





## Broadband High Power Amplifier Module (SSPA)

### 1.5-30MHz/200Watt/Module

Model Number: MCW0001003M53A

The model MCW0001003M53A is a high power amplifier operating between 1.5MHz and 30MHz 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 @ +28.0VDC, 25°C, 50Ω

| Parameter           | Symbol           | Minimum | Typical | Maximum | Units |
|---------------------|------------------|---------|---------|---------|-------|
| Operating Frequency | BW               | 1.5     |         | 30      | MHz   |
| RF Output Power     | P <sub>out</sub> |         | 200     |         | Watt  |
| Power Gain          | G                |         | 53      |         | dB    |
| Input Return Loss   | S <sub>11</sub>  |         |         | -10     | dB    |
| Harmonics @100W     | H                |         | -10     |         | dBc   |
| Spurious Signals    | Spur             |         | -60     |         | dBc   |
| In/Output Impedance |                  |         | 50      |         | Ω     |
| Operating Voltage   | V <sub>DC</sub>  | 24      | 28      | 32      | Volt  |
| DC Current @200W    | I <sub>DD</sub>  |         | 15      |         | Amp   |

#### MECHANICAL SPECIFICATIONS

| Parameter              | Value                            | Units     | Limits  |
|------------------------|----------------------------------|-----------|---------|
| Dimensions             | 200x150x25 [7.87x5.91x0.98]      | mm [inch] | Maximum |
| Weight                 | 2 [4]                            | kg [lbs]  | Maximum |
| RF Connectors Input    | SMA, Female                      |           |         |
| RF Connectors Output   | N-Typ, 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 |

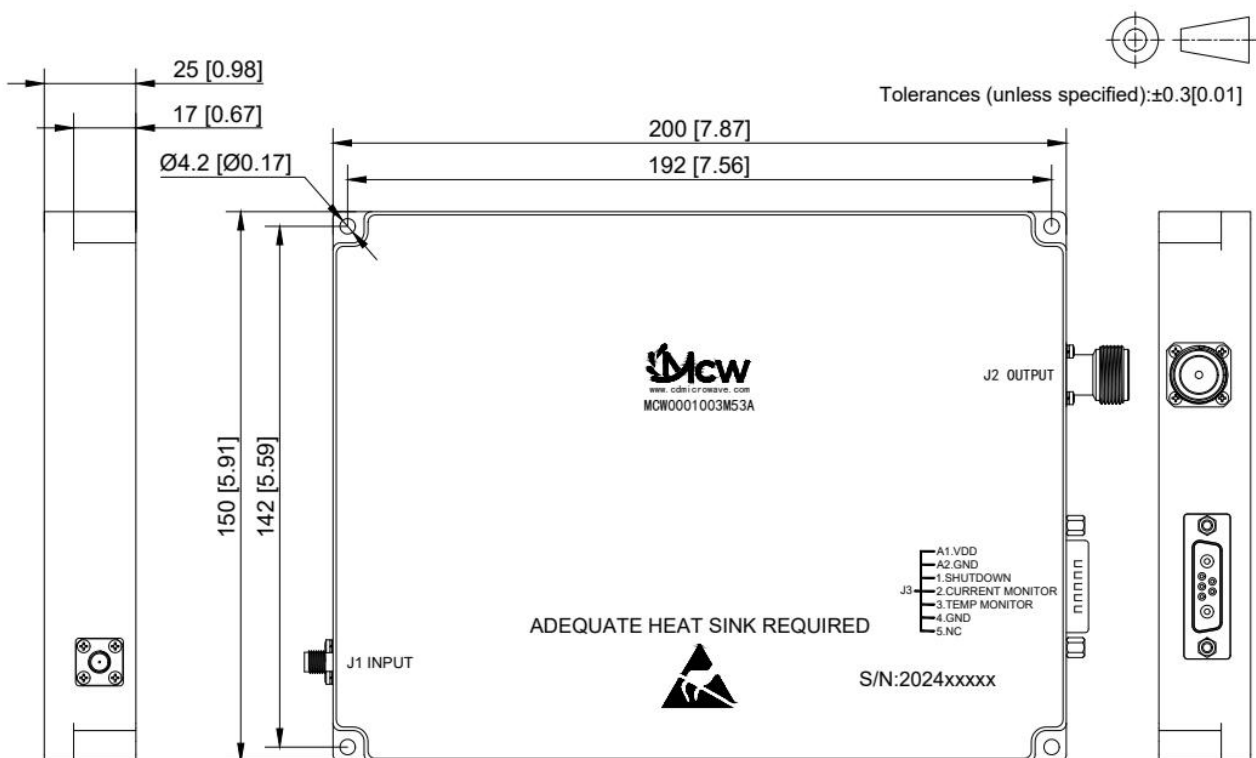
# 1.5-30MHz/200Watt/Module

Model Number: MCW0001003M53A

## DC INTERFACE CONNECTOR

| Pin # | Description     | Specifications   |
|-------|-----------------|--|
| A1    | VDD             | 28VCC  |
| A2    | GND             | Ground   |
| 1     | SHUTDOWN        | Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low) |
| 2     | CURRENT MONITOR | Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere    |
| 3     | TEMP MONITOR    | Analog voltage relative to Module's Temperature @ 10 mV/°C       |
| 4     | GND             | Ground   |
| 5     | NC              | No electrical connection   |

## OUTLINE DRAWING (All dimensions in mm)



\*Chengdu Microwave Technology Co., Ltd\*

>>1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>>Tel: +86(28)87872669\*0

>>Fax: +86(28)87882925

>>Mobile/WhatsApp: +86-181 8078 9271

>>Email: [info@cdmicrowave.com](mailto:info@cdmicrowave.com)

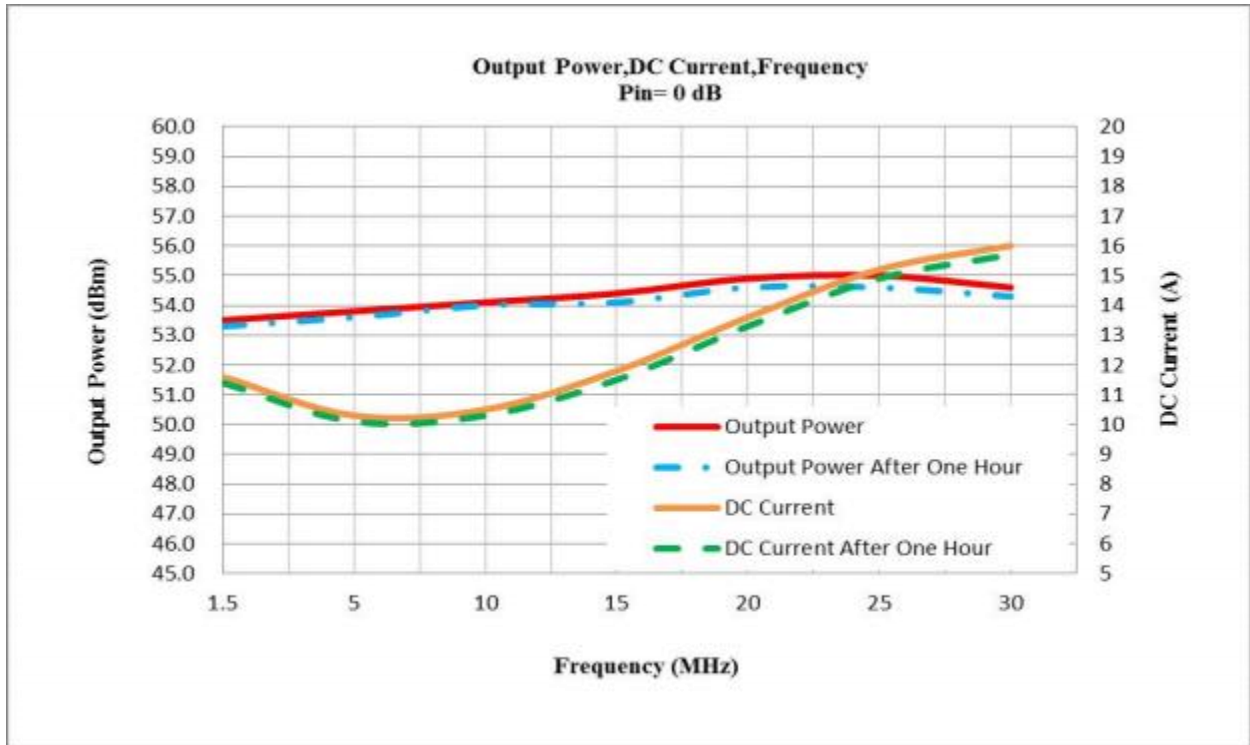
>>[www.cdmicrowave.com](http://www.cdmicrowave.com)

1.5-30MHz/200Watt/Module

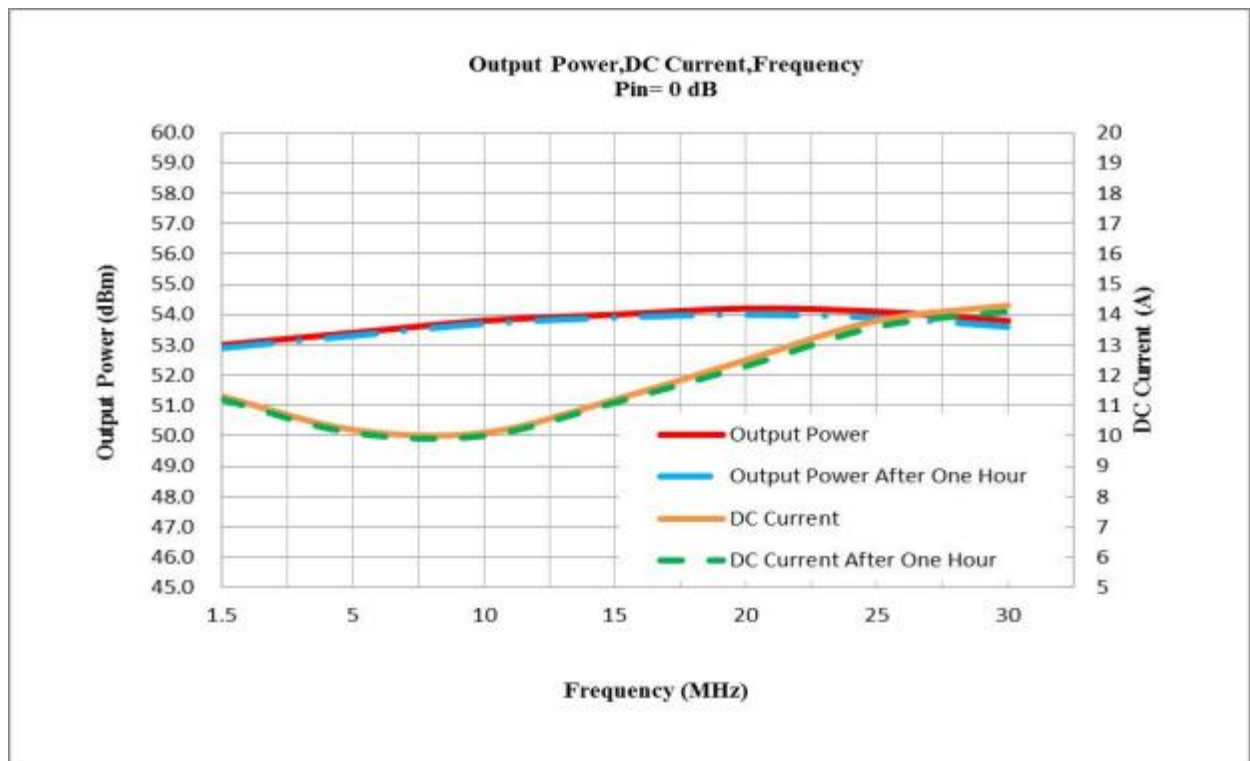
Model Number: MCW0001003M53A

TYPICAL PERFORMANCE PLOTS

Graph 1: Output Power (Low temp.-20±3°C)



Graph 2: Output Power(High temp.+60±3°C)

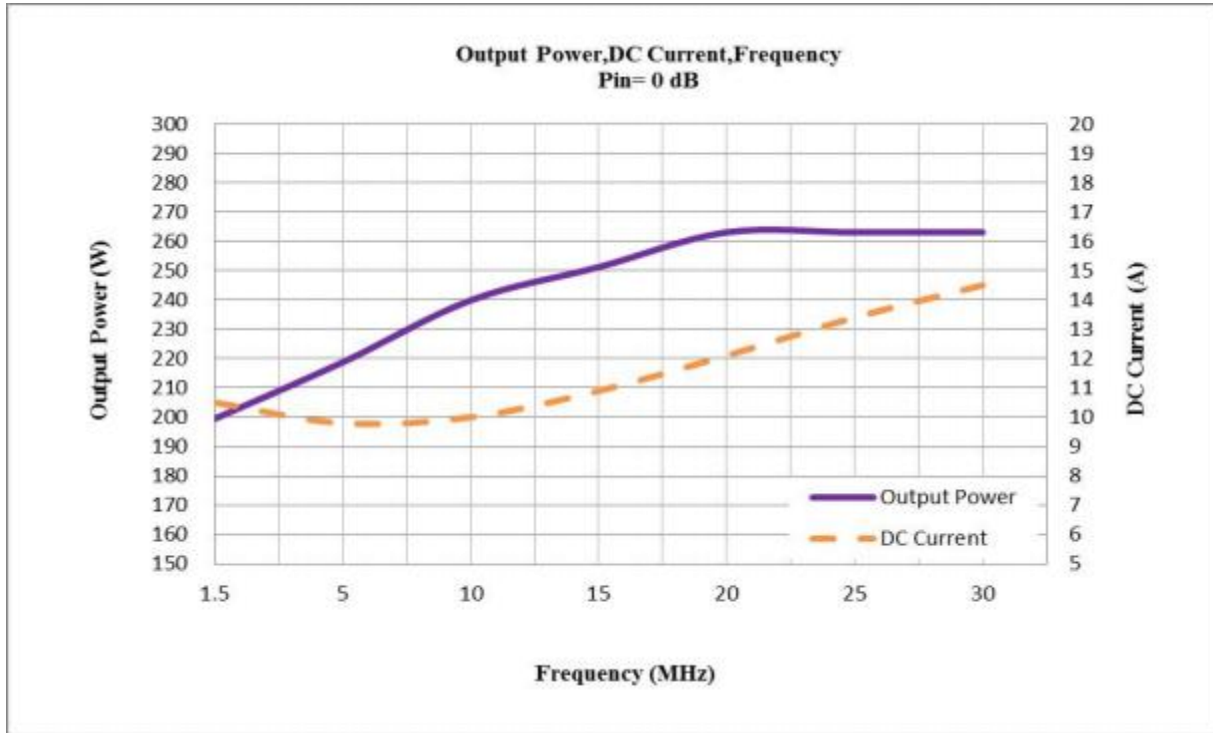


# Broadband High Power Amplifier Module (SSPA)

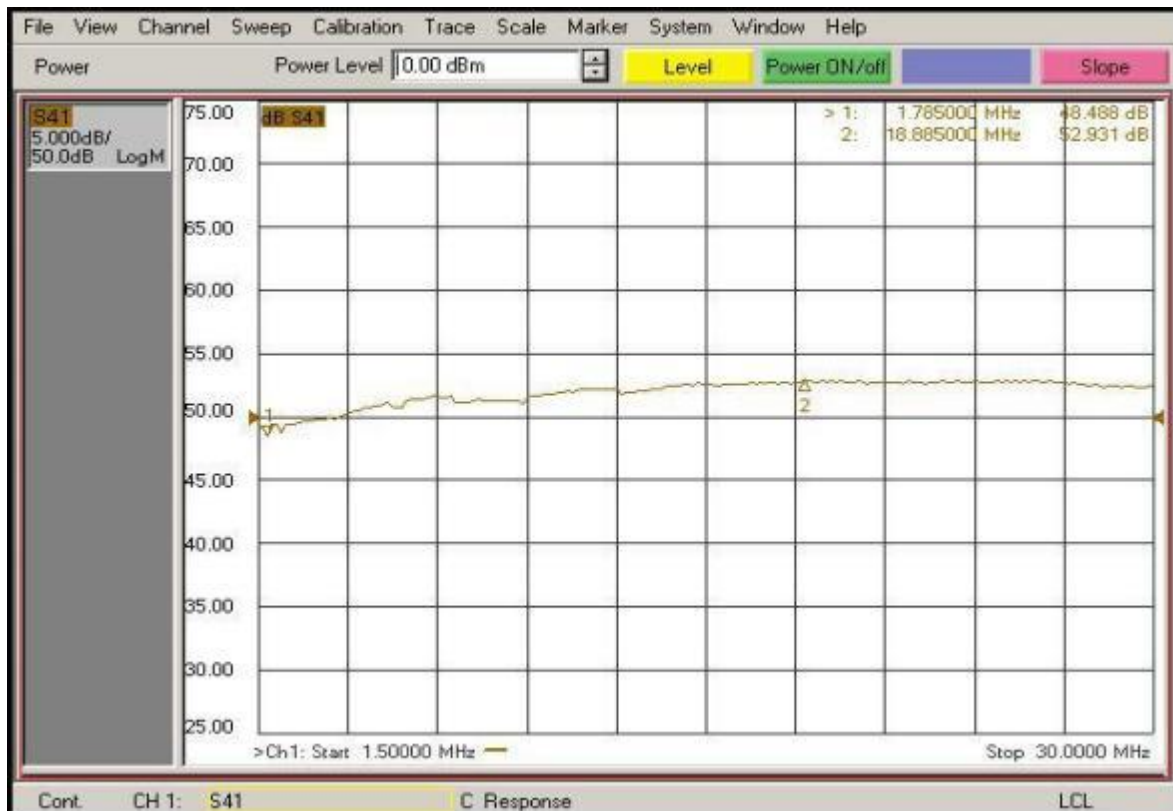
## 1.5-30MHz/200Watt/Module

Model Number: MCW0001003M53A

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



Power Gain:



\*Chengdu Microwave Technology Co., Ltd\*

>>1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>>Tel:+86(28)87872669\*0

>>Fax:+86(28)87882925

>>Mobile/WhatsApp:+86-181 8078 9271

>>Email: [info@cdmicrowave.com](mailto:info@cdmicrowave.com)

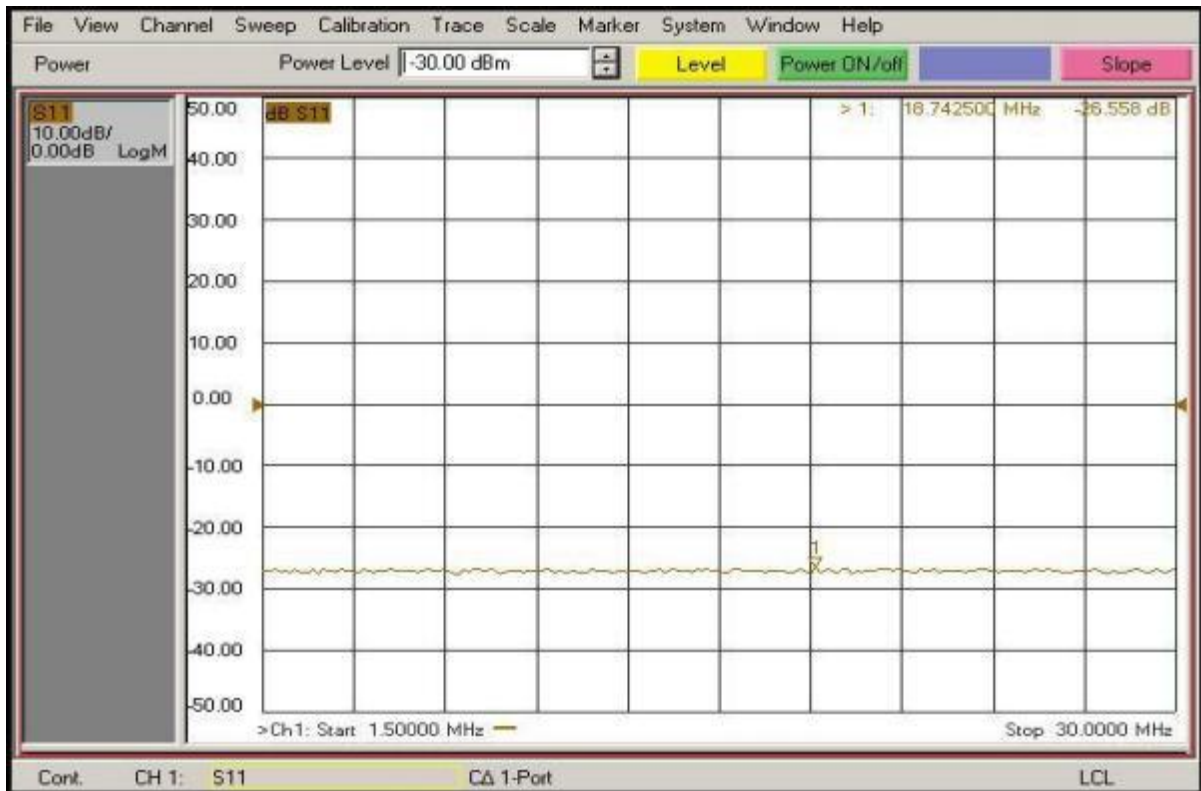
>>[www.cdmicrowave.com](http://www.cdmicrowave.com)

## Broadband High Power Amplifier Module (SSPA)

### 1.5-30MHz/200Watt/Module

Model Number: MCW0001003M53A

Input Return Loss:



#### Important Note:

1. Adequate heatsink required.
2. This product will be developed upon contract/order. All the above specs are for reference only. Actual product may be different. Please check with [Chengdu Microwave Technology Co., Ltd](http://Chengdu Microwave Technology Co., Ltd) sales team or E-mail to [info@cdmicrowave.com](mailto:info@cdmicrowave.com) if you have any more questions.

\*Chengdu Microwave Technology Co., Ltd\*

>> 1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>> Tel: +86(28)87872669\*0

>> Fax: +86(28)87882925

>> Mobile/WhatsApp: +86-181 8078 9271

>> Email: [info@cdmicrowave.com](mailto:info@cdmicrowave.com)

>> [www.cdmicrowave.com](http://www.cdmicrowave.com)