This model MCW0727M47A is a multioctave high power amplifier operating between 700MHz and 2700MHz and offering a wide dynamic range with 50W Min saturated power. The employment of Gallium Nitride (GaN) 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 RF systems, Communication, EMC, Test and Measurement applications.This module is equipped with alarmfunctions for over-temperature, over-voltage, over-current, which will shut down automatically under these conditions.

## Features:

- Small Size and light weight
- Instantaneous ultra broadband
- 50 Ohms Input and Output matched
- Built-In control and protection circuits

## Electrical Specifications (@+28VDC, 25°C, 50Ω)

| Parameter | Symbol | Minimum | Typ | Maximum | Units |
|---|---|---|---|---|---|
| Operating Frequency | BW | 700 | | 2700 | MHz |
| RF Output Power @PSAT | PSAT | 50 | | | Watt |
| Power Gain @PSAT | Gp | | 47 | | dB |
| Power Gain Flatness | Δ Gp | | ±2 | | dB |
| Input Return Loss | S11 | | | -10 | dB |
| Harmonics @20W | H | | -15 | | dBc |
| Spurious Signals @PSAT | Spur | | -60 | | dBc |
| Switching Speed | Ton/OFF | | 2 | 5 | μS |
| In/Output Impedance | Impedance | | 50 | | Ω |
| Operating Voltage | VDC | 24 | 28 | 32 | Volt |
| Power add efficiency | EFF | | 23 | | % |
| DC Current @ 40W | IDD | | | 9 | Amp |

## Absolute Maximum Rating

| Parameter | Rating | |
|---|---|---|
| Input RF drive level without damage | +10 dBm | Maximum |
| Load VSWR @ POUT =30W | ∞ @ all load phase & amplitude for duration of 1 minute;<br>3:1 @ all load phase & amplitude continuous | |

## Environmental Specifications (Design to Meet)

| Parameter | Minimum | Typical | Maximum | Units | Notes |
|---|---|---|---|---|---|
| Operating Temperature | -20 | | 60 | °C | |
| Storage Temperature | -25 | | 65 | °C | |
| Relative Humidity（non-condensing） | | | 95 | % | |

## Mechanical Specifications

| Parameter | Value | Units | Notes |
|---|---|---|---|
| Dimensions | 160x90x25 [6.29x3.54x0.98] | mm [inch] | Maximum |
| Weight | 1.5[3.3] | kg [lbs] | Maximum |
| RF Connectors Input | SMA, Female | | |
| RF Connectors Output | SMA, Female | | |
| DC Interface Connector | D-Sub 9-Pin, Male | | |
| Cooling | Extemal Heatsink (Not Supplied) | | If need can add |

## 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 Moudle'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 [inch])

