

MIL Grade High Power Amplifier

This is a high power, broadband, Gallium Nitride (GaN) RF amplifier that operates from 1.0 to 2.5 GHz. This unit will operate down to 1000 MHz with no degradation in performance, ideal for broadband military platforms as well as commercial applications. This RF module employs temperature compensation to keep the gain constant over the temperature extremes. The power response changes by a ± 0.75 dB typical over temperature. This amplifier has a typical P1dB of 35 watts at room temperature. Saturated output power across the band is typically 50 watts.



- Solid-state Class AB linear design
- Compact, lightweight, rugged and reliable
- Extremely wide instantaneous bandwidth
- Suitable for CW, AM, and FM
(Contact factory for other modulation types)
- 50 ohm input/output impedance
- Built-in control, monitoring and protection circuits

Electrical Specifications					
PARAMETER	SYMBOL	MIN.	TYP.	MAX	UNITS
Operating Frequency	BW	1000		2500	MHz
Output Power CW	P _{SAT}	50			Watt
Small Signal Gain	G _{SS}	46	48		dB
Input Power for Rated P _{SAT}	P _{IN}		0		dBm
Switching Speed (10% to 90%)	T _{ON/OFF}		2.0	5.0	us
Small Signal Gain Flatness	ΔG_{SS}			± 1.5	dB
Third Order Intercept Point 2-Tones, 33dBm/Tone., 100KHz Spacing	IP3	+50			dBm
Input Return Loss	S ₁₁			-10	dB
Noise Figure @ Max Gain	NF			10	dB
Harmonics @ P _{OUT} = 20W	2 ND / 3 RD		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage (24V _{DC} OPT042)	V _{dc}	22	24	26	Volt
Quiescent Current	I _{bq}		2.0		Amp
Output Power @ 1dB Gain Compression	P _{1dB}		30		Watt
Current consumption @ P _{OUT} = 50W	I _{DD}			6.5	Amp



ZHM1000-2500/50

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Mechanical Specifications			
PARAMETER	VALUE	UNITS	LIMITS
Dimensions	3.5" X 7.5" X 1.0"	Inch	Max
Weight	1.0	lb	Max
RF Connectors In/Out	SMA Female		
DC Connectors			
Cooling	External Heatsink (Not Supplied)		