

## 2000-18000MHz/10W/Module

Model Number: KB20180M40A

The model KB20180M40A is a multi-octave high power amplifier operating between 2 GHz and 18 GHz and offering a wide dynamic range with 10 Watt 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 RFC&Ku applications.

### FEATURES:

- Broadband and High Power
- High Efficiency
- Small Size & Light Weight
- Low Distortion

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

| Parameter                    | Symbol              | Minimum | Typical | Maximum | Units |
|------------------------------|---------------------|---------|---------|---------|-------|
| Operating Frequency          | BW                  | 2       |         | 18      | GHz   |
| RF Output Saturated Power    | P <sub>sat</sub>    |         | 10      |         | W     |
| Power Gain @P <sub>SAT</sub> | 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@5W                 | H                   |         | -12     |         | dBc   |
| Spurious Signals             | Spur                |         | -55     |         | dBc   |
| Switch On/Off@10-90%Time     | T <sub>ON/OFF</sub> |         | 2       | 5       | us    |
| In/Output Impedance          | Impedance           |         | 50      |         | Ω     |
| Operating Voltage            | V <sub>DC</sub>     | 26      | 28      | 30      | Volt  |
| DC Current@10W               | I <sub>DD</sub>     |         | 2.5     |         | Amp   |

### MECHANICAL SPECIFICATIONS

| Parameter              | Value                                    | Units     | Limits  |
|------------------------|------------------------------------------|-----------|---------|
| Dimensions             | 80x80x22[3.2*3.2*0.8]                    | mm [inch] | Maximum |
| Weight                 | 1.2[2.64]                                | 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     |         | 80      | °C    |         |
| Non-operating Temperature          | -45     |         | 85      | °C    | Storage |
| Relative Humidity (non-condensing) |         |         | 95      | %     |         |

### ABSOLUTE MAXIMUM RATING

|                                     |                                                                                                             |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Input RF drive level without damage | +5dBm(Max)                                                                                                  |
| Load VSWR@Pout=5W                   | 10:1 @ all load phase & amplitude for duration of 1 minute;<br>3:1 @ all load phase & amplitude continuous. |
| Over Temperature                    | 95°C @ heatsink [restored @ 60°C]                                                                           |

### Focus on Your Application

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Specifications subject to change without notice

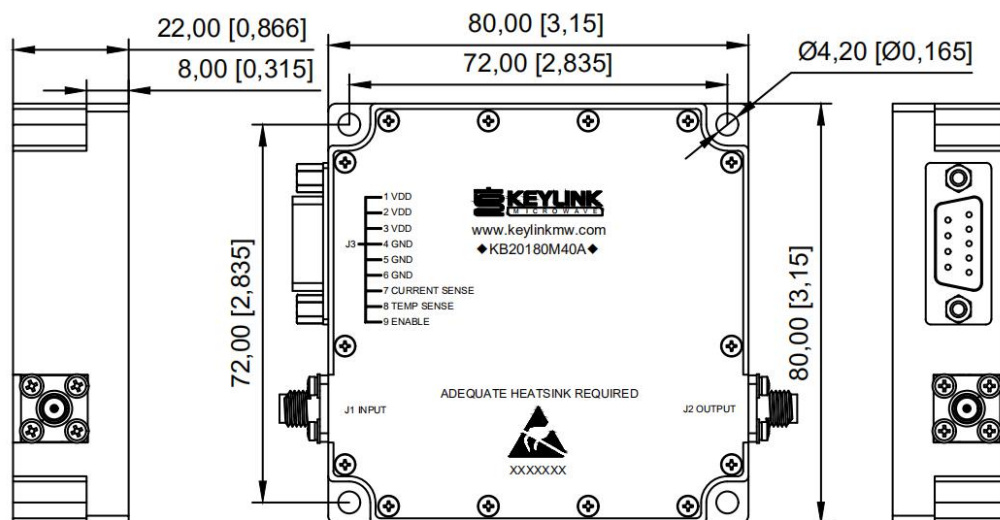
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### DC INTERFACE CONNECTOR

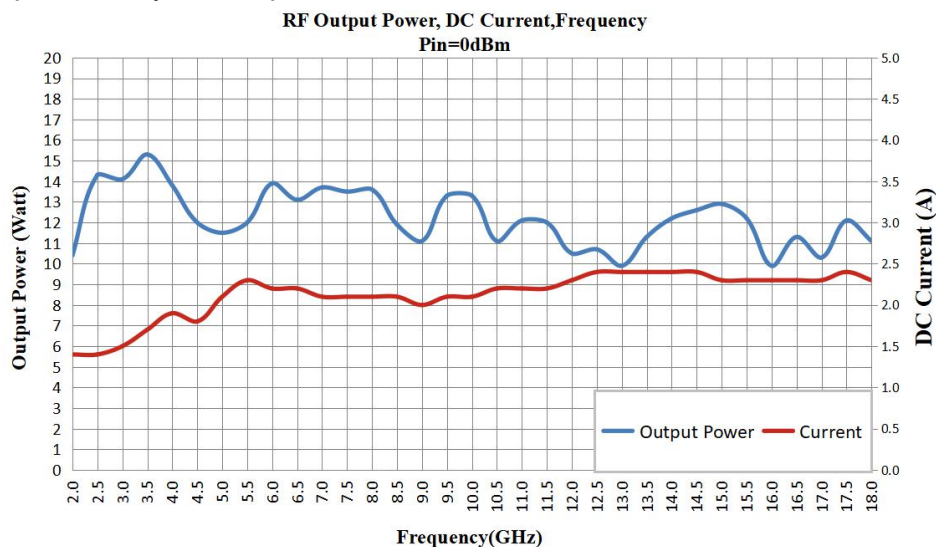
| Pin # | Description   | Specifications                                                |
|-------|---------------|---------------------------------------------------------------|
| 1、2、3 | VDD           | 28VDC                                                         |
| 4、5、6 | GND           | Ground                                                        |
| 7     | CURRENT SENSE | Analog voltage relative to IDD @300mV per Ampere              |
| 8     | TEMP SENSE    | Analog voltage relative to Module's Temperature @10mV/°C      |
| 9     | ENABLE        | Amplifier Enable:TTL Logic High (3.3V)(internally Pulled-Low) |

### OUTLINE DRAWING [All dimensions in mm]



### TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

#### RF Output Power (Normal temp. +25±3 °C)



**Note:** Adequate heatsink required

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