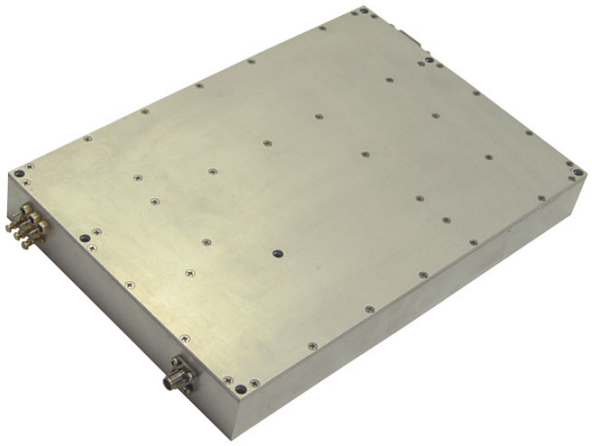
ZHM-1727H100



100W Linear Power Amplifier
1.7 ~ 2.15 GHz

The ZHM-1727H100 is a high gain, linear amplifier ideal for use in cellular bands from 1.7 – 2.15 GHz.

Key Features:

Broad Frequency Range:	1.7 ~ 2.2 GHz
High Gain:	52 dB
High Power (P_{1dB}):	50 dBm
High Linearity (OIP_3):	60 dBm
Impedance:	50 Ohm
Single DC Supply:	2.1 A @ +30 V
High Efficiency:	>30% @ 100W P_{out}
Monitoring all Parameters	Through RS-232 P_{FWD}, P_{REV}, 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_{dd}	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	^oC

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	$_{\Delta}G$	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, Pout 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 @ P1dB	I_{dq}	V_{dd} = +30 V		12		A
Operating Temperature	T_O		0		+50	^oC

Frequency Response

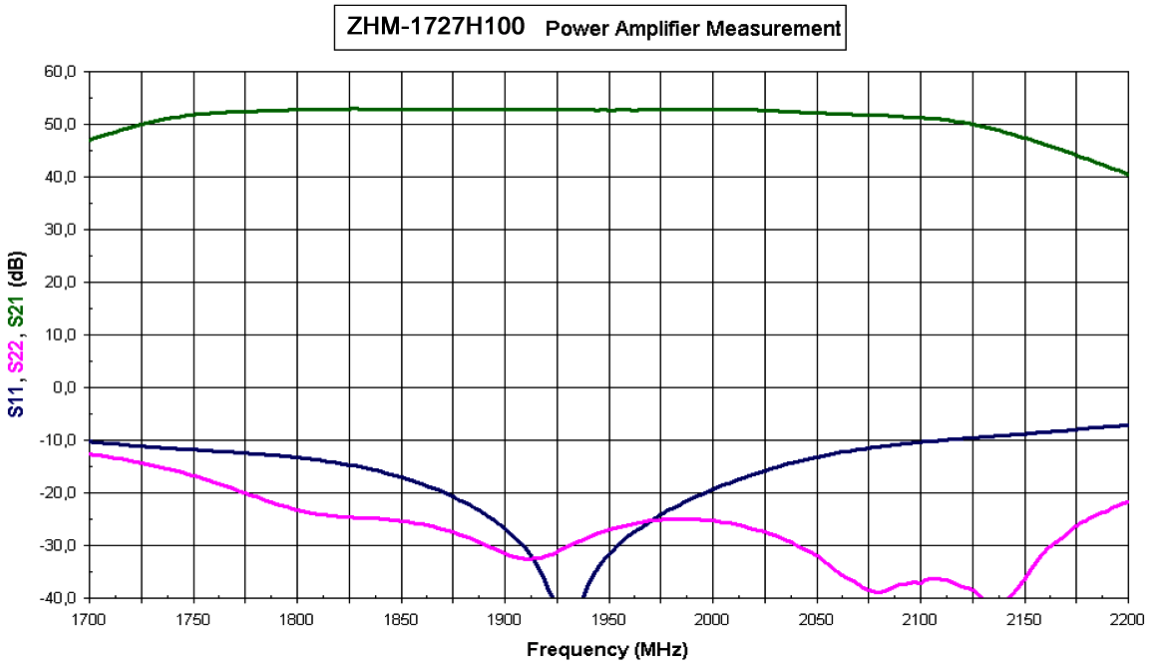


FIG.1 Small signal performance

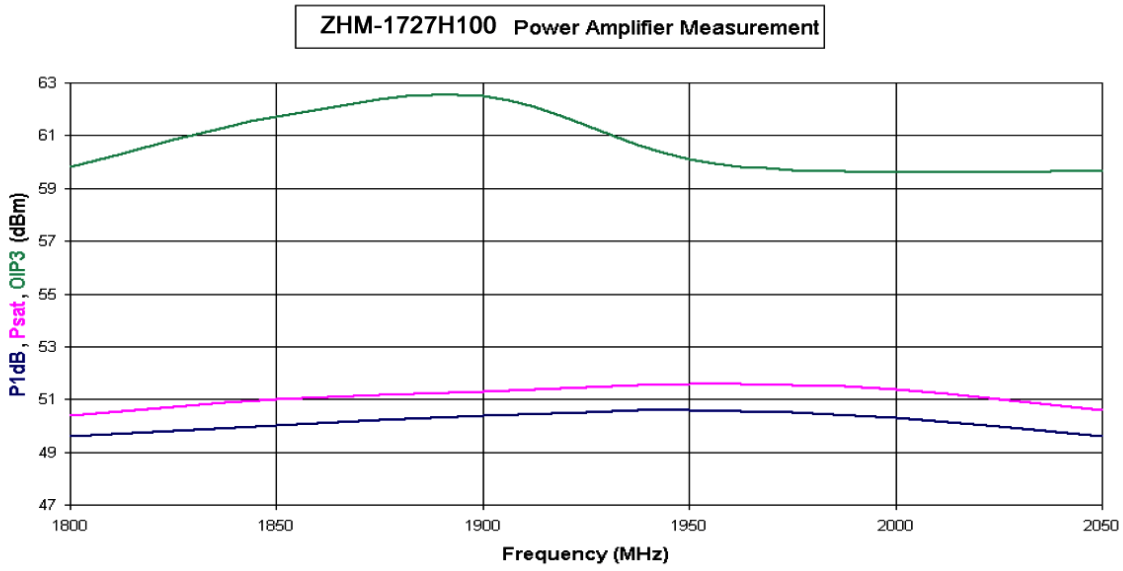
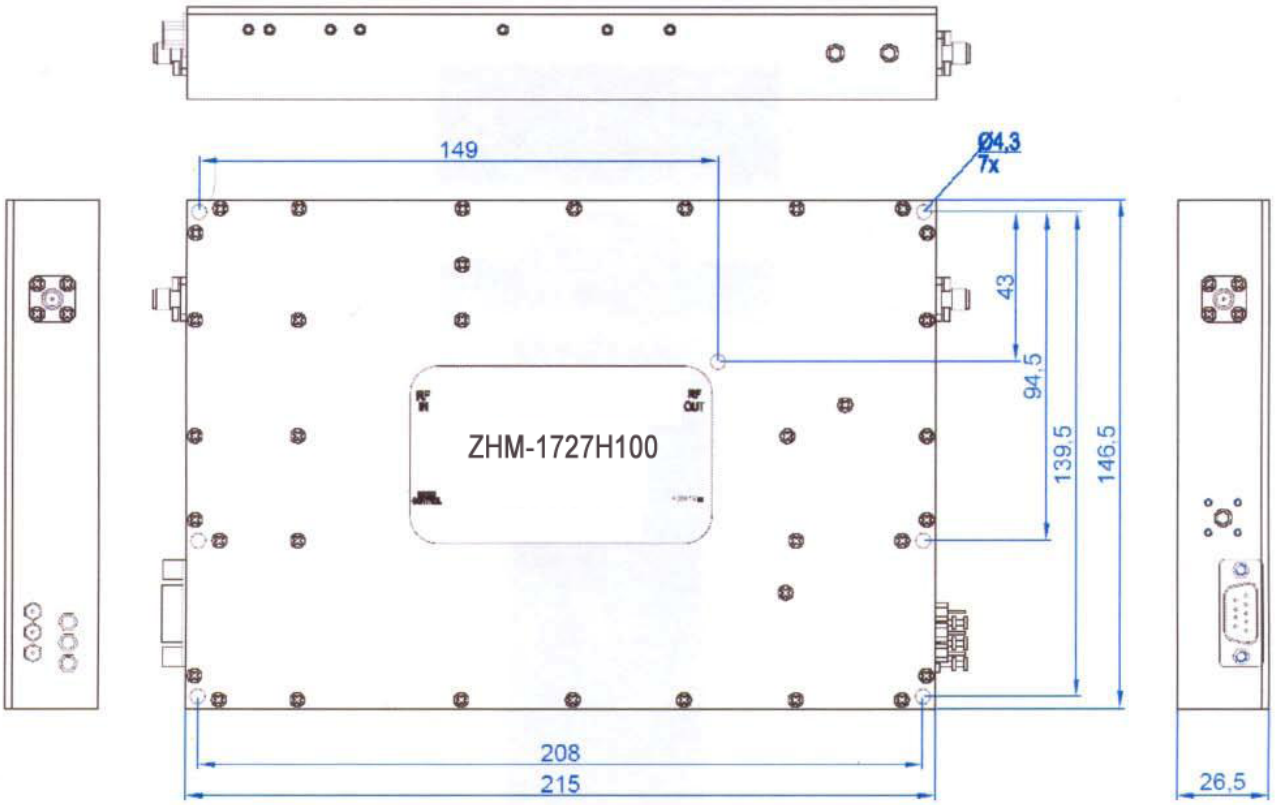


FIG.2 P_{1dB}, P_{SAT} and OIP_3

Mechanical Outline: (all units in mm)



Note: Proper heat sinking required