



### 1000-6000MHz/10Watt/Module

Model Number: MCW1060M40A

The model MCW1060M40A is a multi-octave high power amplifier operating between 1000MHz and 6000MHz and offering a wide dynamic Range with 10Watts 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's suitable for multi-octave broadband high power RF, MF & HF & VHF linear applications.

**FEATURES:**

- Broadband & High power`
- High Efficiency
- Great Linearity
- Extraordinary Harmonic Control
- Smaller Size and Lighter Weight
- Low Distortion

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

| Parameter                      | Symbol              | Min  | Typ | Max  | Units |
|--------------------------------|---------------------|------|-----|------|-------|
| Operating Frequency(Full Band) | Bw                  | 1000 |     | 6000 | MHz   |
| RF Output Power                | P <sub>out</sub>    | 10   |     |      | Watt  |
| Power Gain                     | G <sub>p</sub>      |      | 40  |      | dB    |
| Power Gain Flatness            | Δ G <sub>p</sub>    |      | ±2  |      | dB    |
| Input Return Loss              | S <sub>11</sub>     |      |     | -10  | dB    |
| Harmonics @10W                 | H                   |      | -10 |      | dBc   |
| Spurious                       | Spur                |      | -60 |      | dBc   |
| In/Output Impedance            | Impedance           | -    | 50  |      | Ω     |
| Operating Voltage              | V <sub>DC</sub>     | 26   | 28  | 30   | Volt  |
| DC Current @10W                | I <sub>DD</sub>     |      | 2   |      | Amp   |
| Switch On/Off @10-90% Time     | T <sub>ON/OFF</sub> |      | 2   | 5    | uS    |

**MECHANICAL SPECIFICATIONS**

| Parameter              | Value                                     | Units     | Notes |
|------------------------|---|-----------|-------|
| Dimensions             | 150x 90 x 25 [5.91x3.54x0.98]             | mm [inch] | Max   |
| Weight                 | 1.2[2.64]                                 | kg [lbs]  | Max   |
| 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              | -20     |         | 60      | °C    |         |
| Non-operating Temperature          | -25     |         | 65      | °C    | Storage |
| Relative Humidity (non-condensing) |         |         | 95      | %     |         |

**ABOSOLUTE MAXIMUM RATING**

|                                     |  |
|-------------------------------------|--|
| Input RF drive level without damage | +5 dBm (Max)   |
| Load VSWR @ POUT =10W               | ∞ @all load phase & amplitude for duration of 1 minutes;<br>3:1 @all load phase & amplitude continuous |
| Over Temperature                    | 85°C @heatsink [restored @65°C]  |

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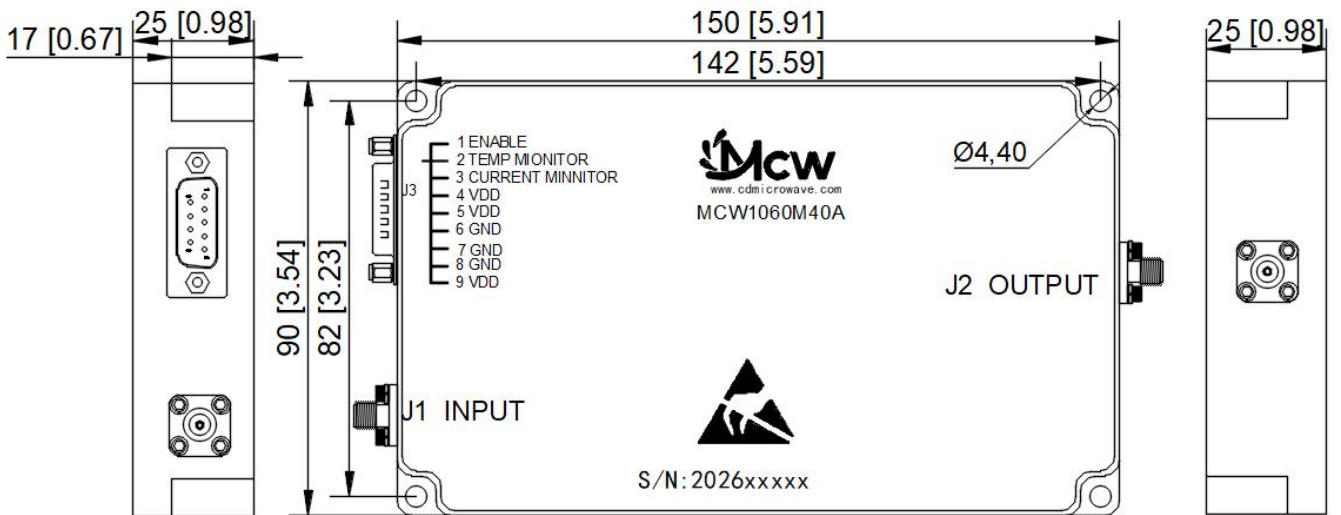
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DC INTERFACE CONNECTOR

| Pin # | Description     | Specifications  |
|-------|-----------------|---|
| 1     | ENABLE          | Amplifier ENABLE: 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 IDD @ 100 mV per Ampere              |
| 4     | VDD             | 28VDC   |
| 5     | VDD             | 28VDC   |
| 6     | GND             | Ground  |
| 7     | GND             | Ground  |
| 8     | GND             | Ground  |
| 9     | VDD             | 28VDC   |

OUTLINE DRAWING (All dimensions in mm)



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TYPICAL PERFORMANCE PLOTS (For reference only)

Graph1: Output Power (Normal temp. +25±3 °C)

