

# Solid State Matched Band High Power Amplifier

**6008 - MBS25270Q**
**2.5 - 2.7GHz / 250Watts**

## PRELIMINARY INFORMATION

The MBS25270Q (SKU# 6008) is suitable for high power linear applications in the new MMDS and digital wireless cable applications. This amplifier utilizes linear GaAsFET power devices that provide excellent linearity, high gain, and wide dynamic range. Exceptional performance, long term reliability, and high efficiency are achieved by employing advanced broadband matching networks and combining techniques, built-in sequence regulators, EMI/RFI filters, machined housing, and qualified components. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.



Shown with Option Package 17

- Solid-state linear design
- Instantaneous broadband
- Small and lightweight
- Standard front panel manual gain adjust
- Built in control, monitoring & protection circuits
- Suitable for all modulation types
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

## ELECTRICAL SPECIFICATIONS @ 115VAC or +13VDC, 25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2.5		2.7	GHz
Power Output CW	P <sub>SAT</sub>	250			Watt
Power Output @ 1dB G.C.P	P <sub>1dB</sub>		200		Watt
Power Output, Meeting ETSI Mask (16-QAM)	P <sub>QAM</sub>		75		Watt
Input Power for nominal Pout	P <sub>IN</sub>		0		dBm
Small Signal Gain	SSG	54			dB
Small Signal Gain Flatness	ΔG			±1.0	dB
Gain Changes with Temperature	ΔG <sub>T</sub>			±1.0	dB
Return Loss Input/Output	S11			-10	dB
Noise Figure	NF		7	10	dB
Third Order Intercept Point 2-Tones, 12Watt/tone, Δ = 100KHz	IP3		+64		dBm
Harmonics @ 1dB G.C.P	H			-30	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V <sub>AC</sub>	100		240	Volt
Current Consumption @ 250W Output	I <sub>DD</sub>			1200	Watt
Test port coupling	TP <sub>SAMPLE</sub>		30		dB

## MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	19 x 8.75 x 22	Inch	Max
Weight	80	lb.	Max
RF Connectors Input/Output	Type-N female		
Cooling	Built in internal forced air cooling system		

## PROTECTIONS

Input Overdrive	+10dBm		Max
Load VSWR @ rated P1dB G.C.P	Infinite @ any angle & magnitude		Nom
Thermal Overload	85°C shutdown		Max

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**ENVIRONMENTAL CHARACTERISTICS**

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	Tc	0		+50	°C
Non-operating Temperature	Tstg	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000	30,000		Feet
Shock & Vibration	SH / VI		Airborne		

**SELECTED AVAILABLE OPTIONS** (Refer to [www.empowerrf.com](http://www.empowerrf.com) for complete options listing)

Option	Number	Description	Price
<b>FGA</b>	<b>061</b>	Front panel 10 turns manual gain adjustment.	Standard
<b>LCD</b>	<b>062</b>	Touchscreen Digital Display, including Fwd/Rev Power indication (dB or Watt scale), Gain Adjustment, ALC Fast/Slow, On/Off, Standby mode, Fault indication, Rear panel HPIB IEEE-488.2 or Full Duplex RS232 remote interface. Note: <b>Output Power is lowered by 0.5 - 0.75dB with this option.</b>	Call
<b>FCN</b>	<b>051</b>	Front Panel Type-N female	N/C
<b>RCN</b>	<b>052</b>	Rear Panel Type-N female	N/C

Available Option Packages: 07, 08, 09, 10

**OUTLINE DRAWING SHOWN WITH OPTION PACKAGE 18**
