



## 450-500MHz/200Watt/Module

**Model Number: OC-NPA0.45-0.5K200W**

The model OC-NPA0.45-0.5K200W is a multi-octave high power amplifier operating between 450MHz and 500MHz and offering a wide dynamic Range with 200 Watts typical saturated power. The employment of LDMOS and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for jamming, EMC, test and measurement applications.

### FEATURES:

- Small Size and light weight
- Instantaneous ultra-broadband;
- 50 Ohms input and Output matched;
- Built-in control and protection circuits.

### ELECTRICAL SPECIFICATIONS @ +32.0VDC, 25°C, 50Ω

| Parameter           | Symbol           | Minimum | Typical | Maximum | Units |
|---------------------|------------------|---------|---------|---------|-------|
| Operating Frequency | BW               | 450     |         | 500     | MHz   |
| RF Output Power     | P <sub>out</sub> | 150     | 200     |         | Watt  |
| Power Gain          | G                |         | 53      |         | dB    |
| Input Return Loss   | S <sub>11</sub>  |         |         | -10     | dB    |
| Harmonics @100W     | H                |         | -20     |         | dBc   |
| Spurious Signals    | Spur             |         | -60     |         | dBc   |
| In/Output Impedance |                  |         | 50      |         | Ω     |
| Operating Voltage   | V <sub>DC</sub>  |         | 32      |         | Volt  |
| DC Current @200W    | I <sub>DD</sub>  |         | 18      |         | Amp   |

### MECHANICAL SPECIFICATIONS

| Parameter              | Value                            | Units     | Limits  |
|------------------------|----------------------------------|-----------|---------|
| Dimensions             | 180x150x25 [7x5.9x0.98]          | mm [inch] | Maximum |
| Weight                 | 2 [4.4]                          | kg [lbs]  | Maximum |
| RF Connectors Input    | SMA, Female                      |           |         |
| RF Connectors Output   | N, Female                        |           |         |
| DC Interface Connector | Hybrid,D-Sub 7-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       | +10dBm                                                                                                  | Maximum |
| Load VSWR @ P <sub>OUT</sub> =100W | ∞ @ all load phase & amplitude for duration of 1 minute;<br>3:1 @ all load phase & amplitude continuous |         |
| Thermal Overload                   | 85°C shutdown                                                                                           | Maximum |

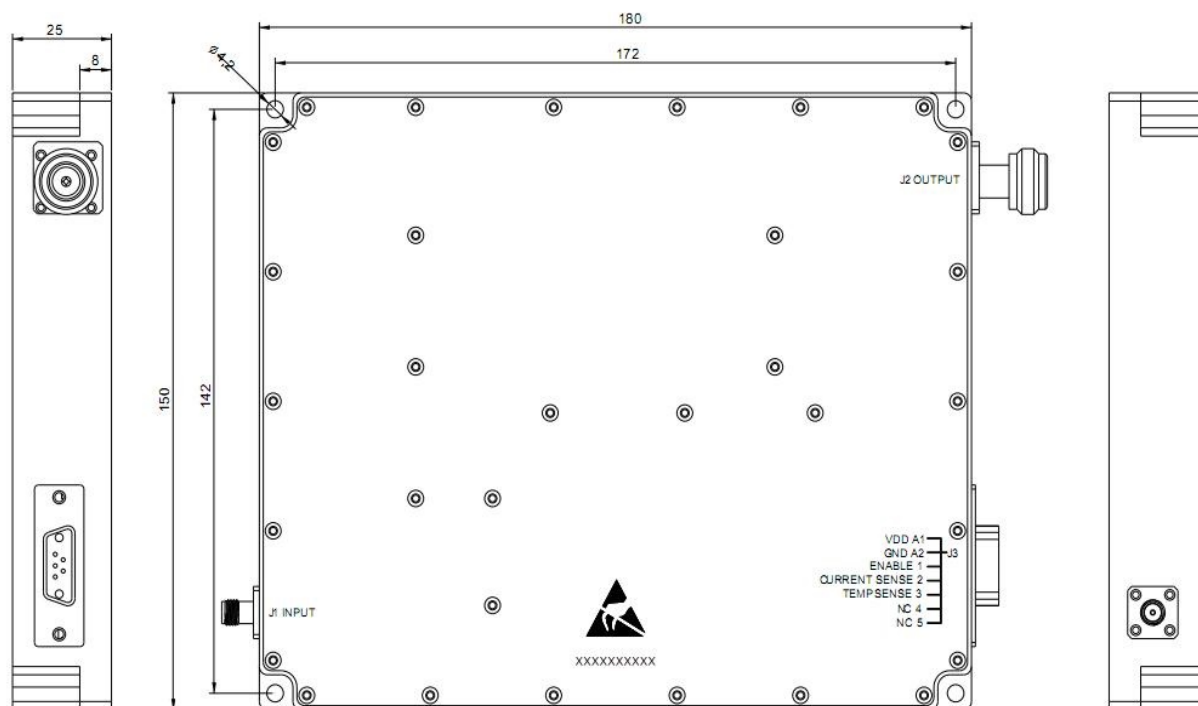
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### DC INTERFACE CONNECTOR

| Pin # | Description   | Specifications                                                  |
|-------|---------------|-----------------------------------------------------------------|
| A1    | VDD           | 32VCC                                                           |
| A2    | GND           | Ground                                                          |
| 1     | ENABLE        | Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low) |
| 2     | CURRENT SENSE | Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere   |
| 3     | TEMP SENSE    | Analog voltage relative to Module's Temperature @ 10 mV/°C      |
| 4     | NC            | No electrical connection                                        |
| 5     | NC            | No electrical connection                                        |

### OUTLINE DRAWING (All dimensions in mm)



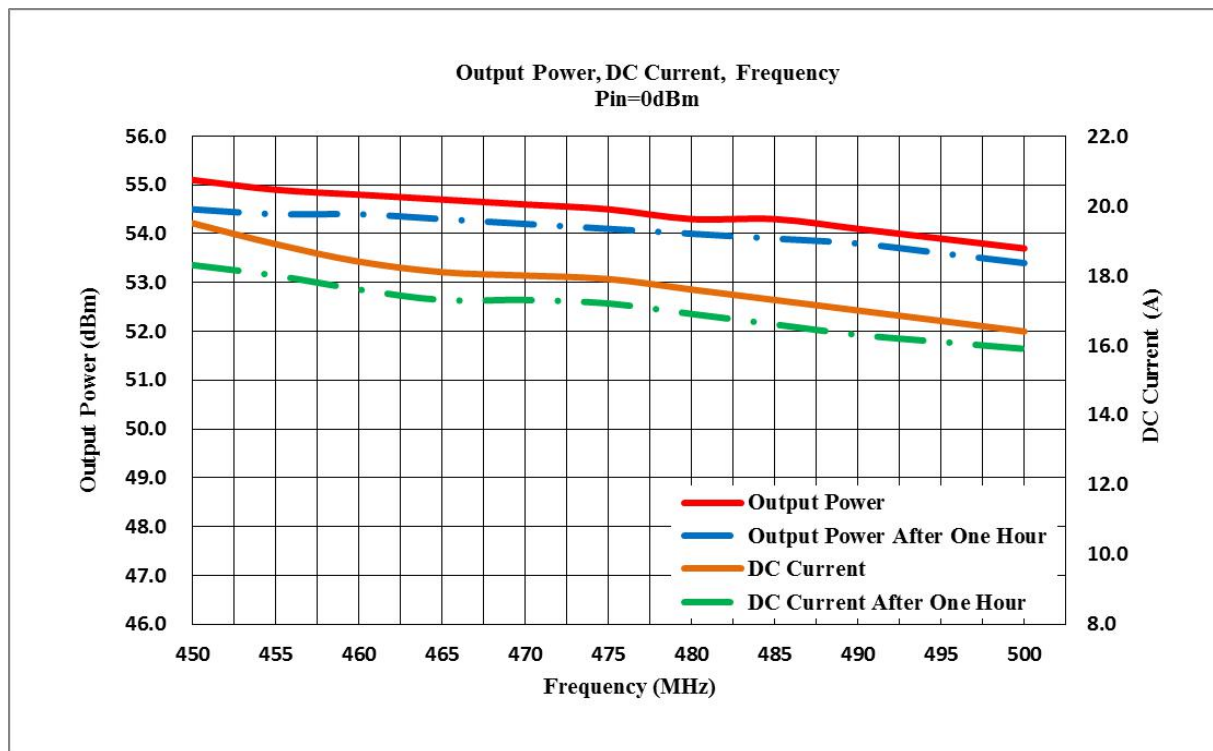


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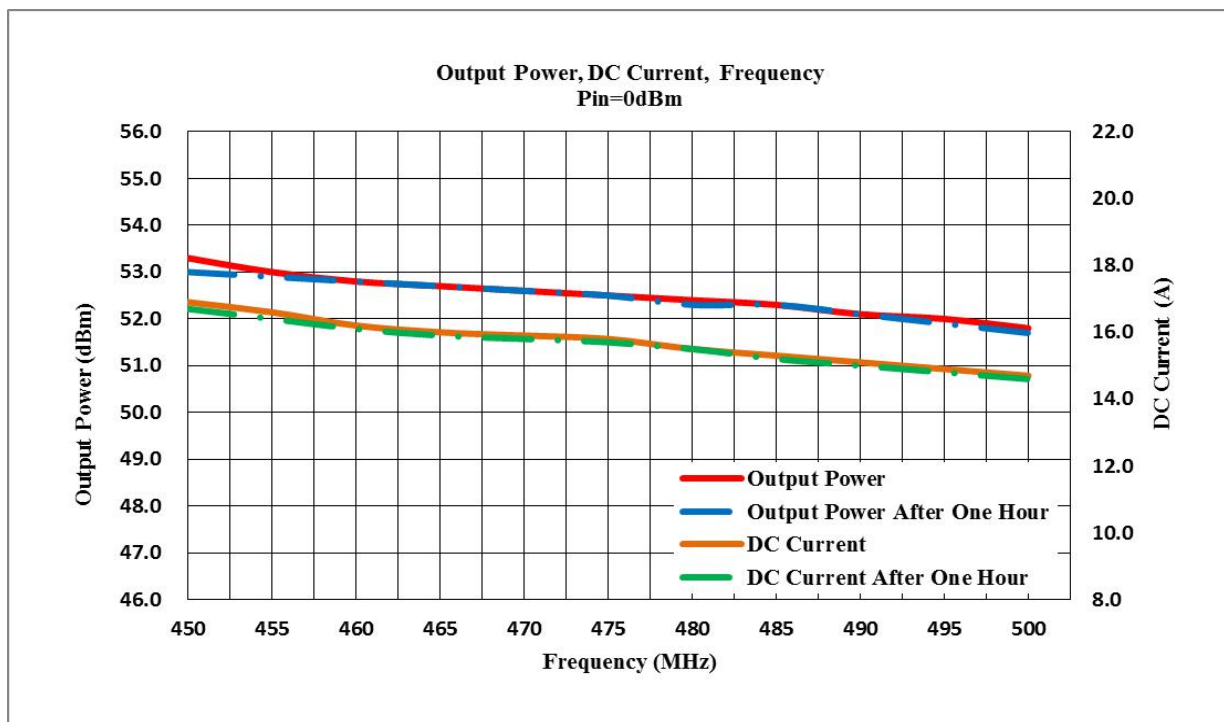
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## TYPICAL PERFORMANCE PLOTS (for reference)

Graph1: Output Power(Low temp.-20±3°C)



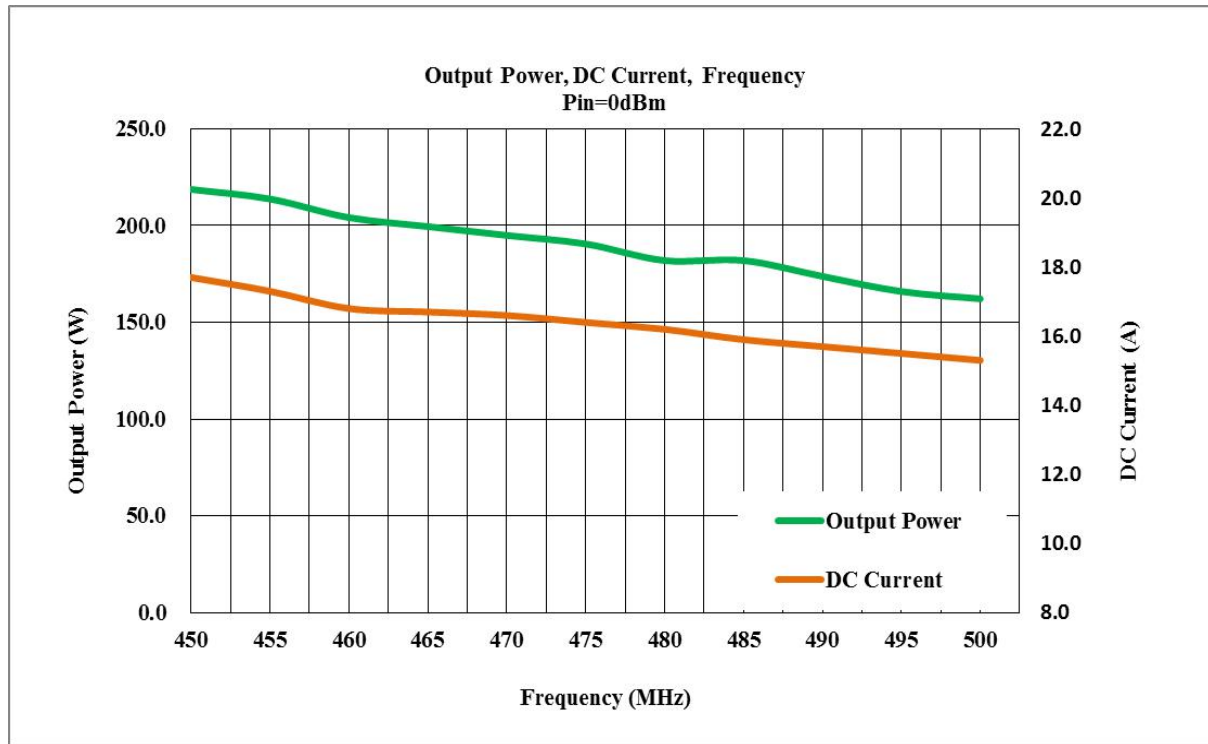
Graph2: Output Power(High temp.+60±3°C)



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

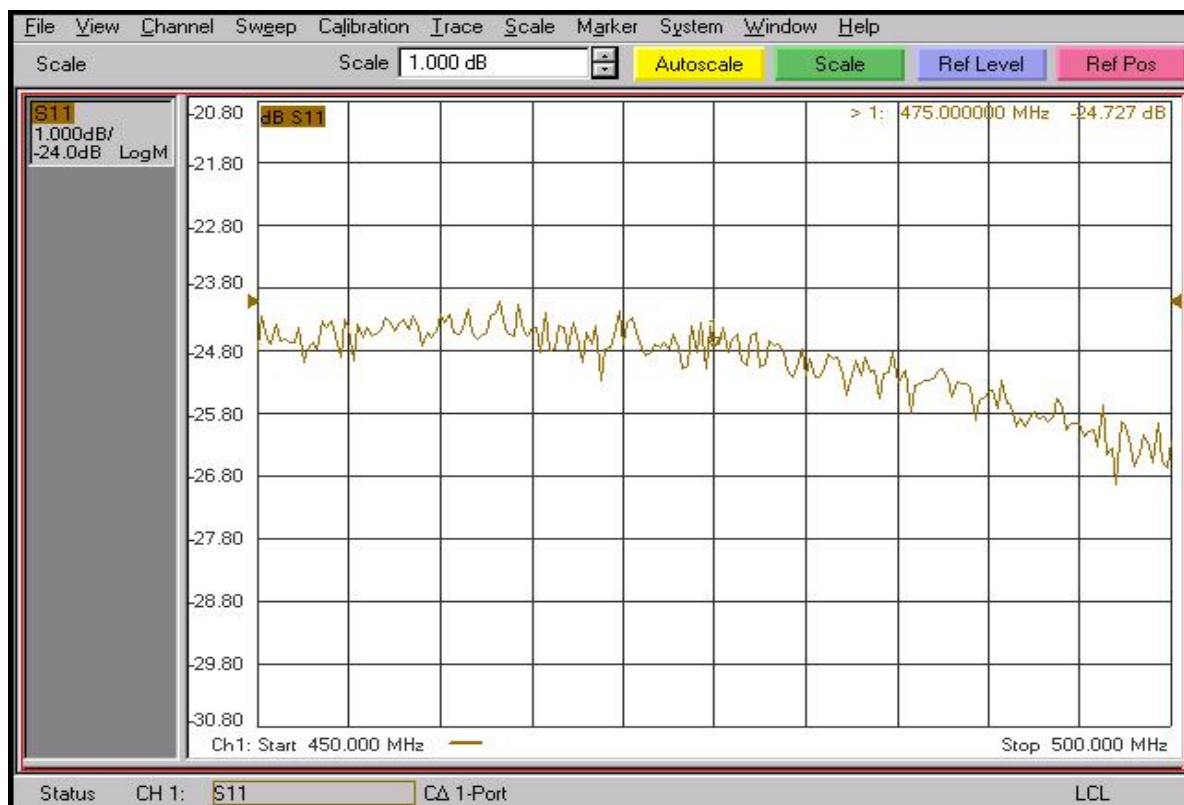


Power Gain:



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Input Return Loss:



Note: Adequate heatsink required.