ZHM50-250/30

MIL Grade High Power Amplifier

This is a high power, broadband, gallium nitride (GaN) RF amplifier that operates from 0.5 to 2.5 GHz. This PA is ideal for broadband military platforms as well as commercial applications because it is robust and offers high power over a multi-octave bandwidth. This amplifier has a typical P1dB of 20 watts at room temperature. Saturated output power across the band is typically 25 to 30 watts. Noise figure at room temperature is 7.5 dB typical. This amplifier offers a typical gain of 55 dB with a typical gain flatness of ± 2.5 dB.

- Solid-state Class AB linear design
- Instantaneous ultra broadband
- Small and lightweight
- Suitable for CW, AM, and FM
  (Contact factory for other modulation types)
- 50 ohm input/output impedance
- High reliability and ruggedness
- Built-in control, monitoring and protection circuits

Electrical Specifications

PARAMETER	SYMBOL	MIN.	TYP.	MAX	UNITS
Operating Frequency	BW	500		2500	MHz
Output Power CW	P_{SAT}	50		70	Watt
Small Signal Gain	G_{SS}	46	48		dB
Input Power for Rated P_{SAT}	P_{IN}		0		dBm
Switching Time @ 1kHz TTL , P_{IN} = 0 dBm	$T_{ON/OFF}$		2	5	uSec
Small Signal Gain Flatness	ΔG_{SS}			±1.5	dB
Third Order Intercept Point 2-Tones, 33dBm/Tone., Δ= 100 KHz	IP3	+48	+53		dBm
Input Return Loss	S_{11}			-10	dB
Noise Figure	NF			11.5	dB
Harmonics @ P_{OUT} = 20W	H	-20		-13	dBc
Spurious Signals	Spur	-70		-60	dBc
Operating Voltage	Vdc	26	28	30	Volt
Quiescent Current	I_{DQ}		2.0		Amp
Current consumption @ Shundown	I_{SD}			400	mA
Current consumption @ P_{OUT} = 50W	I_{DD}			6.0	Amp

Output Power @ 1dB Gain Compression	P_{1dB}		20		Watt

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)		