



## 400-500MHz/50Watt/Module

Model Number: OC-NPA0.4-0.5K50W

The OC-NPA0.4-0.5K50W is suitable for narrowband high power RF,UHF linear applications. This compact module utilizes advanced high power devices that provide excellent power density, high efficiency, wide dynamic range and low distortions. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, machined housings and qualified components. Keylink's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

### FEATURES:

- Small Size and light weight;
- Instantaneous narrowband;
- 50 Ohms input and Output matched;
- Built-in control and protection circuits.
- Class AB

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	400		500	MHz
RF Output Power	Psat		50		Watt
Power Gain	Gp		47		dB
Small Gain Flatness	$\Delta$ Gp		$\pm 1.5$		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @20W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V <sub>DC</sub>	26	28	30	Volt
DC Current @20W	I <sub>DD</sub>		5		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	150x90x25[5.9 x3.6 x1.0]	mm [inch]	Maximum
Weight	1.2 [2.6]	kg [lbs]	Maximum
RF Connectors Input	SMA Female		
RF Connectors Output	SMA Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink (Not Supplied)		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		70	°C	
Non-operating Temperature	-25		75	°C	Storage
Relative Humidity (non-condensing)			95	%	

### Absolute Maximum Rating

Input RF drive level without	+5 dBm	Maximum
Load VSWR @ POUT =10W	5:1 @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C ± 10°C shutdown	Maximum

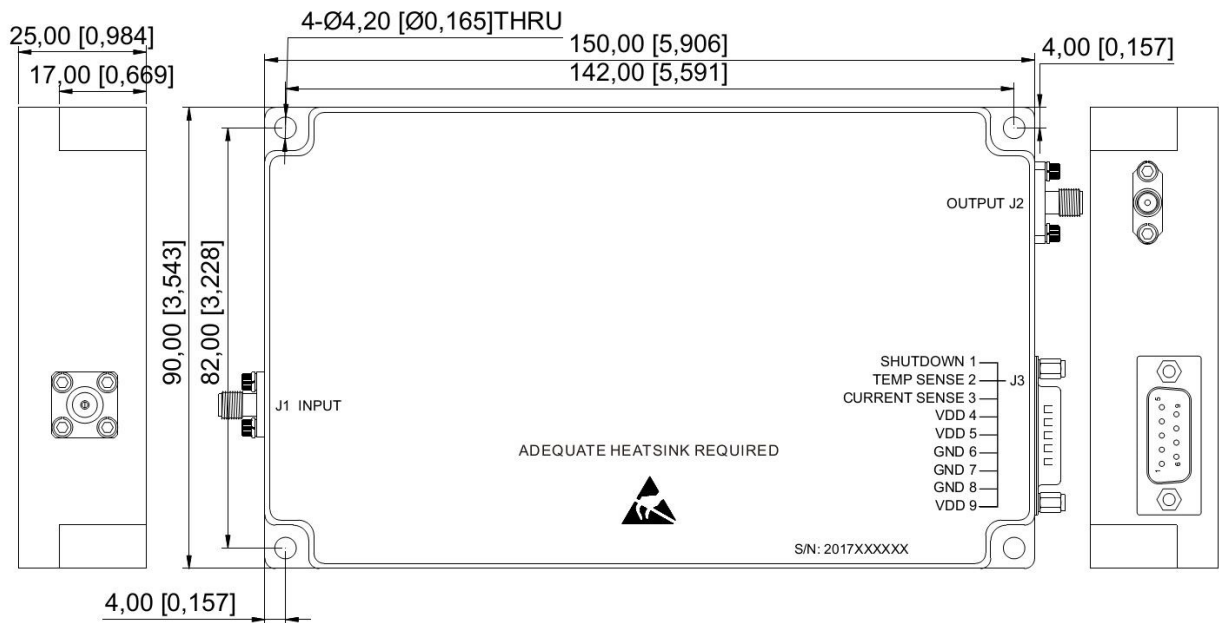
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#### DC INTERFACE CONNECTOR

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

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



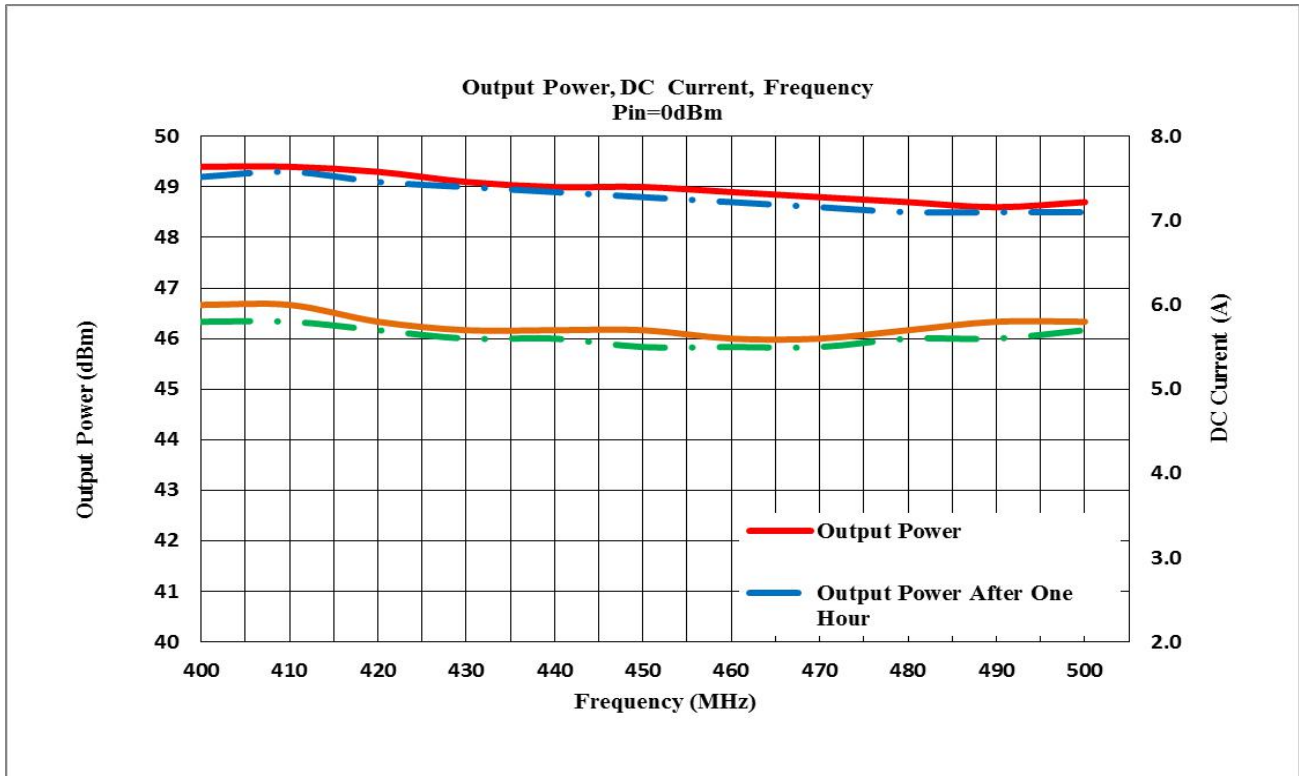


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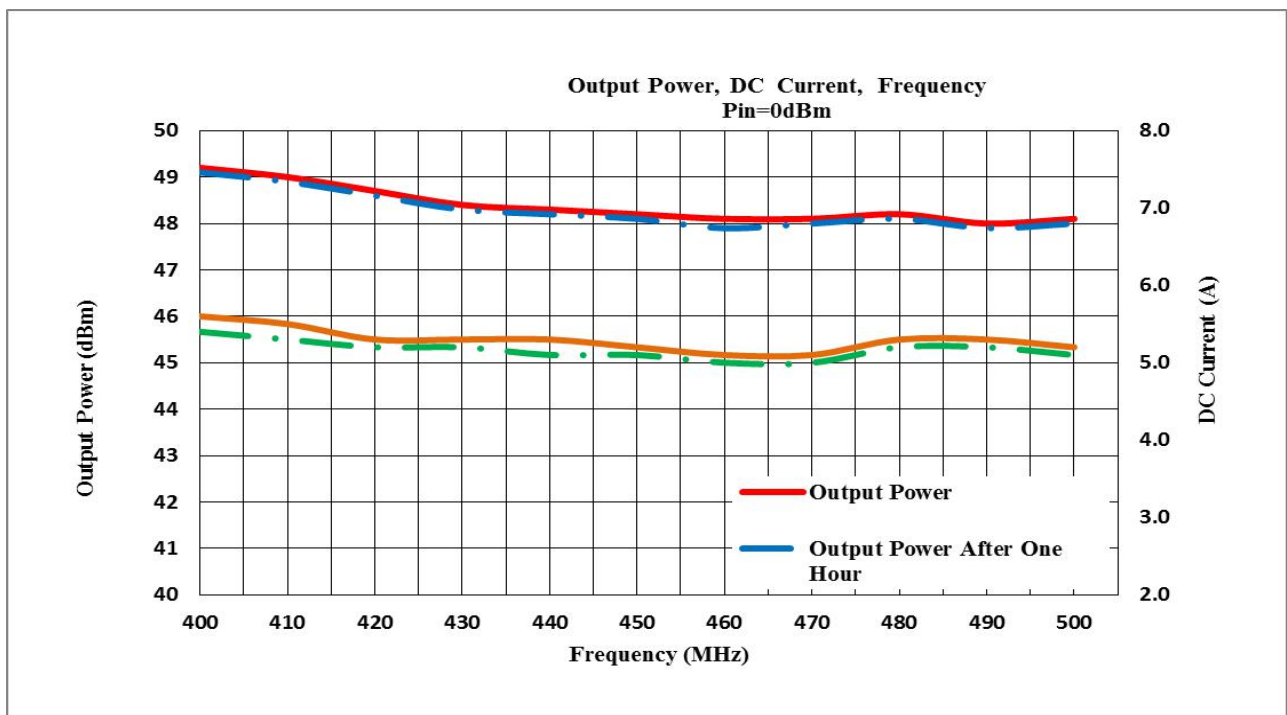
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TYPICAL PERFORMANCE PLOTS (ONLY FOR REFERENCE)

Graph1: Output Power (Low temp.  $-20\pm 3^{\circ}\text{C}$ )



Graph2: Output Power(High temp.  $+60\pm 3^{\circ}\text{C}$ )

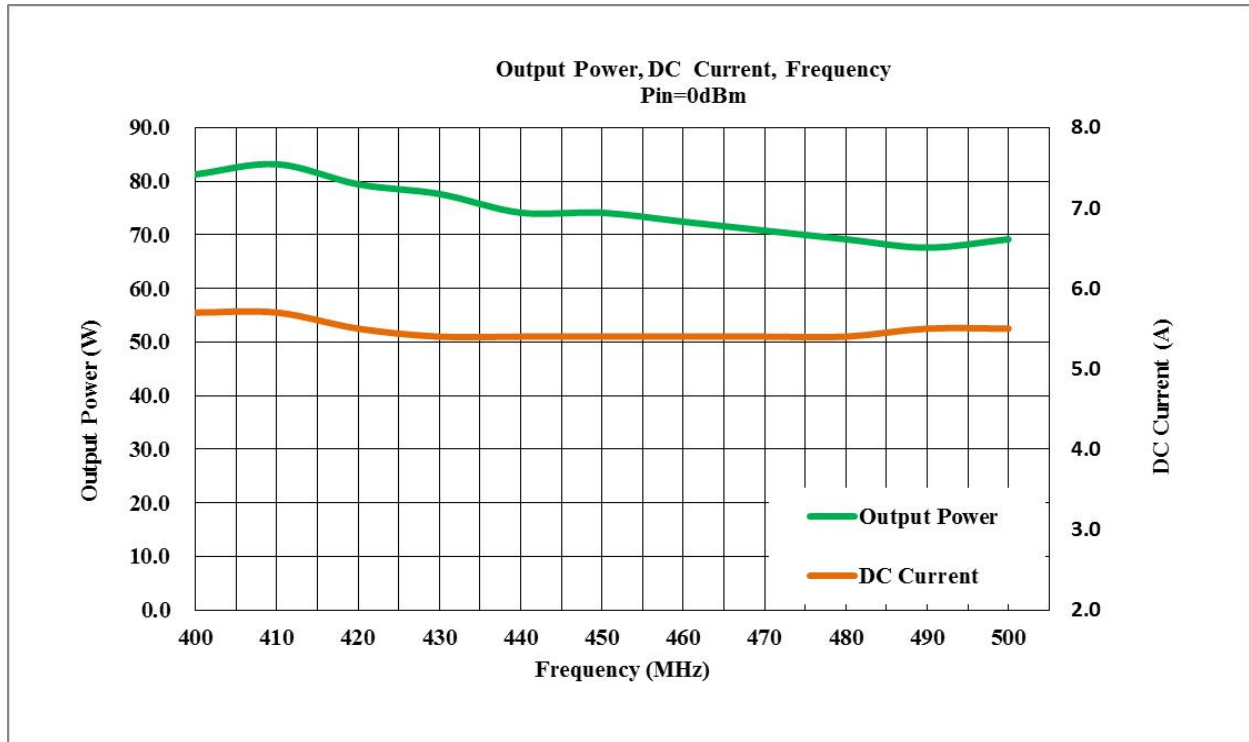




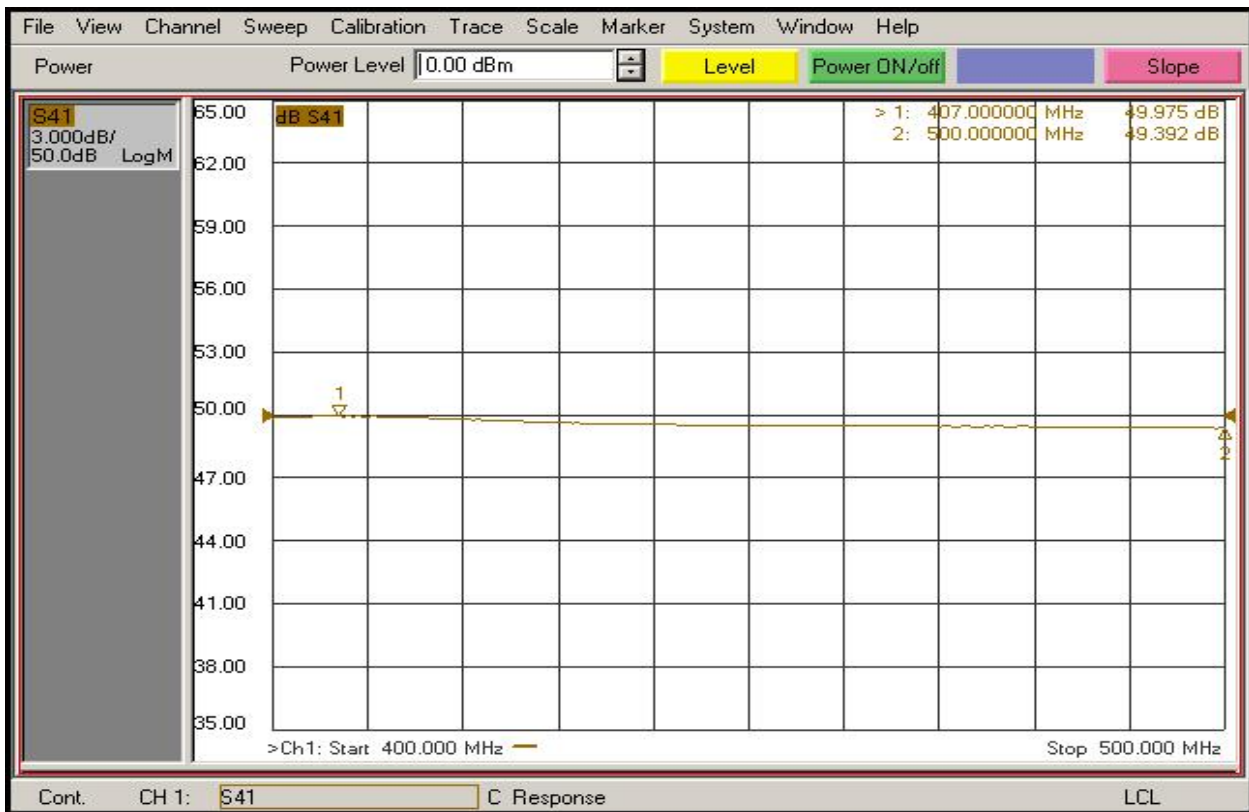
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Graph3: Output Power(Normal temp.+25±3°C)



Power Gain:

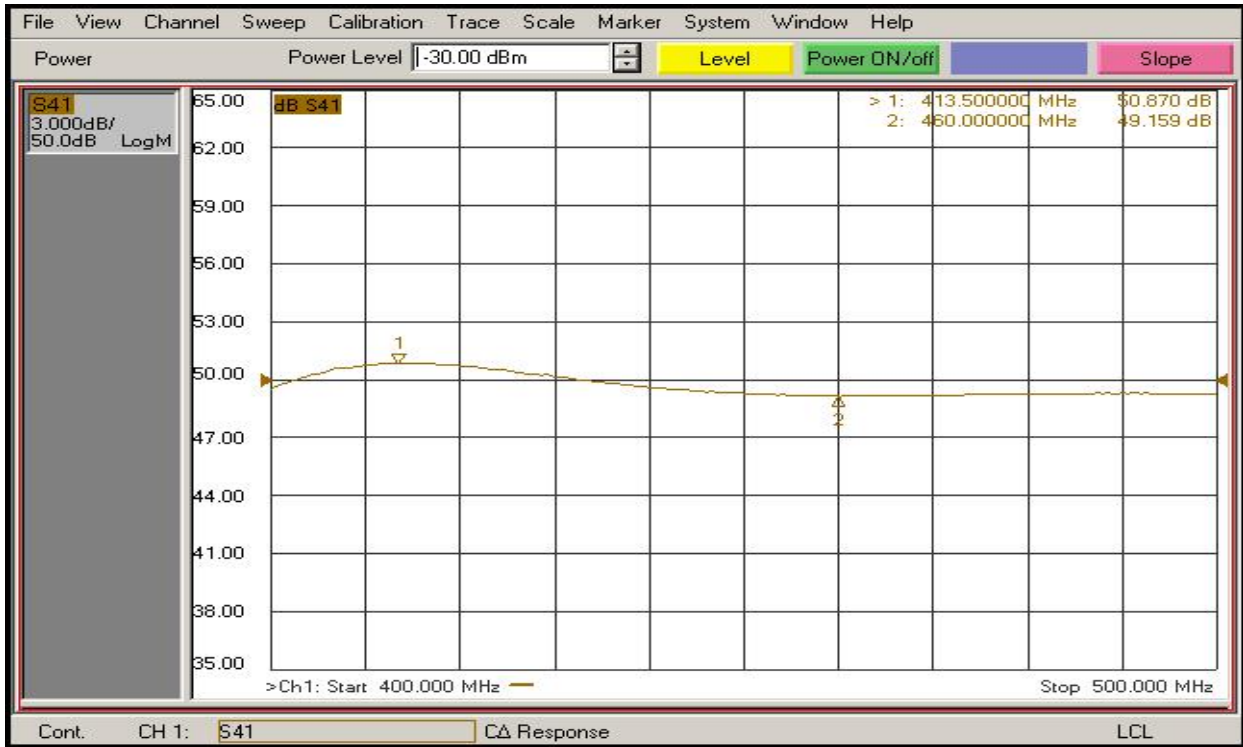




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Small Signal Power Gain:



Input Return Loss:

