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**ZHG1725/400**  
**HIGH POWER AMPLIFIER FOR VHF BAND**  
**170 MHz – 250 MHz**

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Designed for analog and digital TV transposers and transmitters, this amplifier incorporates microstrip technology and push-pull TETRAFET to enhance ruggedness and reliability. RF POWER output is 400 W CW, required input RF power is 5 W.

Dimensions: 280 mm x 105 mm x 86 mm

- 170 - 250 MHz
- (28 ÷32 Volt) 30 V Nominal
- Input/Output 50Ω - 50Ω
- Pout CW: 200W (Continuous Work)
- Pout : 400W pep -27 dBc min (two-tone test 6MHz spacing )
- Gain : 13.5 dB min; 14.5 dB typ
- Class AB

## Electrical Specifications:

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

Symbol	Parameter	Value	Unit
V <sub>S</sub>	Voltage Supply	35	V dc
I <sub>S</sub>	Current Supply	25	A dc
T <sub>stg</sub>	Storage Temperature Range	-20 + 80	°C
T <sub>c</sub>	Operating Base Plate Temperature <sup>1</sup>	0 + 75 <sup>2</sup>	°C
ψ	VSWR max	3:1 all phase angle	-
	Max input power	See note <sup>3</sup>	-
	Max cw output power (continuous work)	400	Watt

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

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typ.	Max	
BW	Bandwidth	P <sub>out</sub> = 250 W (CW)	170		250	MHz
G <sub>p</sub>	Power gain	P <sub>ref</sub> = 250 W (CW)	13.5	14.5	-	dB
P <sub>out</sub> – 1dB	Power Output @ 1dB Compression	Referred to P <sub>out</sub> = 60W (CW)	370	400	-	W
I <sub>q</sub> *	Quiescent Current	P <sub>out</sub> = 0 W – Total * <sup>4</sup>	-	-	6.0	A
I <sub>tot</sub>	@ P <sub>Max</sub>	300W Ps Black Level Video + Audio	-	-	18	A
I <sub>rl</sub>	Input return loss	P <sub>out</sub> = 250 W CW	16	20	-	dB
ψ	Load mismatch	P <sub>ref</sub> = 250 W CW, f= 230MHz, load VSWR = 2:1, all phase angles	No degradation in P <sub>out</sub>			
Gr	Gain Flatness	P <sub>ref</sub> = 250 W CW, BW: 170-230MHz		±0.5	±1	dB
η	Drain Efficiency	P <sub>out</sub> = 300 W (CW)	40	45	-	%
	P <sub>out</sub> separate ampl.	Sync. Compression < 1dB without correction	350			Wps
	P <sub>out</sub> common ampl.	P <sub>out</sub> 300W ps common ampl. dual sound, with Red Field sound 1 @ -13dB and sound 2 @	-45	-50		dBc
	P <sub>out</sub> DAB	P <sub>out</sub> 150Wrms without precorrection	-27	-30		Wrms
	P <sub>out</sub> DVB-T	P <sub>out</sub> 80Wrms without precorrection	-28	-30		Wrms