

80-1000MHz/20Watt/Module

Model Number: OC-PA008-1K20W

The OC-PA008-1K20W is suitable for multi octave broadband high power RF, HF&VHF&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 ultra-broadband;
- 50 Ohms input and Output matched;
- Built-in control and protection circuits.

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

| Parameter | Symbol | Minimum | Typical | Maximum | Units |
|---------------------|------------------|---------|---------|---------|-------|
| Operating Frequency | BW | 80 | | 1000 | MHz |
| RF Output Power | P _{out} | 15 | 20 | | Watt |
| Power Gain | G _p | | 43 | | dB |
| Power Gain Flatness | Δ G _p | | ±2 | | dB |
| Input Return Loss | S ₁₁ | | | -10 | dB |
| Harmonics @10W | H | | -10 | | dBc |
| Spurious Signals | Spur | | -60 | | dBc |
| In/Output Impedance | | | 50 | | Ω |
| Operating Voltage | V _{DC} | 26 | 28 | 30 | Volt |
| DC Current @20W | I _{DD} | | 6 | | Amp |

MECHANICAL SPECIFICATIONS

| Parameter | Value | Units | Limits |
|------------------------|----------------------------------|-----------|---------|
| Dimensions | 150x90x25 [5.9x3.5x1] | 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 | | 60 | °C | |
| Non-operating Temperature | -25 | | 65 | °C | Storage |
| Relative Humidity (non-condensing) | | | 95 | % | |

Absolute Maximum Rating

| | | |
|-----------------------------------|---|---------|
| Input RF drive level without | +10 dBm | Maximum |
| Load VSWR @ P _{OUT} =10W | ∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous | |
| Thermal Overload | 85°C shutdown | Maximum |

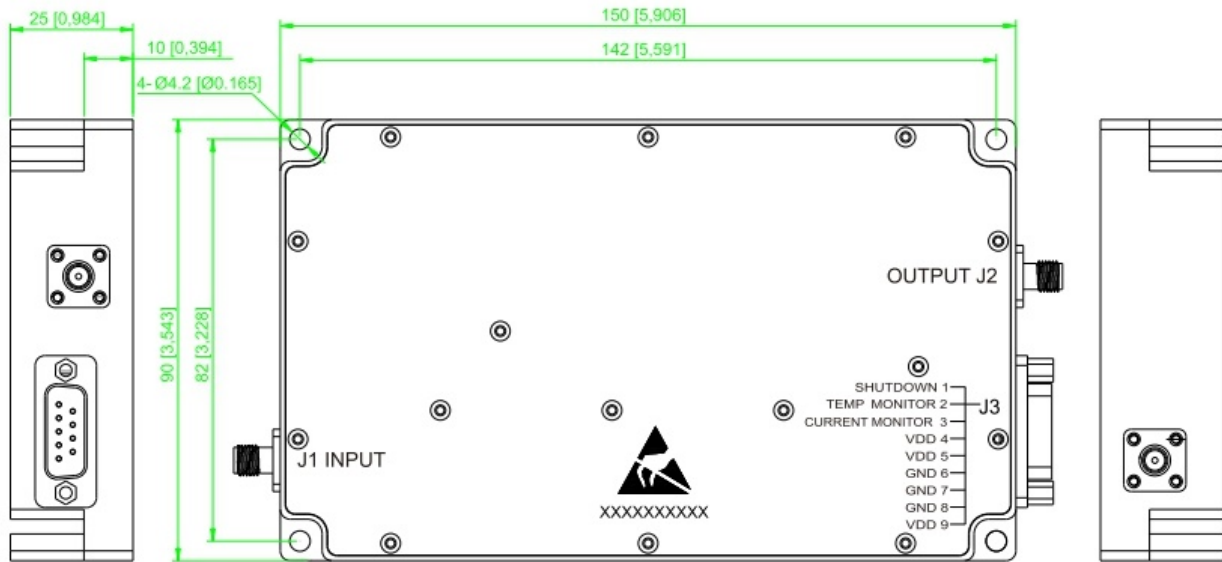
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DC INTERFACE CONNECTOR

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

OUTLINE DRAWING (All dimensions in mm)

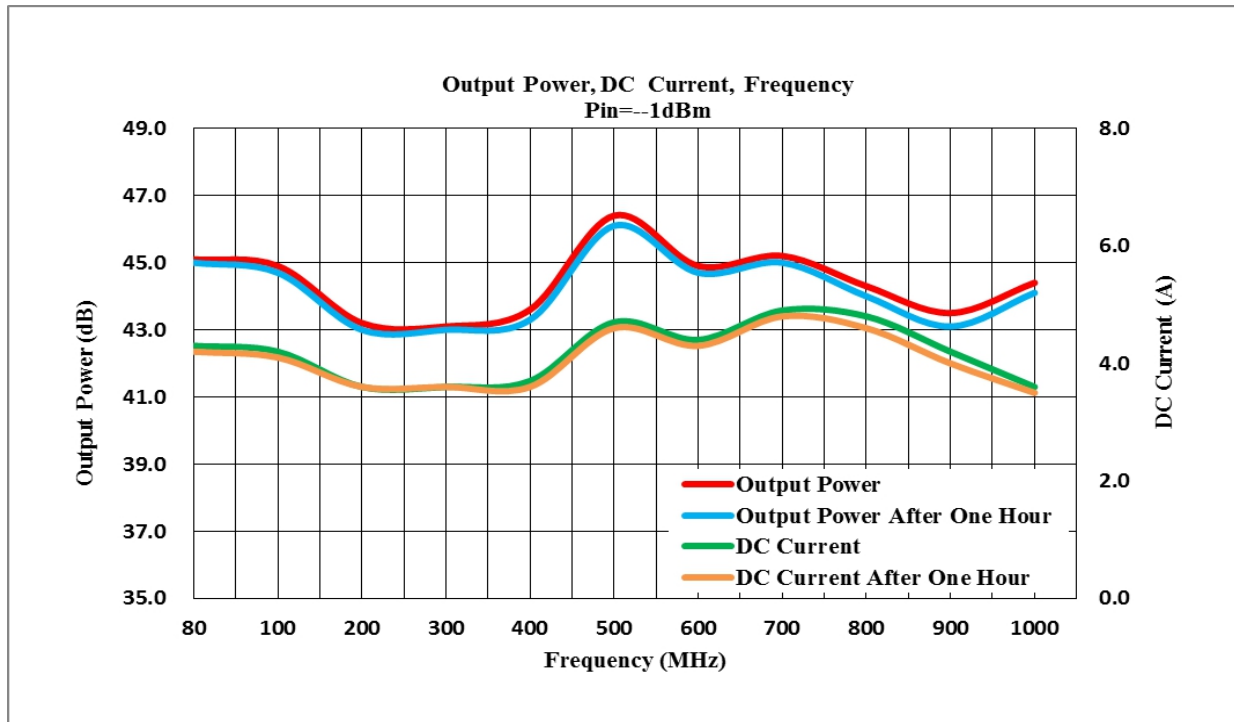


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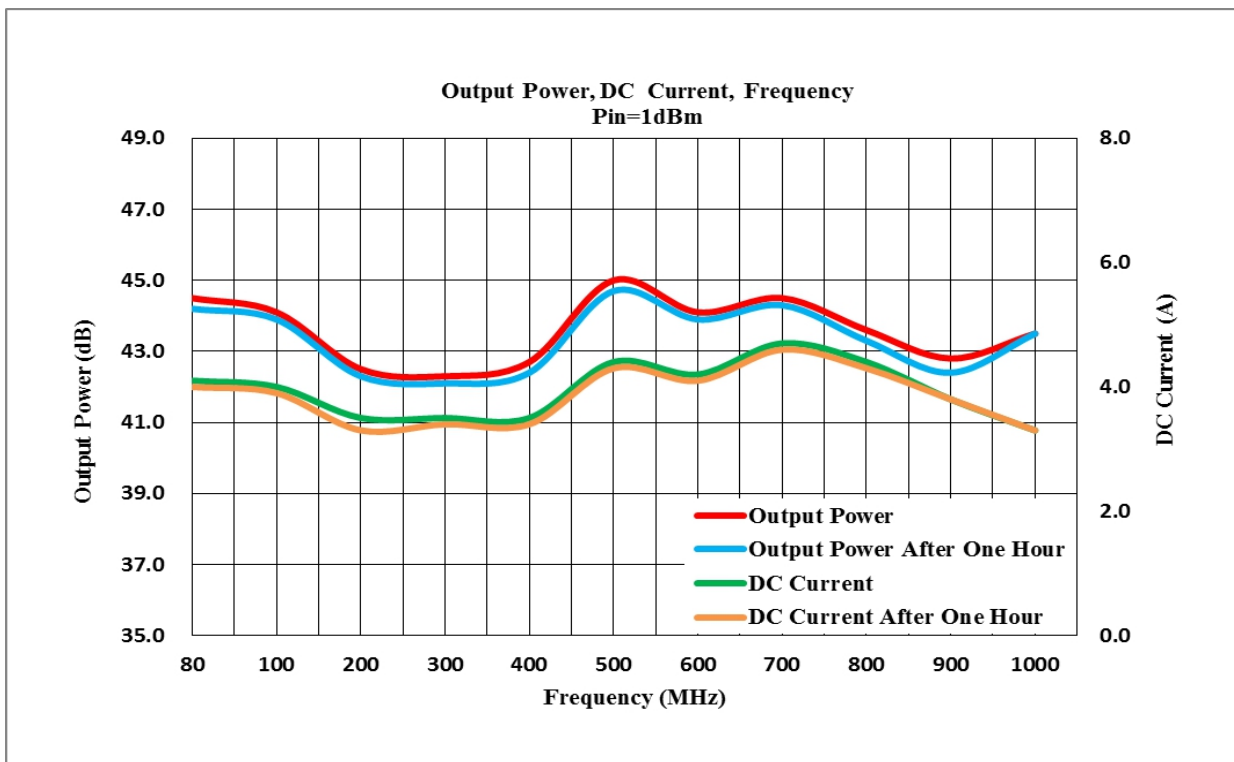
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TYPICAL PERFORMANCE PLOTS (FOR REFERENCE)

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



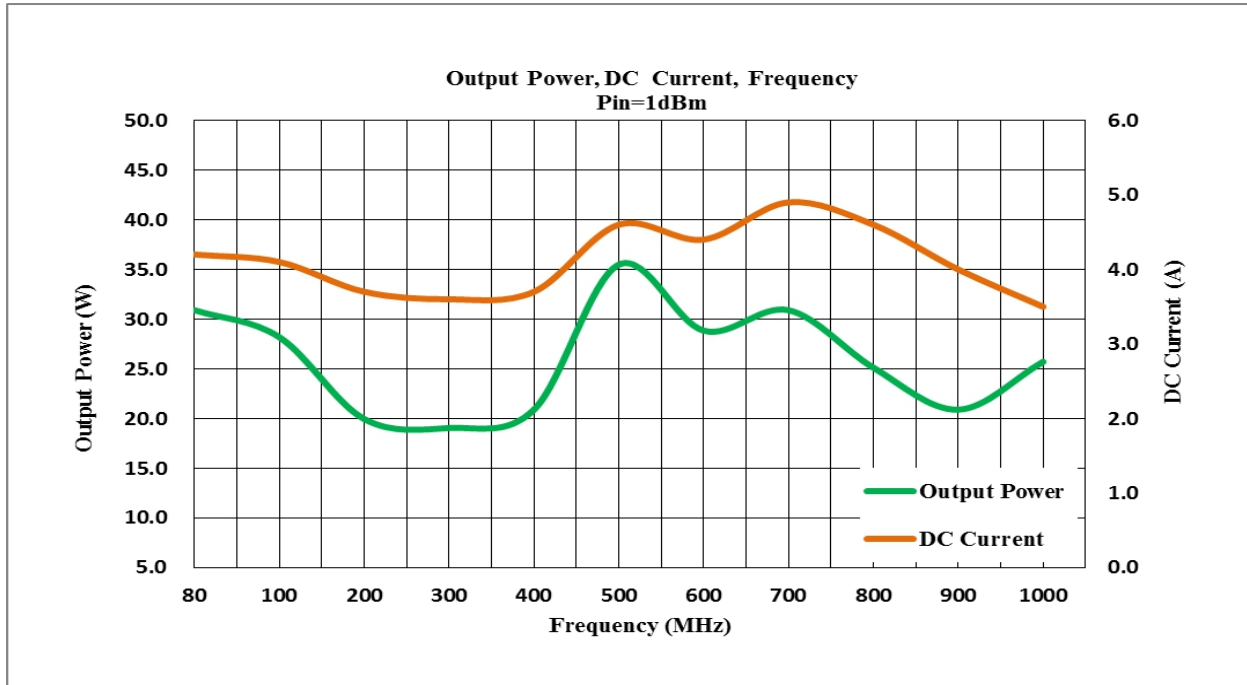
Graph2: Output Power (High temp. $+60\pm 3^{\circ}\text{C}$)



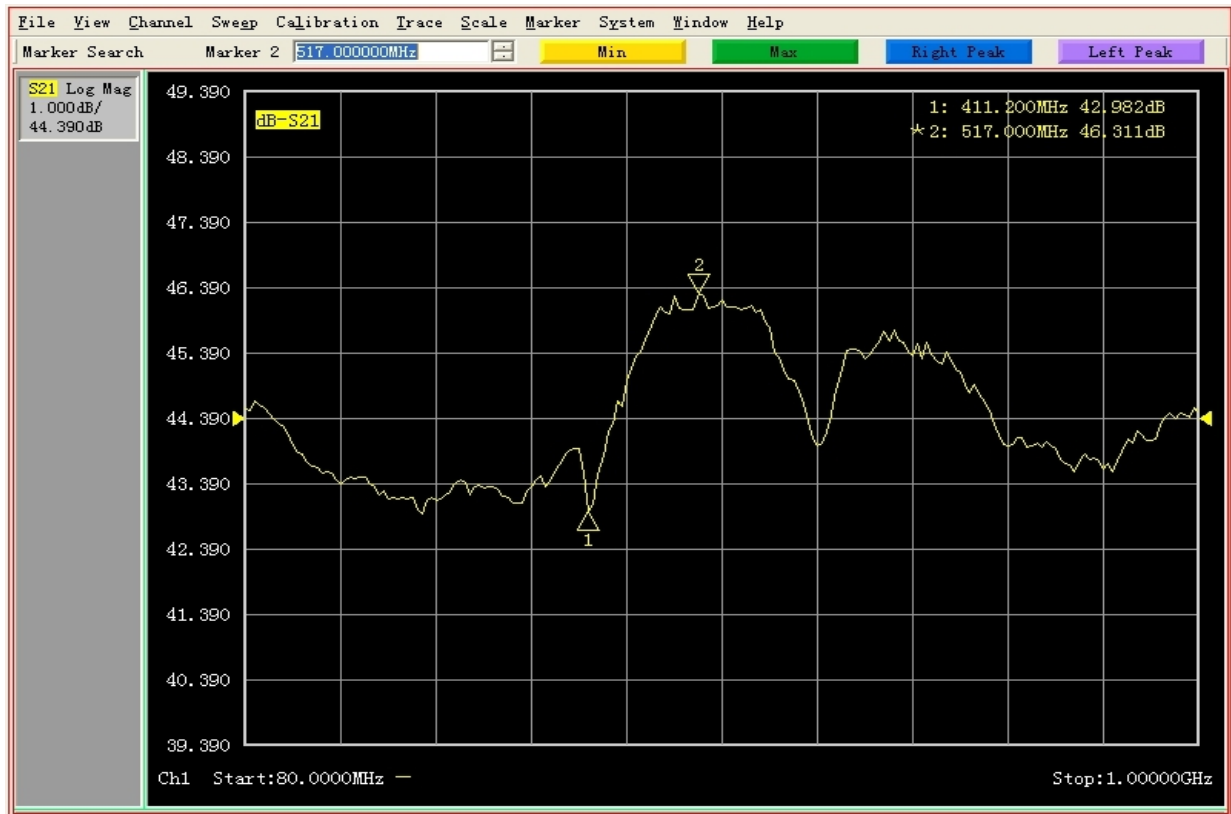
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Graph3: Output Power (Normal temp. +25±3°C)



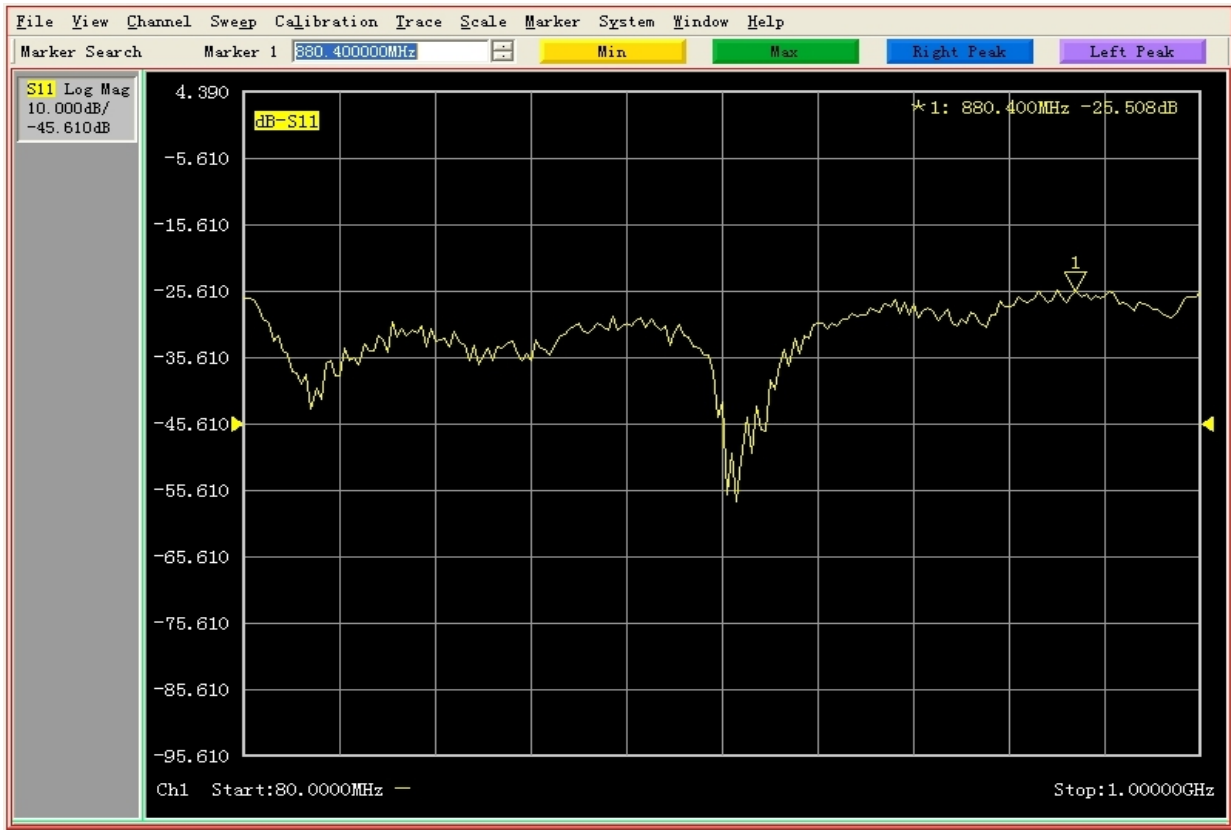
Power Gain:



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Input Return Loss:



Note: Adequate heatsink required.