

45W LDMos Technology Amplifier

Designed for analog and digital TV transposers and transmitters, this amplifier incorporates microstrip technology and single end LDMos Devices to enhance ruggedness and reliability.

- 470 - 860 MHz
- 28 \pm 32 Volt (30V Nominal)
- Input/Output: 50 Ω - 50 Ω
- P_{out} 45 Watt (CW)
- P_{out} 45 Watt ps Separate Ampl.
- P_{out} 30 Watt ps Common Ampl.
- P_{out} 10 Watt rms DVB
- Gain : 13 dB min.
- Class AB
- Devices: MRF9060 or equivalent
- Connectorized version available
- APL corrector on board



Dimensions (LxWxH) 136x78x20mm (5.36"x3.07"x0.79")

This picture is a mere example, it does not bind the provided product

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

Symbol	Parameter	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 Case Temperature	0 + 75 ¹	°C
ψ	VSWR max	3:1 all phase angles	

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

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typ.	Max	
BW	Bandwidth	P _{out} = 45 W (CW)	470		860	MHz
G _p	Power gain	P _{ref} = 45 W (CW)	13	15	-	dB
P _{out} - 1dB	Power Output @ 1dB Compression	Referred to P _{out} = 5 W (CW)	45	-	-	W
I _q *	Supply Current	P _{out} = 0 W - Total *	-	-	1	A
I _{tot} *	@ P _{Max}		-		4	A
Ω	Input/Output	50 Ohm				Ohm
I _{rl}	Input return loss	P _{out} = 45 W CW	15	18	-	dB
\square	Load mismatch	P _{ref} = 45 W CW, f= 860MHz, load VSWR = 2:1, all phase angles	No degradation in Pout			
Gr	Gain Flatness	P _{ref} = 45 W CW, BW: 470-860MHz		\pm 0.5	\pm 1	dB
η	Drain Efficiency	P _{out} = 45 W (CW)	35	45	-	%
	Pout separate ampl.	Sync. Compression < 1dB without correction	45			
	Pout common ampl.	Pout 30W ps common ampl. Dual sound, with Red Field sound 1 @ -13dB and sound 2 @ -20dB without precorrection	45	50		
	Pout DVB-T	Pout 10Wrms without precorrection	28	30		

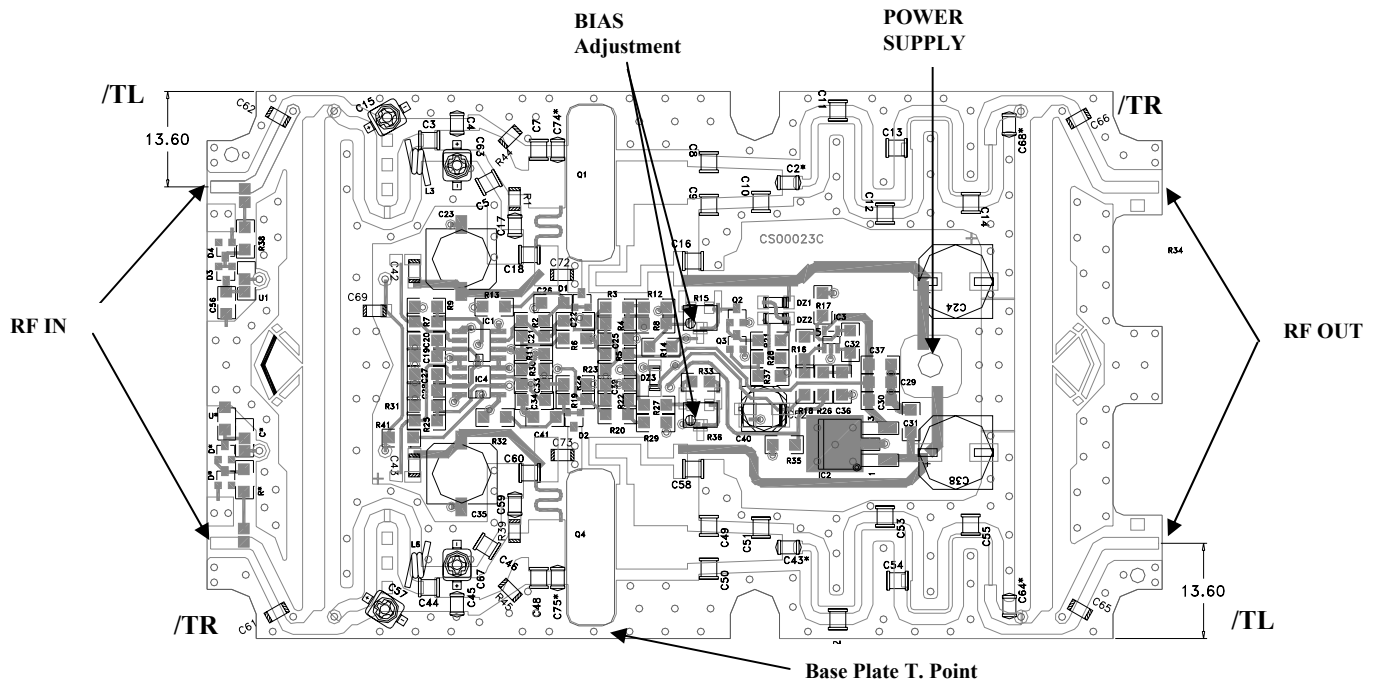
¹ Warning: The base plate temperature must be 75 °C max, using an appropriate Heatsink.

* Depending of handling signal (analog /digital)

NOTES: The input power must not exceed +6dB, for 1 microsec. , the nominal input power referred to the 1dBcp power output; the Quiescent Current is set at typical value, in factory. This parameter can be adjusted by the final user depending on the applied signal and/or frequency and output power. (Warning: Do not exceed the specified max I_q value).

Contact Res-Ingenium, +39 0763 316333 Fax +39 0763316002- or visit www.res-ingenium.com for a complete listing.

PC BOARD LAYOUT



NOTE. In response to customer request, this pallet has been designed to allow two different positions of IN/OUT connections:
/TL = connection on the left side, /TR = connection on the right side.

HEATSINK MOUNTING/HARDWARE

1. HEATSINK TOOLING

- Planarity: typical value 0.8
- Roughness: better than 0.03 mm

2. THERMAL COMPOUND

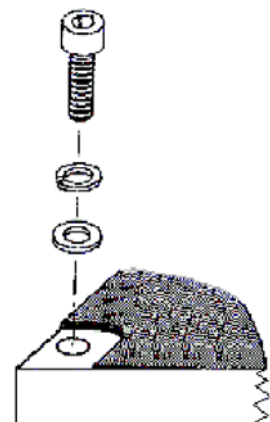
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

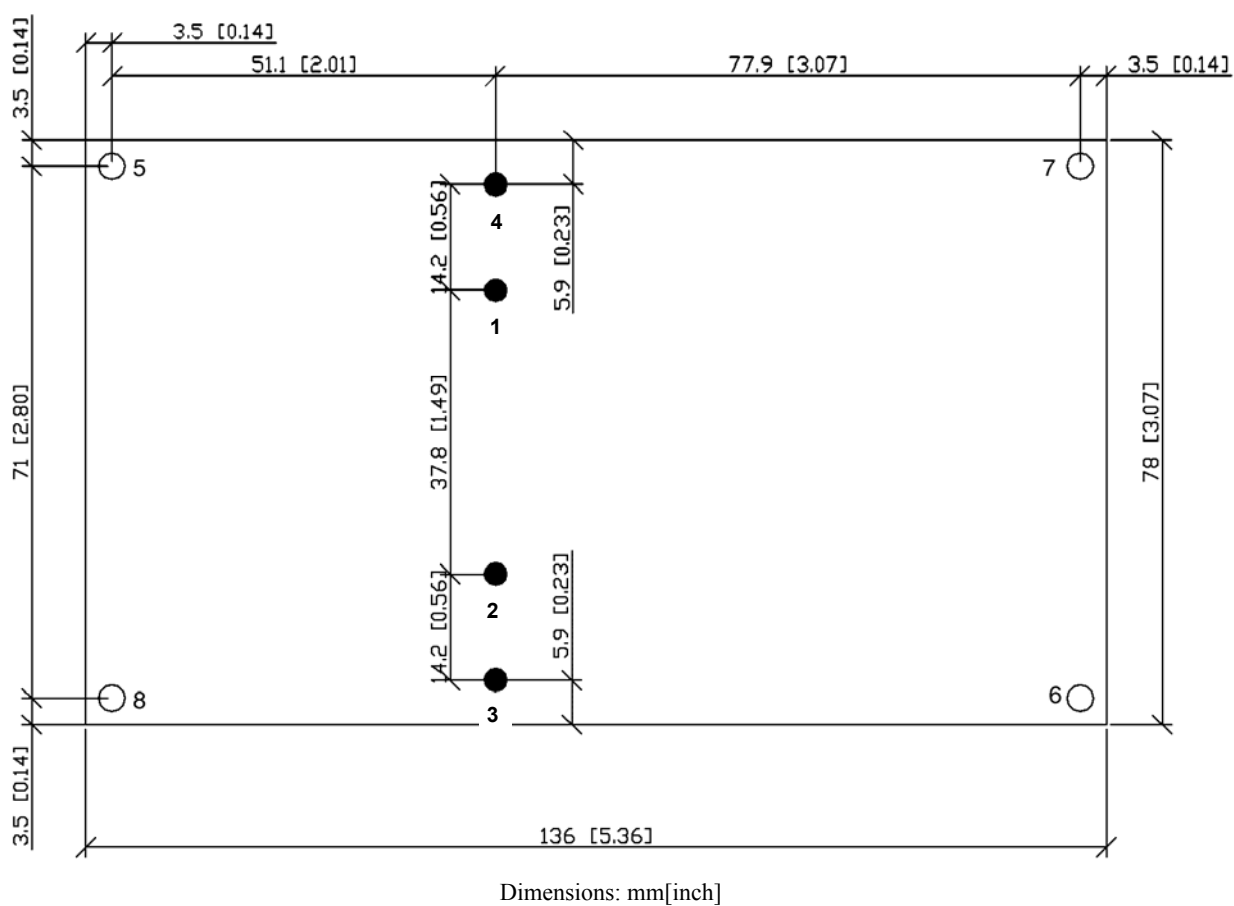
3. SCREWS

- 4 x M3 -Cross head screws (position 5, 6, 7, 8) – 4 x M2.5 (position 1, 2, 3, 4).
- The recommended Torque is 12 Kg/cm for M3 type screws and 10 Kg/cm for M2.5 type screws.

4. TIGHTENING ORDER

- See next figure:





Dimensions: mm[inch]

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Res-Ingenium

Via dei Vasari, 17
Zona Industriale Fontanelle di Bardano
05018 Orvieto (TR)
Italy
Telephone: +39 0736 316333
Fax: +39 0763 316002
Internet: res-ingenium.com
E-Mail: map@res-ingenium.com

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