

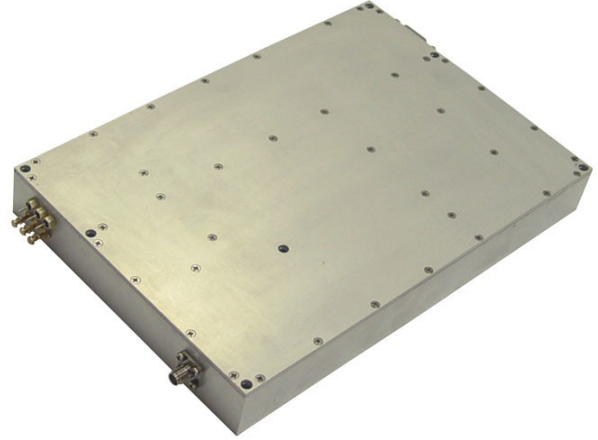


ZHM 1727H100 MIL GRADE HIGH POWER AMPLIFIER 1700 - 2250 MHz 100W

This amplifier operates from 1800 MHz to 2050 MHz, ideal for broadband military platforms as well as commercial applications because it is robust and offers high power over a multi-decade bandwidth. It was designed for broadband communication systems platforms. It is packaged in a modular housing that is approximately 5.75 " (W) x 8.46 " (L) x 1.04 " (H). This amplifier has a typical P3dB of 80-100 watts at room temperature.

Noise figure at room temperature is 8.0 dB typical. It offers a typical gain of 52 dB with a typical gain flatness of ± 3.0 dB. The power and gain flatness across the band is very flat for the bandwidth.

Dimensions: 5.75 " X 8.46 " X 1.04 ".



Weight: 3 lb

Key Features:

Broad Frequency Range:	1.7 ~ 2.2 GHz
High Gain:	52 dB
High Power (P1dB):	50 dBm
High Linearity (OIP3):	60 dBm
Impedance:	50 Ohm
Single DC Supply:	2.1 A @ +30 V
High Efficiency:	>30% @ 100W Pout
Monitoring all Parameters	Through RS-232 PFWD, PREV, Supply Voltage, Supply Current, Temperature

Absolute Maximum Ratings:

Parameters	Symbol	Value	Units
DC Power Supply Voltage	V _{dd}	32	V
DC Power Supply Current	I	14	A
Total Power Dissipation	P _{diss}	300	W
RF Input Power	P _{In,Max}	+7	dBm
Maximum Operating Heatsink Temp.	T _{O,Max}	+65	°C

Electrical Specifications: (at room temperature)

Testing Item	Symbol	Test Constraints	Min	Typ	Max	Unit
Gain	S ₂₁	1.8 ~ 2.0 GHz	51	52		dB
Gain Variation	ΔG	1.8 ~ 2.0 GHz		± 0.5	± 1	dB
Input Reflection	S ₁₁	1.8 ~ 2.0 GHz		15		dB
Output Reflection	S ₂₂	1.8 ~ 2.0 GHz		15		dB
Output Power @ 1dB Gain Comp. Point	P _{1dB}	1.8 ~ 2.0 GHz	49.5	50		dBm
Output IP3	OIP ₃	2-Tone, P _{out} 43 dBm each, 1 MHz sep.	59.5	60		dBm
Power Supply Voltage	V _{dd}		29.5	30		V
Current Consumption @ no RF input	I _{dq}	V _{dd} = +30 V		2.1		A
Current Consumption @ P _{1dB}	I _{dq}	V _{dd} = +30 V		12		A
Operating Temperature	T _O		0		+50	°C

Frequency Response

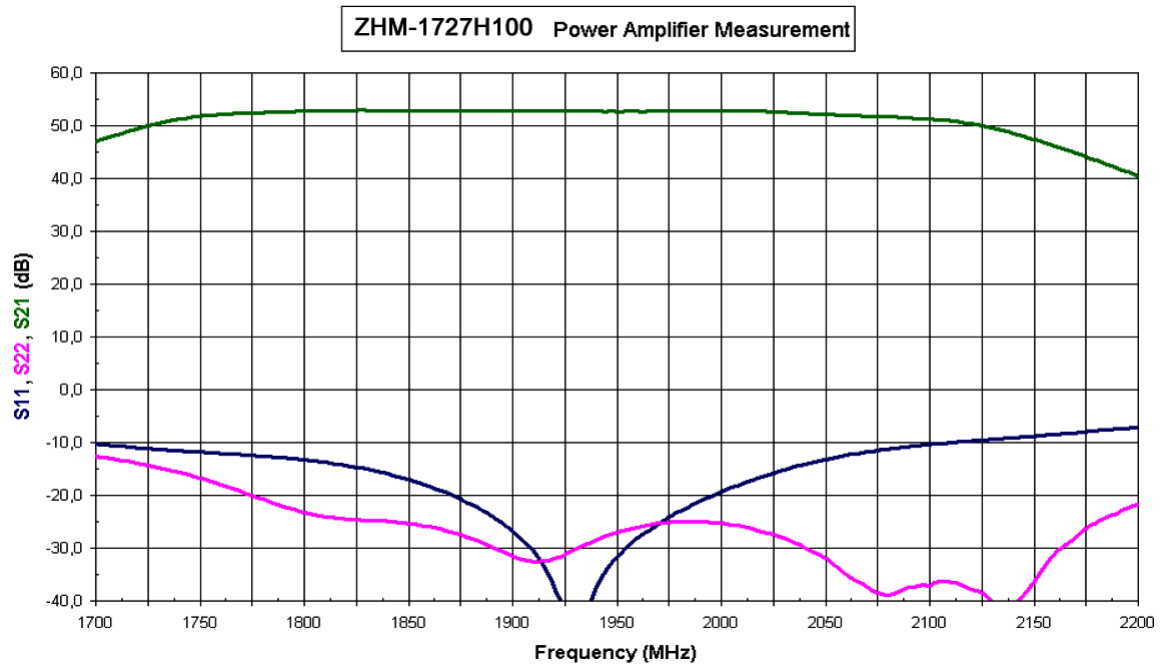


FIG.1 Small signal performance

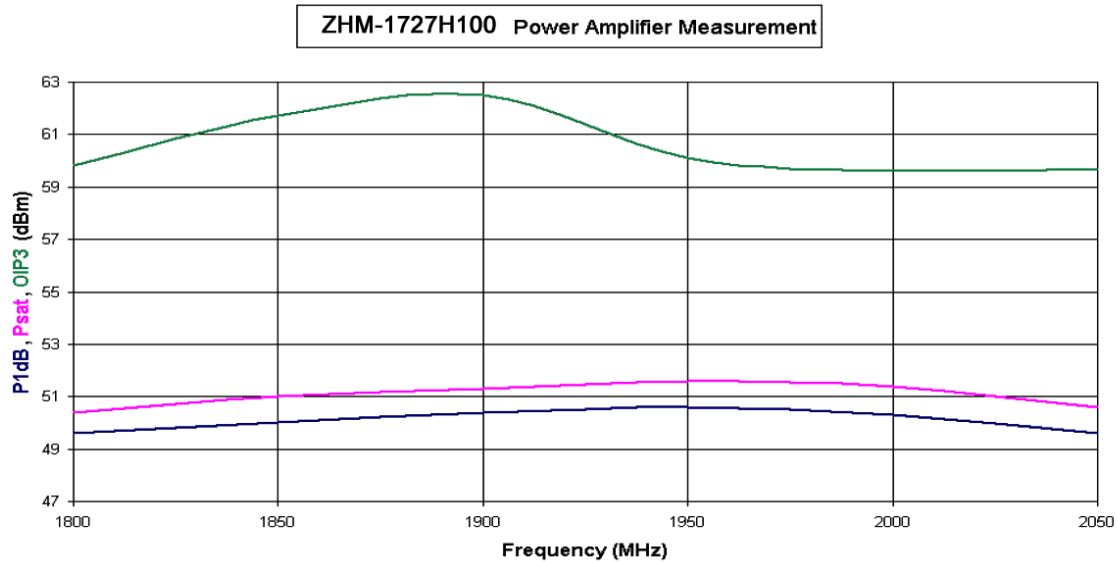
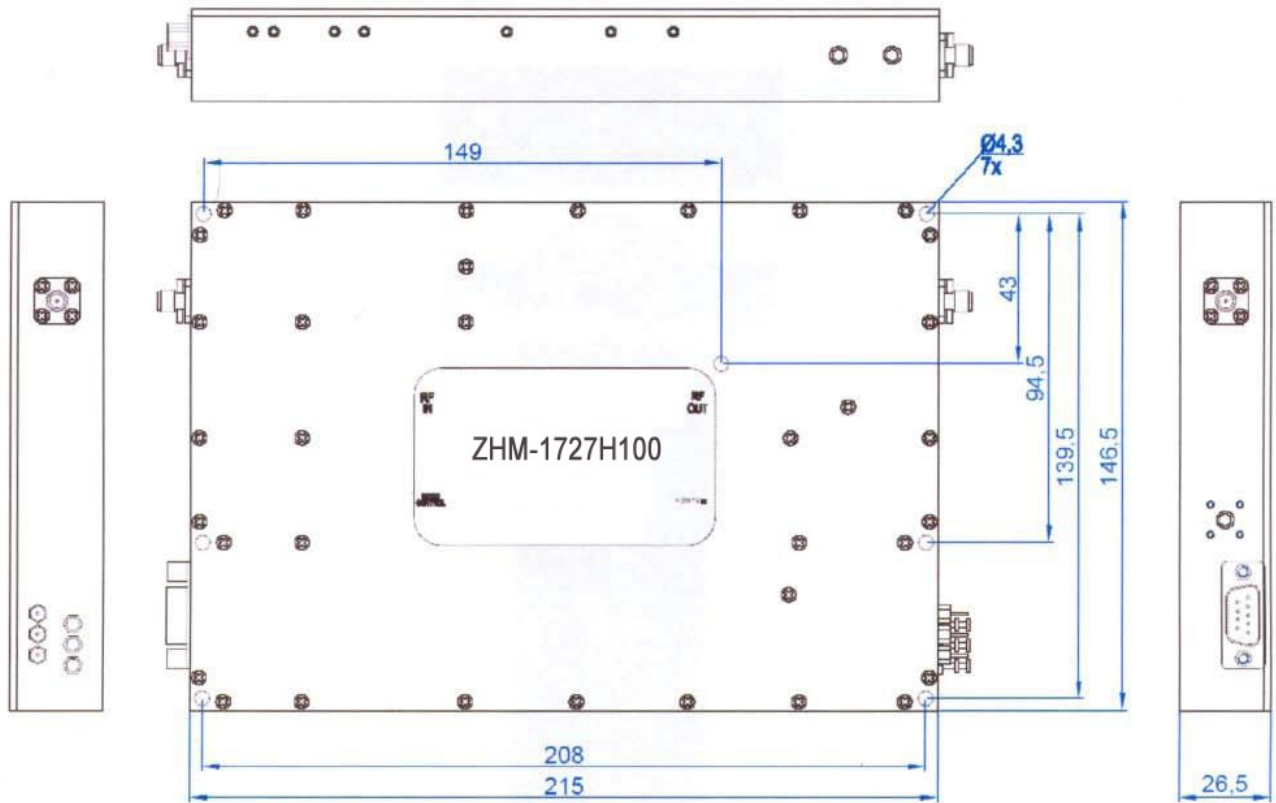


FIG.2 P_{1dB}, P_{SAT} and OIP₃

Mechanical Outline: (all units in mm)



Note: Proper heat sinking required