

## MIL Grade High Power Amplifier

This is a high power, broadband, silicon carbide (SiC) RF amplifier that operates from 0.8 to 2.5 GHz. This PA is ideal for broadband military platforms as well as commercial applications. Noise figure at room temperature is 12.0 dB typical. This amplifier has a typical P3dB of 200 watts at room temperature. It offers a typical gain of 45 dB with a typical gain flatness of  $\pm 2.5$  dB. Class AB current is ~6.3 amps typical employing a +50 Vdc supply.



- Solid-state Class AB linear design
- Compact, lightweight, rugged and reliable
- Instantaneous ultra broadband
- Suitable for most 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	800		2500	MHz
Output Power CW	$P_{SAT}$	200			Watt
Small Signal Gain @ $P_{IN} = -10$ dBm	$G_{SS}$		55		dB
Input Power for Rated $P_{SAT}$	$P_{IN}$		-3.0		dBm
Small Signal Gain Flatness @ $P_{IN} = -10$ dBm (BW= 1000MHz, 800-1500MHz)	$\Delta G_{SS}$			$\pm 1.0$	dB
Small Signal Gain Flatness @ $P_{IN} = -10$ dBm (BW= 500MHz, 1500-2500MHz)	$\Delta G_{SS}$			$\pm 1.5$	dB
Third Order Intercept Point 2-Tones, 40dBm/Tone., 1MHz Spacing	IP3		+50		dBm
Input Return Loss	$S_{11}$			-10	dB
RF Noise when RF off	$N_{RF}$			-35	dBm/MHz
Harmonics @ $P_{OUT} = 80$ W	H	-50			dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage (24V <sub>DC</sub> OPT042)	V <sub>dc</sub>	26	28	30	Volt
Quiescent Current	$I_{DQ}$		2.5		Amp
Output Power @ 1dB Gain Compression	$P_{1dB}$		80		Watt
Current consumption @ $P_{OUT} = 200$ W CW	$I_{DD}$		20	25	Amp
Current consumption @ Mute – Pin 4	$I_{MUTE}$		1.5		Amp



# ZHM800-2500/200

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Current consumption @ RF OFF – Pin 5	$I_{RF\_OFF}$		1.5		Amp
RF ON/OFF Switching Time @ 100KHz TTL, $P_{IN} = 0dBm$	$T_{ON/OFF}$			1.0	us
Mute Control Switching Time @ 1KHz TTL, $P_{IN} = 0dBm$	$T_{ON/OFF}$		2.0	5.0	us

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)		