

## 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
- Built-In Control and Protection Circuits

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

| Parameter                  | Symbol       | Min | Typ | Max  | Units |
|----------------------------|--------------|-----|-----|------|-------|
| Operating Frequency        | BW           | 700 |     | 2700 | MHz   |
| RF Output Power            | $P_{SAT}$    |     | 50  |      | Watt  |
| Power Gain @ PSAT          | $G_p$        |     | 47  |      | dB    |
| Input Power for Rated PSAT | PIN          |     | 0   |      | dBm   |
| Power Gain Flatness        | $\Delta G_p$ |     | ±2  |      | dB    |
| Input Return Loss          | $S_{11}$     |     | -15 | -10  | dB    |
| Harmonics @20W             | H            |     | -15 |      | dBc   |
| Spurious Signals           | Spur         |     | -60 |      | dBc   |
| Switch On/Off@10-90% Time  | $T_{ON/OFF}$ |     | 2   | 5    | μs    |
| In/Output Impedance        | Impedance    |     | 50  |      | Ω     |
| Operating Voltage          | $V_{DC}$     | 24  | 28  | 32   | Volt  |
| DC Current @50W            | $I_{DD}$     |     | 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 @ $P_{OUT}=40W$           | ∞ @ all load phase & amplitude for duration of 1 minute;<br>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

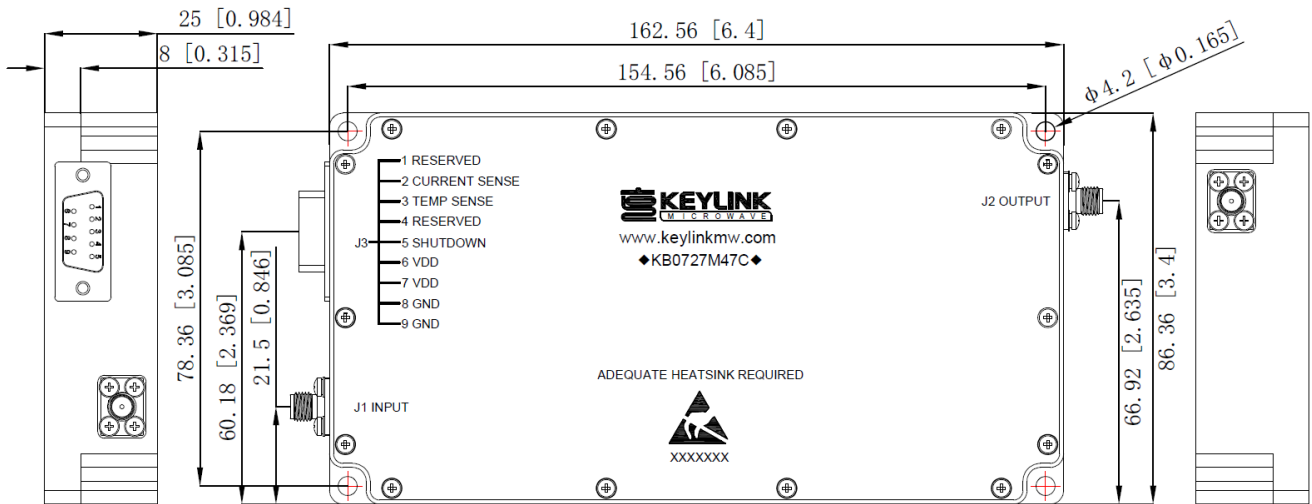
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### DC INTERFACE CONNECTOR

| Pin # | Description          | Specifications   |
|-------|----------------------|--|
| 1     | Reserved             | No Connection  |
| 2     | Current <b>Sense</b> | Analog voltage relative to IDD @ 100mV per Ampere                |
| 3     | Temp <b>Sense</b>    | 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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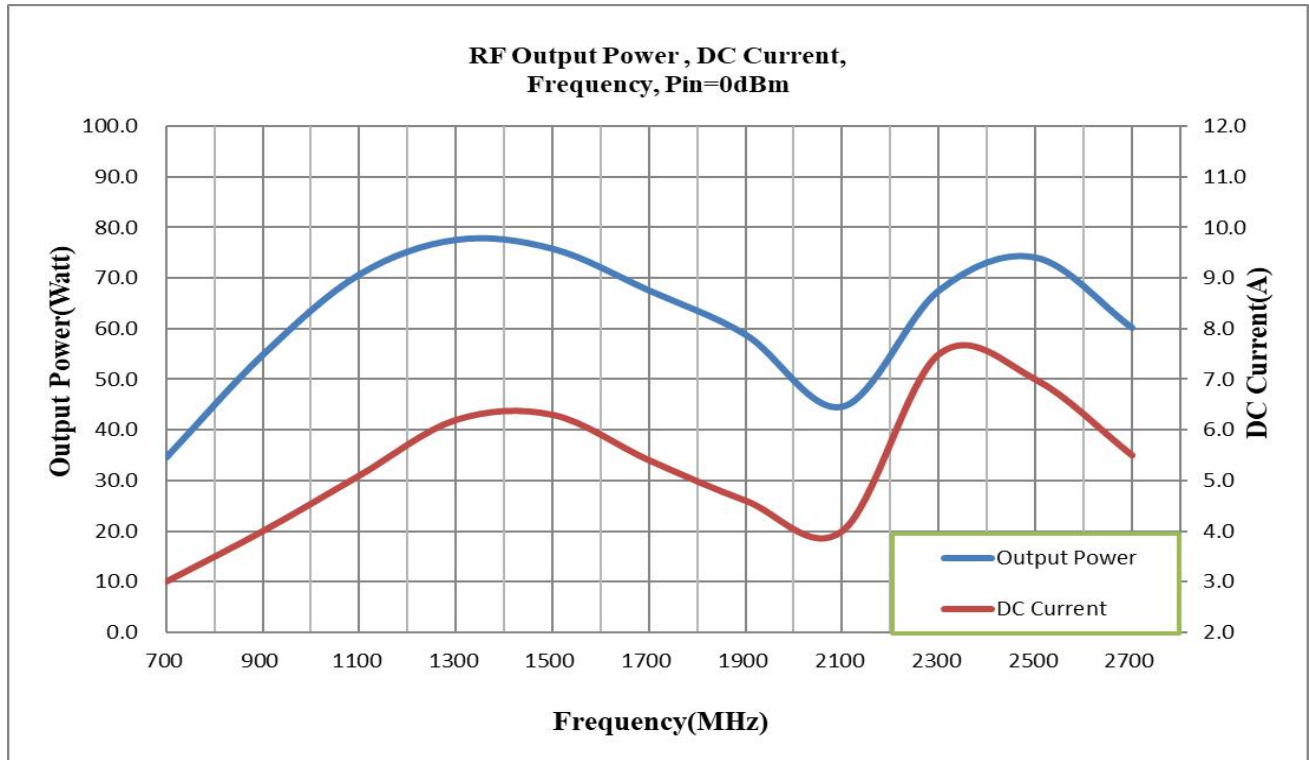
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TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)



Note: Adequate heatsink required.

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