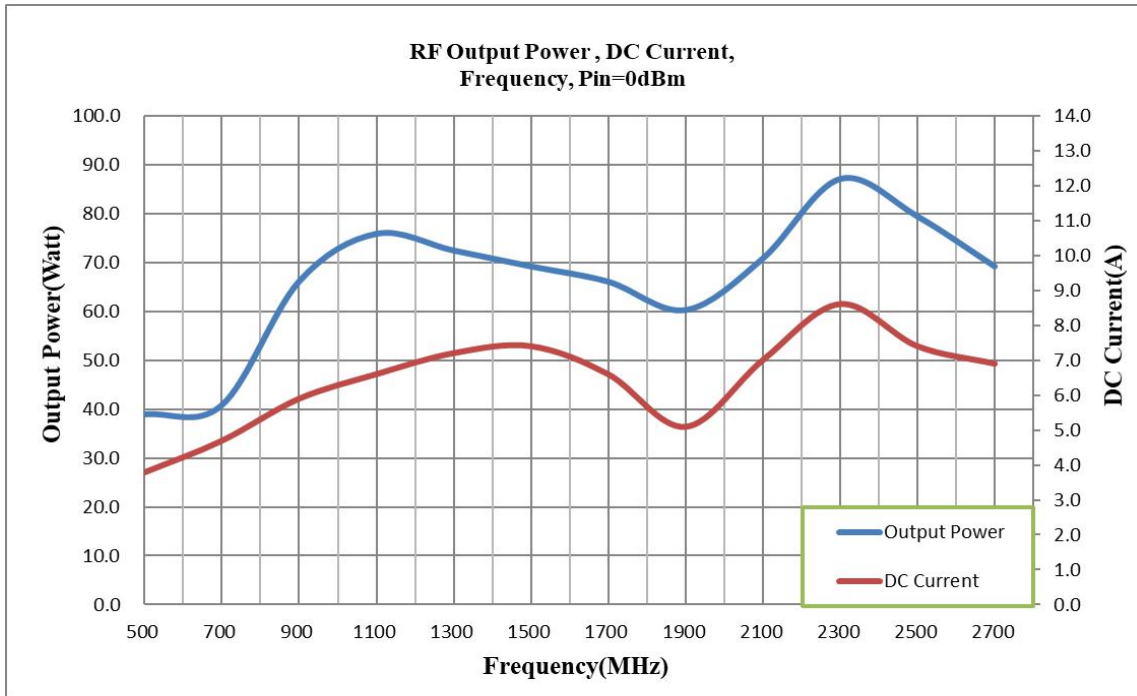
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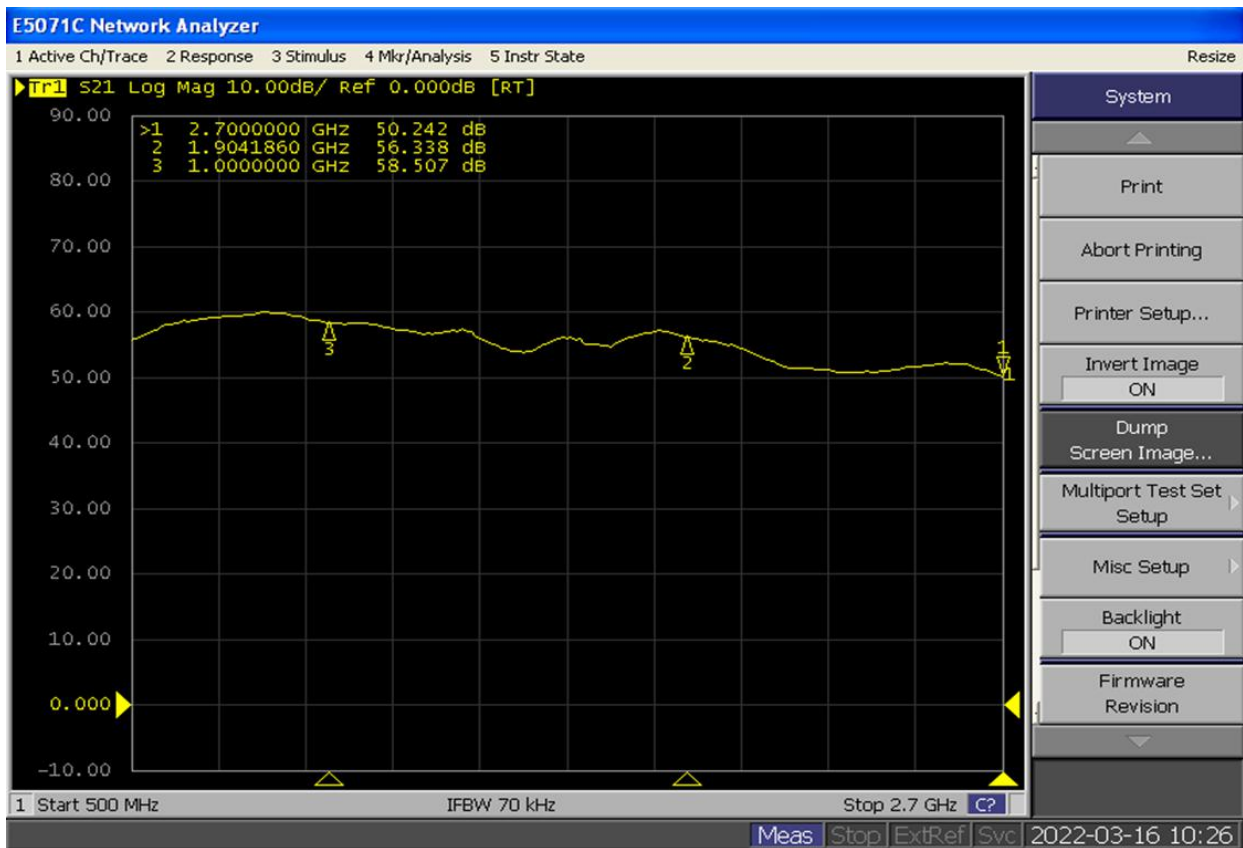
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Graph3: Output Power(Normal temp.+25±3°C)



Small Signal Flatness:



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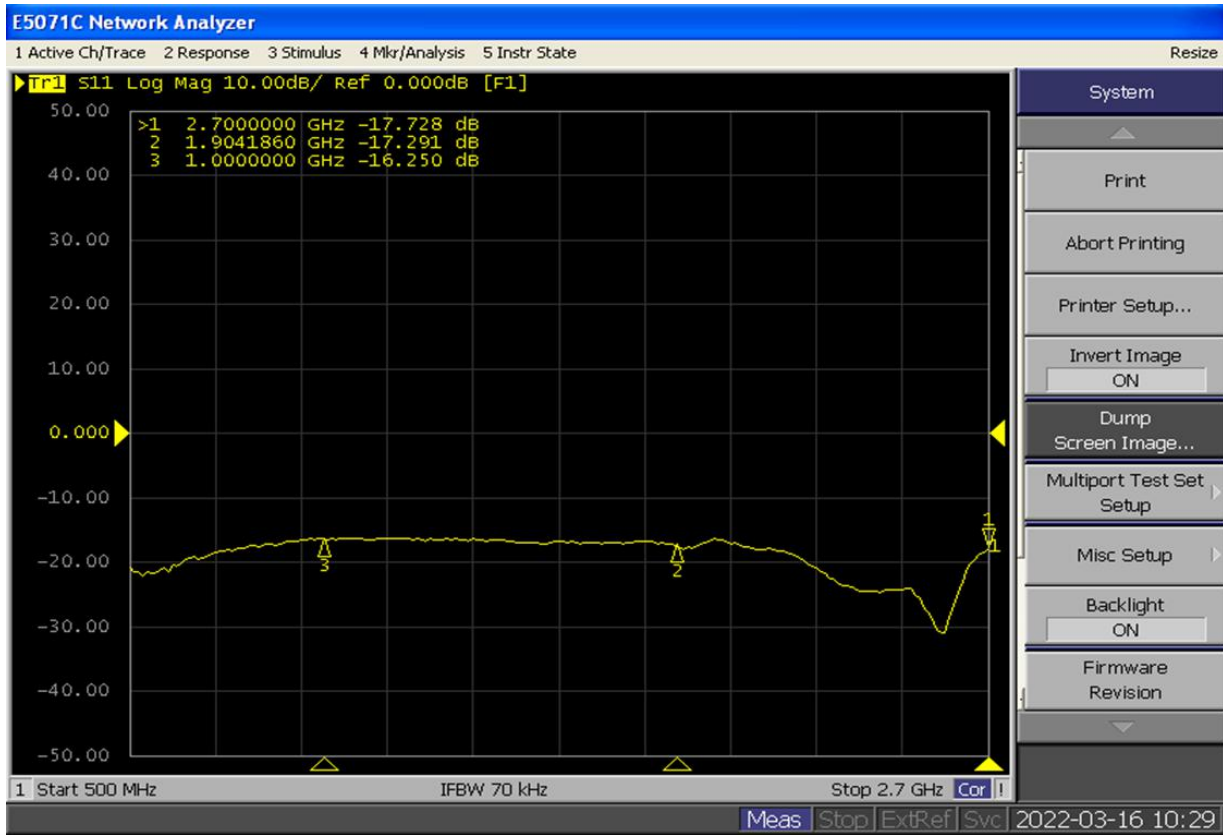
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Input Return Loss:



Note: Adequate heatsink required.

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