

ZHM-1415/50
HIGH POWER AMPLIFIER FOR LTE BAND
1400 MHz – 1500 MHz



Designed for Digital Audio Broadcasting, this amplifier incorporates microstrip technology and single end LDMos Devices to enhance ruggedness and reliability.

Size (base plate): 6" x 4" x 3"

- 1400 - 1500 MHz
- 28 ±32 Volts (30V nominal)
- Input/Output 50 Ω - 50 Ω
- P_{out}: 50W CW
15Wrms DAB
- Shoulder -28dBc
- Gain : 15dB
- Class AB

Electrical Specifications:

ABSOLUTE MAXIMUM RATINGS (Device Flange T = 70 °C)

Symbol	Parameters	Value	Unit
V _s	Voltage Supply	35	V dc
I _s	Current Supply	5	A dc
T _{stg}	Storage Temperature Range	-30 + 100	°C
T _c	Operating Base Plate Temperature	0 + 75 ¹	°C
ψ	VSWR max	3:1 all phase angle	-
	Max input power	See note ²	-

ELECTRICAL SPECIFICATIONS (Base Plate T. = 45 °C, 50Ω loaded, Vd = 30 V)

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typ.	Max	
BW	Bandwidth	P _{out} = 55 W (CW)	1450		1500	MHz
Gp	Power gain	P _{ref} = 15 W (CW)	14	15	-	dB
P _{out} – 1dB	Power Output @ 1dB Compression	Referred to P _{out} = 15W (CW)	45	-	-	W
I _q *	Quiescent Current	P _{out} = 0 W – Total ³ *	-	-	1	A
I _{tot} *	@ P _{Max}		-		3,5	A
r _l	Input return loss	P _{out} = 55 W CW or 15Wrms DAB	16	18	-	dB
Ψ	Load mismatch	P _{ref} = 55W CW, f= 1500MHz, load VSWR = 2:1, all phase angles	No degradation in P _{out}			
Gr	Gain Flatness	P _{ref} = 55 W CW, BW: 1450-1500MHz		±0.5	±1	dB
η	Drain Efficiency	P _{out} = 55 W (CW)	35	45	-	%

Usage:

1400-1427 MHz EARTH EXPLORATION-SATELLITE (passive)
 RADIO ASTRONOMY SPACE RESEARCH (passive)

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