



MPA1139 SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class A/AB linear design
Instantaneous ultra-wide bandwidth
Suitable for all single channel modulation standards
Built-in protection circuits
High reliability and ruggedness



ELECTRICAL SPECIFICATIONS: 50Ω, 25°C

Parameter	Specification	Notes
Operating Frequency Range	9 KHz - 1.0 GHz	
Power Output Psat	2 Watt Min	CW
Power Output @ P1dB GCP	>1 Watt Typ	
Power Gain	33 dB Min	0dBm or less for rated Pout
Gain Flatness	4.0 dB p-p Max	Constant input power
Input Return Loss	-10 dB Max	
Harmonics 2 nd / 3rd	-15 dBc Max / -20 dBc Typ	At rated Pout
2-Tone Intermodulation (IMD)	-30 dBc Typ	23dBm/Tone, Δ = 1MHz
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	28 VDC Nom	
Current Consumption	1 Amp Max	At rated Pout
Input Power Protection	+8 dBm Max	Without damage
Load VSWR Protection	∞ : 1	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	up to 95 %	Non-condensing
Altitude	3000 meters	
Shock & Vibration	Normal transport	

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	100 x 80 x 27 mm	Excluding connectors
Weight	300 gr.	
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	N/C	N/C
2	N/C	N/C
3	CURRENT SENSOR	$I_D @ 20\text{mV}/100\text{mA Typ}$
4	TEMP SENSOR	$V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$
5	SHUTDOWN	Enable = TTL "High" or Open; Disable = TTL "Low" or Short
6, 7	VDD	28VDC
8, 9	GND	Ground

OUTLINE DRAWING

