

2000-6000MHz/50Watt/Module

Model Number: KNP2060M47A

The model KNP2060M47A is a multi-octave high power amplifier operating between 2000 MHz and 6000 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 multi-octave broadband high power broadband 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 | 2000 | | 6000 | MHz |
| RF Output Power | PPK | | 50 | | Watt |
| Power Gain | Gp | | 47 | | dB |
| Duty Cycle | Duty Cycle | | 10 | 20 | % |
| Pulse Width | PWIDTH | 2 | | 200 | μS |
| Power Gain Flatness | Δ Gp | | ±3 | | dB |
| Input Return Loss | S ₁₁ | | | -10 | dB |
| Harmonics @40W | H | | -10 | | dBc |
| Spurious Signals | Spur | | -60 | | dBc |
| Switch On/Off@10-90% Time | TON/OFF | | 2 | 5 | μS |
| In/Output Impedance | Impedance | | 50 | | Ω |
| Operating Voltage | VDC | 24 | 28 | 32 | Volt |
| DC Current @40W | IDD | | 8 | | Amp |

MECHANICAL SPECIFICATIONS

| Parameter | Value | Units | Notes |
|------------------------|---|-----------|---------|
| Dimensions | 160x100x25 [6.2x3.9x0.98] | mm [inch] | Maximum |
| Weight | 2 [4.4] | kg [lbs] | Maximum |
| RF Connectors Input | SMA, Female | | |
| RF Connectors Output | SMA, Female | | |
| DC Interface Connector | Hybrid, D-Sub 7-Pin, Male | | |
| Cooling | External Heatsink Required (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 damage | +5 dBm (Max) |
| Load VSWR @ POUT =40W | 5:1 @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous |
| Over Temperature | 85°C @ heatsink [restored @ 60°C] |

Focus on Your Application

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Specifications subject to change without notice

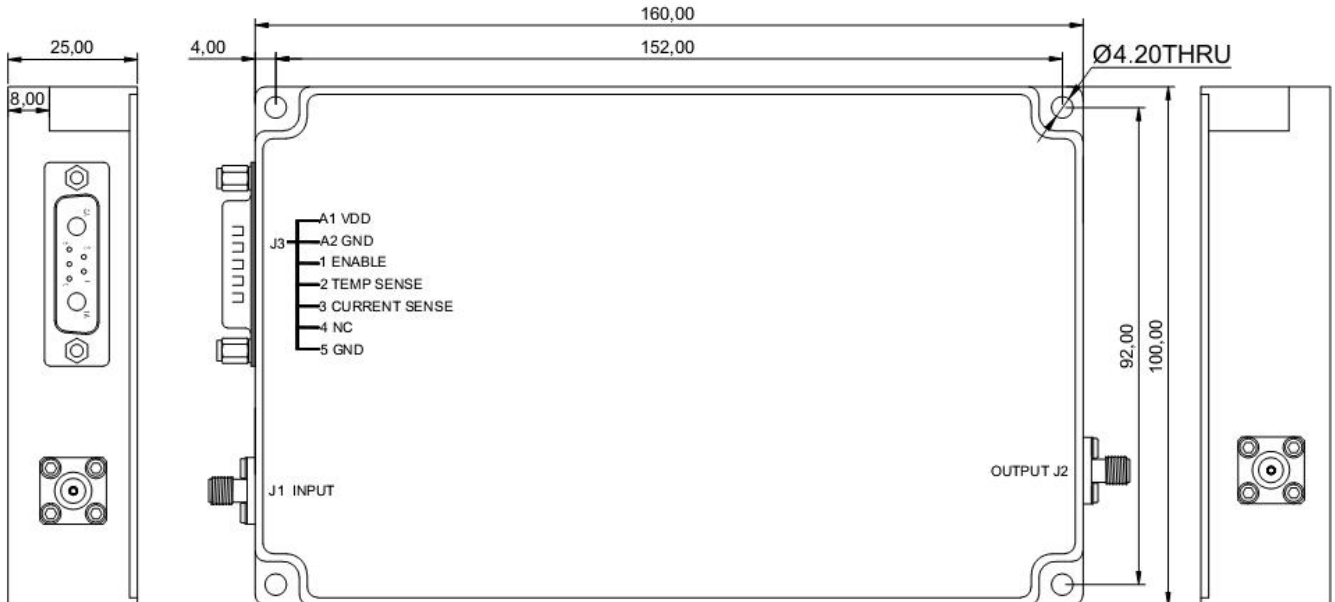
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DC INTERFACE CONNECTOR

| Pin # | Description | Specifications |
|-------|---------------|---|
| A1 | VDD | 28V _{DC} |
| A2 | GND | Ground |
| 1 | ENABLE | Amplifier Enable: 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 _{DD} @ 100mV per Ampere |
| 4 | NC | No electrical connection |
| 5 | GND | Ground |

OUTLINE DRAWING (All dimensions in mm [inch])



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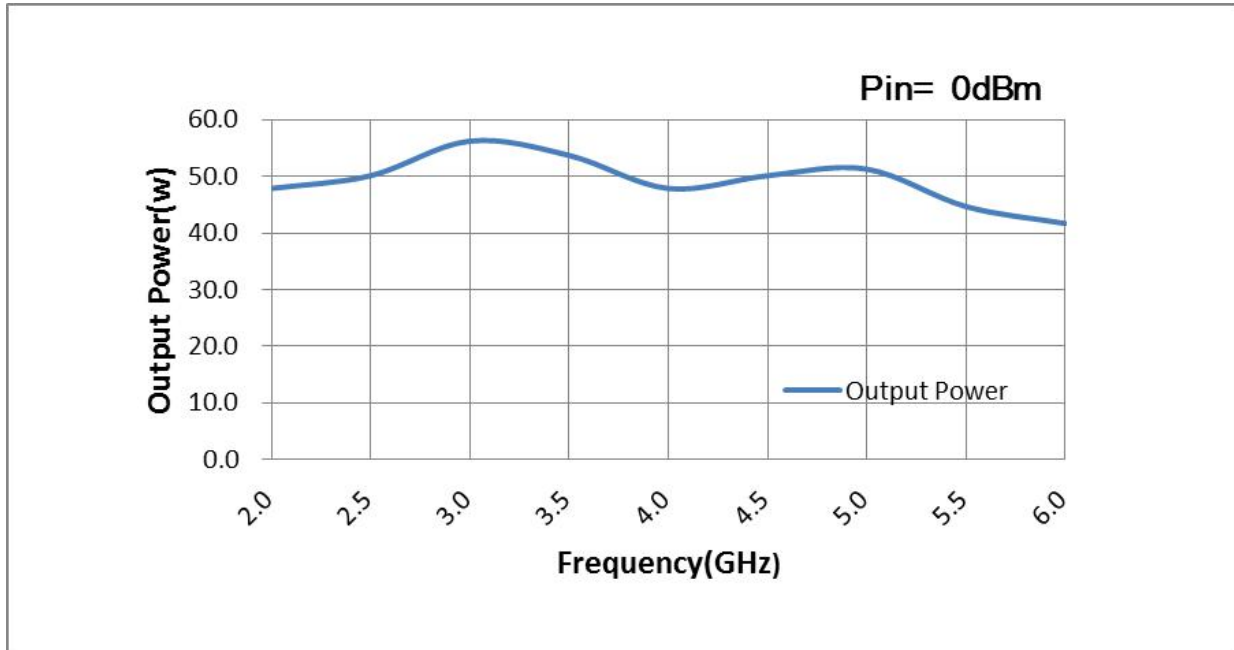
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TYPICAL PERFORMANCE PLOTS (for reference)



Note: Adequate heatsink required.

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