EMPOWER RF SYSTEMS, INC.

Solid State Matched Band High Power Amplifier

5006 - MBM2527HM	2.5 – 2.7 GHz / 30 Watts

PRELIMINARY DATA

The MBM2527AHM (SKU# 5006) is suitable for high power S-Band Matched band applications. This amplifier is utilizing Empower RF advanced GaAsFET technology that provide high gain, wide dynamic range, low distortions and excellent linearity. Exceptional performance, long term reliability, and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, built in high efficiency sequence regulator, EMI/RFI filters, machined housing, and qualified components. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- Solid-state class A linear design
- Instantaneous broadband
- Excellent Phase Linearity and Group Delay Characteristics
- Small and lightweight
- Suitable for all modulations CW/FM/PM/AM/Pulse/Digital
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+12VDC; 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2.5		2.7	GHz
Power Output CW	P_{sat}	6	60		Watt
Power Output @ 1dB G.C.P	P_{1dB}	50			Watt
Power Gain @ 1dB G.C.P	G_{1dB}	46			dB
Input Power for Rated Pout	P_{in}		0		dBm
Small Signal Gain Flatness	ΔG			±1.5	dB
Input/Output VSWR	S11/S22			2:1	-
Noise Figure	NF		7	10	dB
Third Order Intercept Point	IP3		+58		dBm
Harmonics @ 1dB G.C.P	H		-20		dBc
Spurious Signals	Spur		-60		dBc
Operating Voltage	VDC	11.0	12	13	Volt
Supply Current	IDD			15	Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	9.0 x 6.4 x 1.1	Inch	Max
Weight	4.0	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	DB9		
Power Monitor 0 to +5VDC, 1kohm load	DB9		
Cooling	External Heatsink		

ENVIRONMENTAL CHARACTERISTICS Design to Meet)

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