

## 700-2700MHz/50Watt/Module

Model Number: KB0727M47C

The model KB0727M47C is a multi-octave high power amplifier operating between 700 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, L&S applications.

### FEATURES:

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

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	700		2700	MHz
RF Output Power	P <sub>out</sub>		50		Watt
Power Gain @ PSAT	G <sub>p</sub>		47		dB
Input Power for Rated PSAT	PIN		0		dBm
Power Gain Flatness	ΔG <sub>p</sub>		±2		dB
Small Signal Gain Flatness	ΔG <sub>SS</sub>		±3		dB
Input Return Loss	S <sub>11</sub>		-15	-10	dB
Harmonics @20W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switch On/Off@10-90% Time	T <sub>ON/OFF</sub>		2	5	μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V <sub>DC</sub>	24	28	32	Volt
DC Current @50W	I <sub>DD</sub>		6		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	162.56x86.36x25 [6.4x3.4 x0.98]	mm [inch]	Maximum
Weight	0.8 [1.76]	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 <sub>OUT</sub> =40W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous.
Over Temperature	85°C @ heatsink [restored @ 60°C]

*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

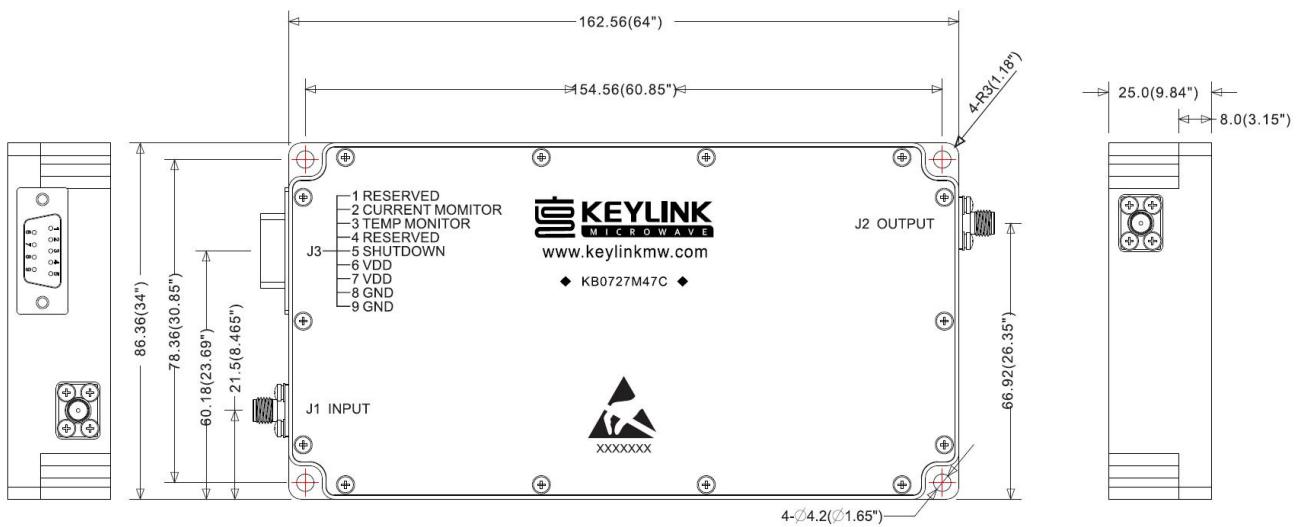
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### DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	Reserved	No Connection
2	Current Monitor	Analog voltage relative to IDD @ 100mV per Ampere
3	Temp Monitor	Analog voltage relative to module temperature @ 10mV/°C
4	Reserved	No Connection
5	Shutdown	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
6	VDD	+28.0VDC
7	VDD	+28.0VDC
8	GND	Ground
9	GND	Ground

### OUTLINE DRAWING (All dimensions in mm [inch])



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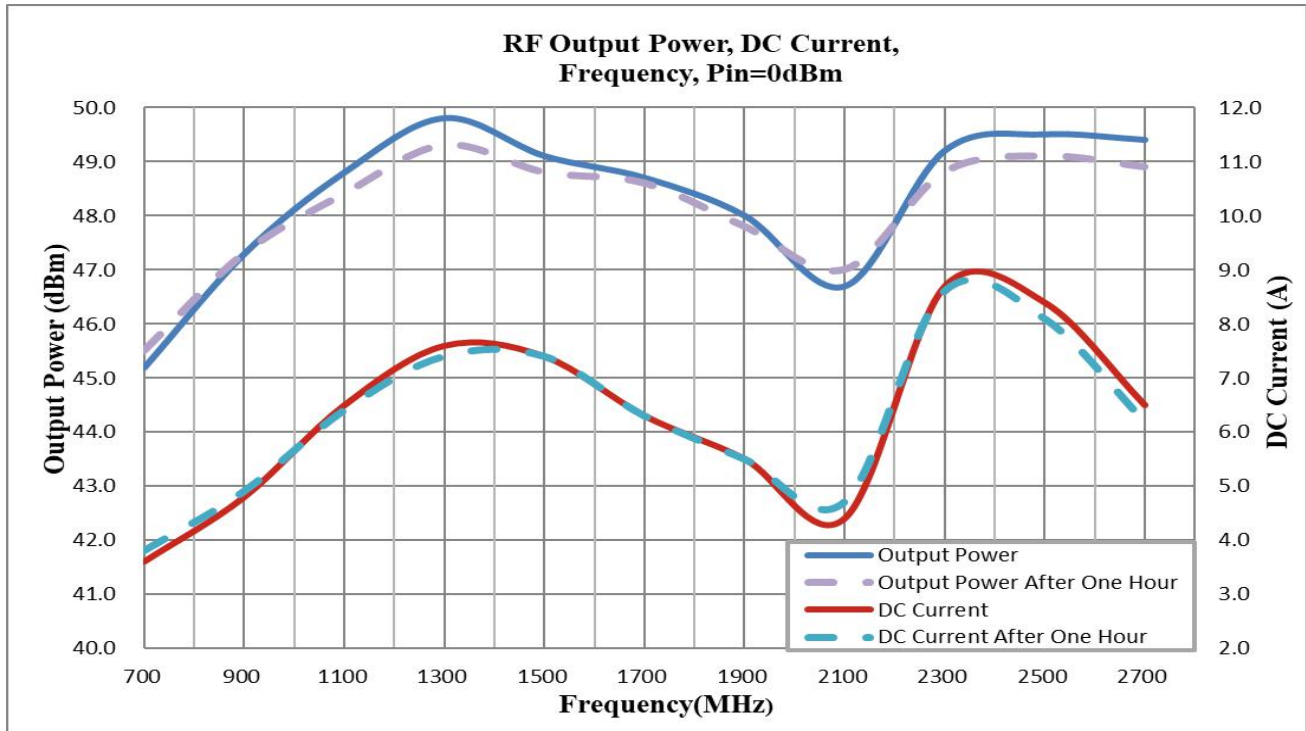
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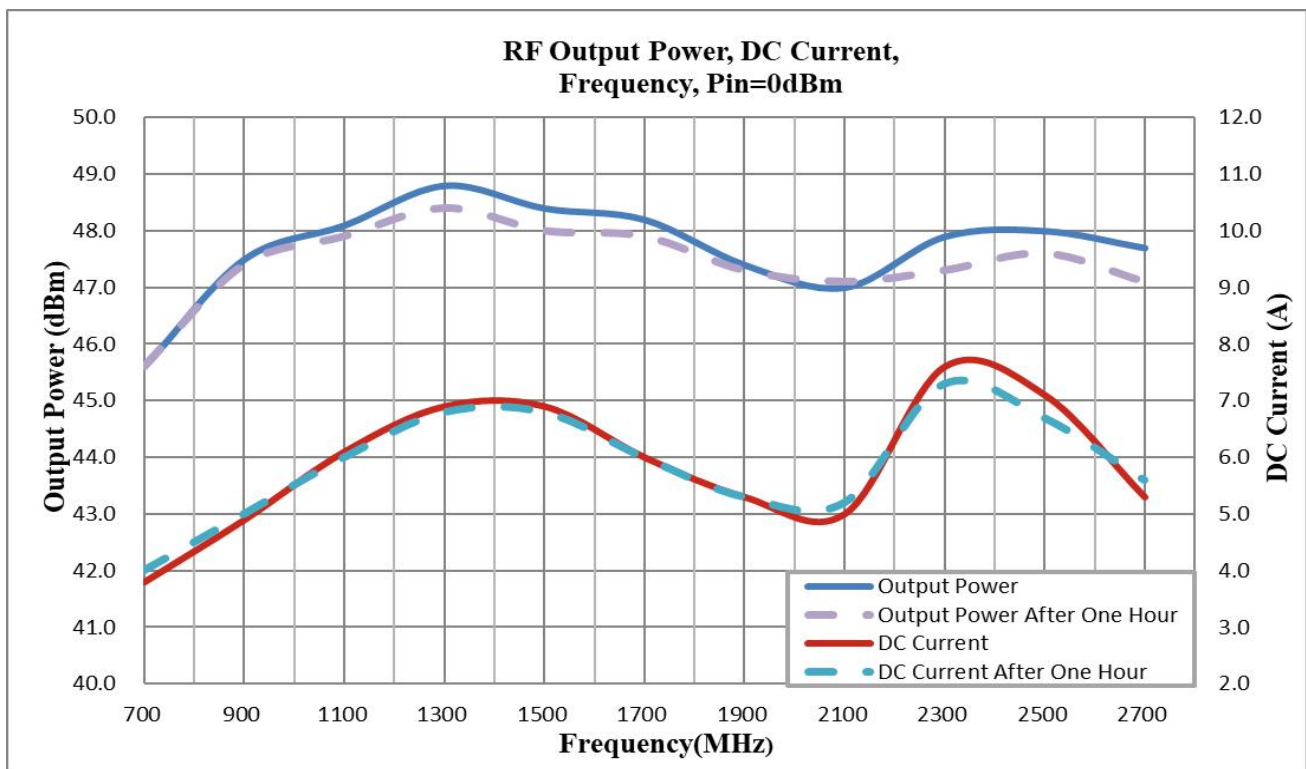
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### TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

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



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



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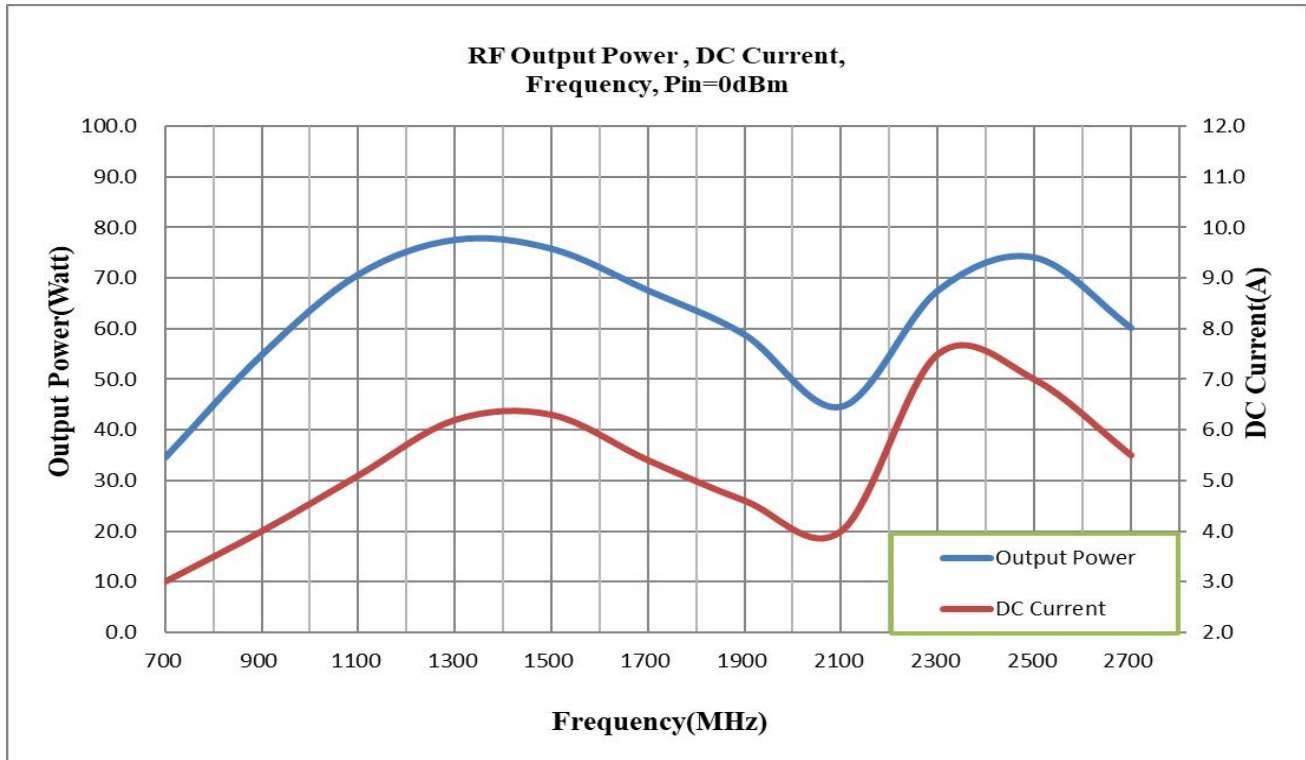
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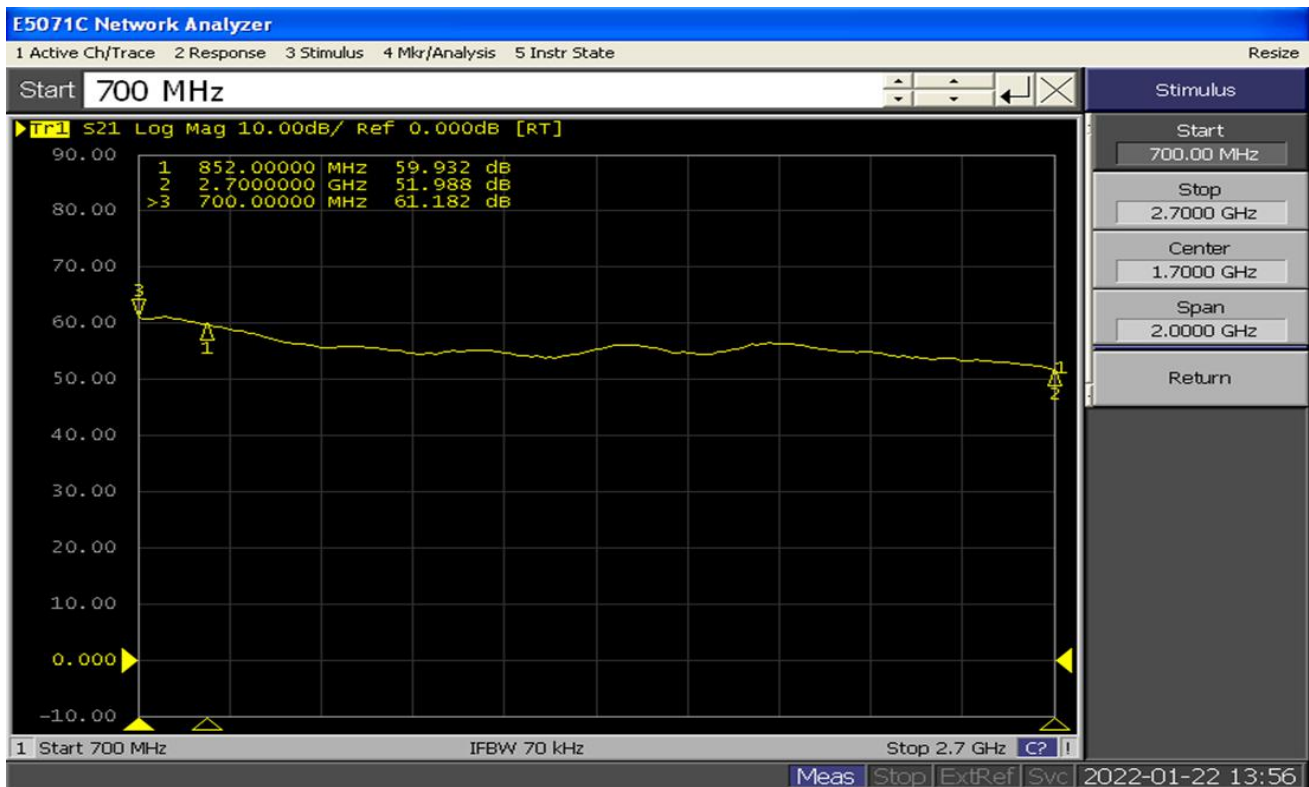
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Graph3: Output Power (Normal temp. +25±3 °C)



### Small Signal Gain Flatness:



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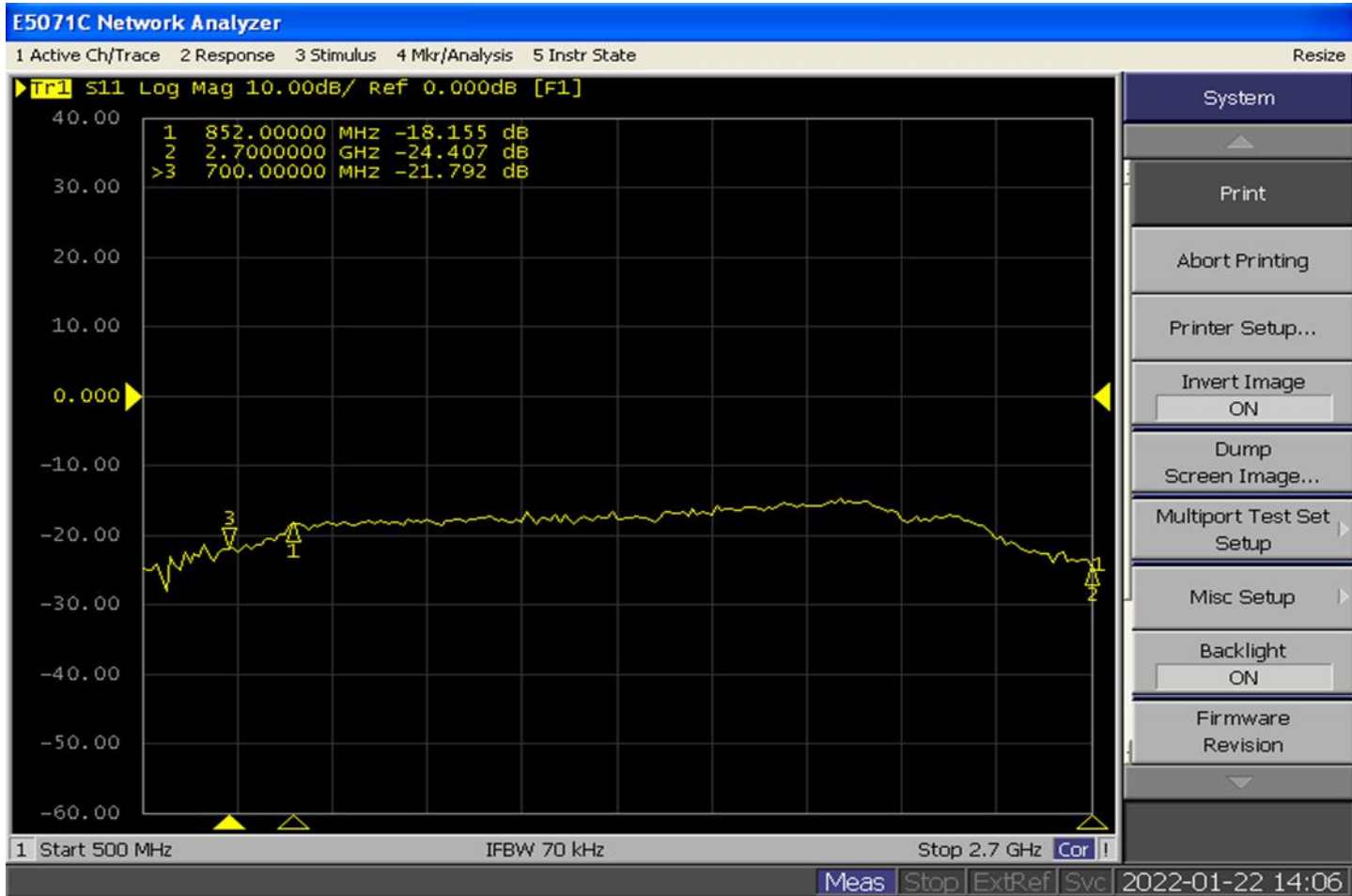
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Input Return Loss:



Note: Adequate heatsink required.

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