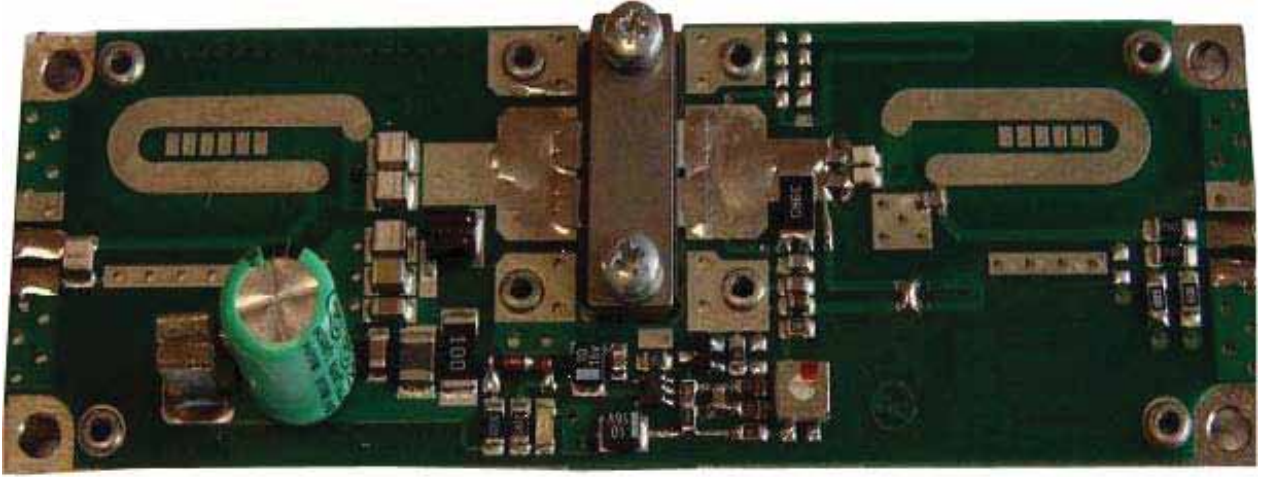




VHFAMP50 175-230 VHF PALLET AMPLIFIER



FEATURES & APPLICATIONS

Designed for analog and digital TV transmitters and transposers this RF amplifier incorporates, simple design based on microstrip technology, PTFE PCB, planar balun and push-pull LDMOS to enhance ruggedness and reliability.

Motorola LDMOS Technology

Class AB operation

Analog TV Broadcast

- DVB-T, DVB-H, ATSC 8VSB

Broadband, no tuning required in VHF band

Output Power > 50W @ - 60 dBc min IMD / Three Tone Test

Input & Output Impedance= 50Ω - 50Ω

48÷49 Volt, 48 Volt Nominal

Gain : 19 dB min

Devices: MRFGV2150



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ABSOLUTE MAXIMUM RATINGS (Carrier Temperature < 70 °C)

Symbol	Parameter	Value	Unit
Vs	Voltage Supply	50	V dc
Is	Current Supply	4	A dc
TStg	Storage Temperature Range	-20...+70	°C
Tc	Operating Base Plate Temperature	-0...+70	°C
ψ	VSWR max	3:1 all phase angle	-
	Max input power	1W pep	-
	Max CW output power	100	Watt

ELECTRICAL SPECIFICATIONS (Base Plate Temp. = 25 °C, Vdd = 28 V, 50 Ω)

Symbol	Parameter	Test Conditions	Value Min	Typ.	Max	Unit
BW	Bandwidth	Pout = 50 W (CW)	175		230	MHz
Gp	Power gain	Pref = 50 W (CW)	18.75	19	-	dB
P1dB	Power Output @ 1dB Compression	Referred to Pin= 0,8W (CW)	75	80	-	W
PV	Pout separate amplification	Sync. Compression 5% without precorrection	70	80		Wps
PAV	Pout common amplification	Red field IMD < -60 dBc without precorrection	50	60		Wps
IMD	Intermodulation	Three Tone -8,-10,-16 db @ 50W without precorrection		-60		db
P8VSB	Pout 8VSB	Shoulder @ -36 dB without precorrection	20			Wrms
PDVB	Pout DVB-T	Shoulder @ -36 dB without precorrection	12.5			Wrms
IDq	Quiescent Current	Pout = 0 W – Total	-	-	0.7	A
Itot	@ PMax	50W P.sync. Black Level Audio + Video	-	-	2	A
Irl	Input return loss	Pout = 50 W CW	-20	-22	-	dB
ψ	Load mismatch	Pref = 50 W CW, f= 230MHz, load VSWR = 2:1 at all phase angles				
FL	Gain Flatness	Pref = 50W CW, BW: 175-230MHz			No degradation in Pout ± 0.25	dB



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Layout and Connections

Dimensions are in mm.

