

# DM-SC50-01 2 - 6GHz 50W GaN Power Amplifier Module



## *Provisional Data*

- Ultra-compact
- Can be run pulsed or CW
- Peak pulsed output power up to +51dBm
- Drain-pulsed, ultra-fast rise/fall time
- Internal temperature monitor
- Layout can be tailored to suit system and interfaces
- Alternative to TWT amplifiers

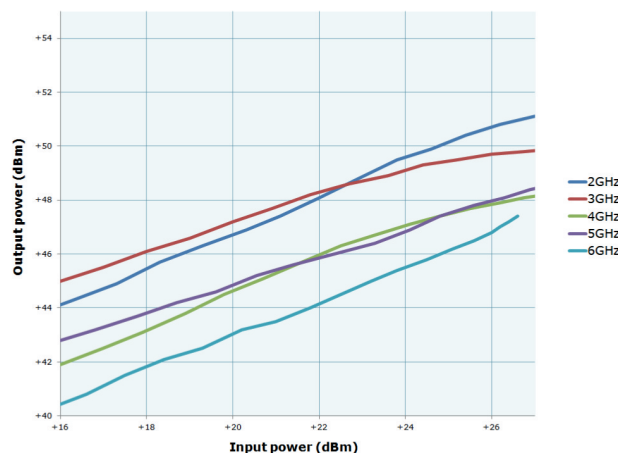


These ultra-compact high power solid-state power amplifiers are ideal for use in demanding defence, aerospace and communications applications.

Using GaN devices, they offer state-of-the-art power performance coupled with a power-to-volume ratio believed to be among the highest in the industry for such products. The designs are flexible in layout and architecture, and are fully customisable to meet individual specifications for electrical, mechanical and environmental parameters. Amplifiers with pulsed power outputs in excess of 1kW, and with multi-octave bandwidths, are also under development.

## Typical measured performance

Compression characteristics



## Typical performance (at 25°C unless otherwise specified)

Parameter	Value	Unit	Comment
Frequency range	2 - 6	GHz	
Peak Output Power ( $P_{\text{sat}}$ ) at 2 - 3GHz	+50	dBm	>+51dBm at 2GHz
Peak Output Power ( $P_{\text{sat}}$ ) at 3 - 4GHz	+48	dBm	
Peak Output Power ( $P_{\text{sat}}$ ) at 4 - 6GHz	+47	dBm	
Average Output Power (max)	+47	dBm	Thermal limitation. Baseplate 50°C max
Nominal RF Input Power	+30	dBm	Without optional pre-driver
Small-signal gain	30	dB	Higher gain options available
Small-signal gain variation	5	dB	
Input return loss (min)	10	dB	
Power Supply	40 - 50	V	Quiescent current 2A nom. Max current 7A
Size <sup>2</sup>	120 x 100 x 20	mm	Excluding heat-sink and connectors
Weight (approx)	350	g	Excluding heat-sink
Interface DC power	Screw terminal		
Interface RF input/output	SMA (M/F)		
Amplifier/pulse control	LVC MOS		Amplifier on/off, duty cycle select, PRF select
Operating Temperature Range	-30 to +70	°C	

<sup>1</sup> Heat sinking is required

<sup>2</sup> Other form factors available



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