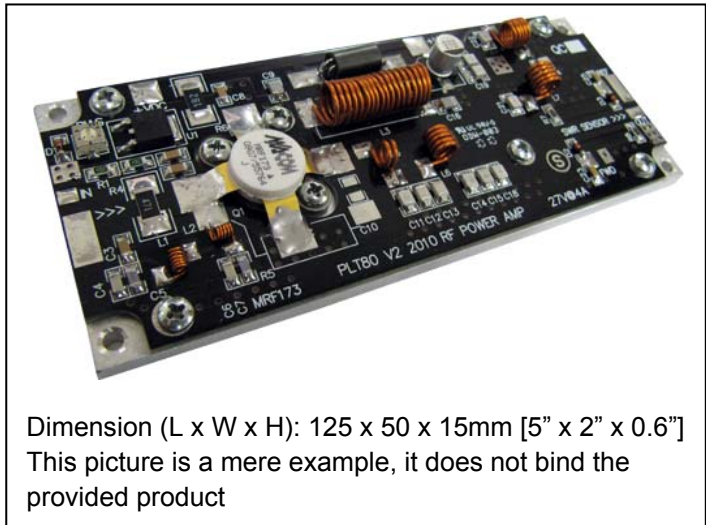


50 W – FM Amplifier Plate

Designed for FM radio transmitters, Drivers this amplifier incorporates microstrip technology and MOSFET transistor to enhance ruggedness and reliability.

SWR SENSOR / LPF ON BOARD

- 87.5 ÷ 108 MHz
- 28 Volts
- Input/Output 50 Ω
- Pout : 50W min 80W max
- Gain : 18 dB typ 19.5 db max
- Class B Id=2mA
- Low pass filter on board
- SWR sensor on board
- Devices: MRF173 or equivalent



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

Symbol	Parameter	Value	Unit
Vdc	Drain Voltage Supply	30	V
Idc	Supply Current	5	A
Vswr	Load Mismatch (all phase angles, Tc=40°C, Id=4A)	10.0	Vswr
Pin	Input RF Power	3	W
Tstg	Storage Temperature Range	-40 to +80	°C
Tc	Operating Temperature	+70	°C

ELECTRICAL SPECIFICATIONS (Base Plate T = 45 °C, 50Ω loaded, Vd = 28 V)

Characteristics	Min	Typ	Max	Unit
Operating Frequency Range	86	98	109	MHz
Fundamental Output Power		55	80	W
Input Power		1.2		W
Power Gain (50W output)		18	19.5	db
Drain Efficiency (Load 50Ω)		60	70	%
Input VSWR	1.5	2.0	3.0	Vswr
F2 Second Harmonic		-60	-70	dbc
F3 Third Harmonic		-55	-65	dbc

ELECTRICAL CONNECTIONS

Warning – Operating without antenna or dummy load (50ohm) can permanently damage to the RF power transistor.

Warning – Check the output connection before applying DC voltage to the module.



HEATSINK MOUNTING/HARDWARE

Warning – This module must be place on a heat sink that is at least 150X80X40 mm

If the module will be over heated above 50°C – Air fan should be applied to the heat sink.

Warning – Overheating can cause permanently damage to the power transistor.

1.HEATSINK TOOLING

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

2.THERMAL COMPOUND

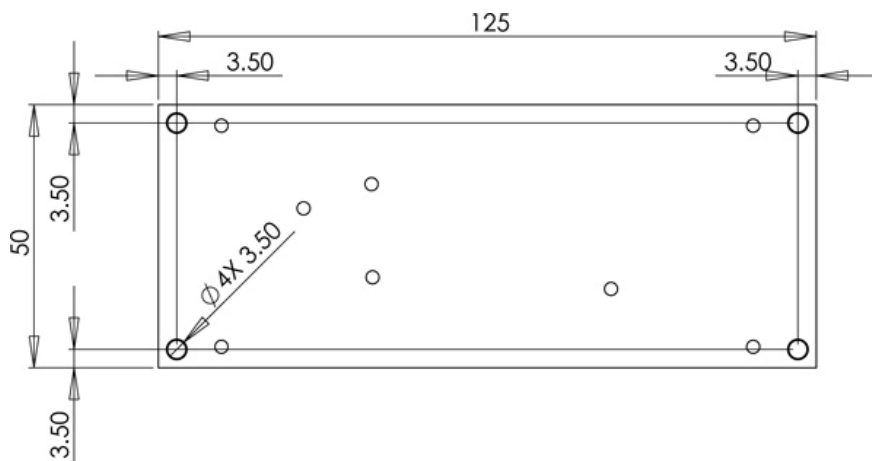
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

3.SCREWS

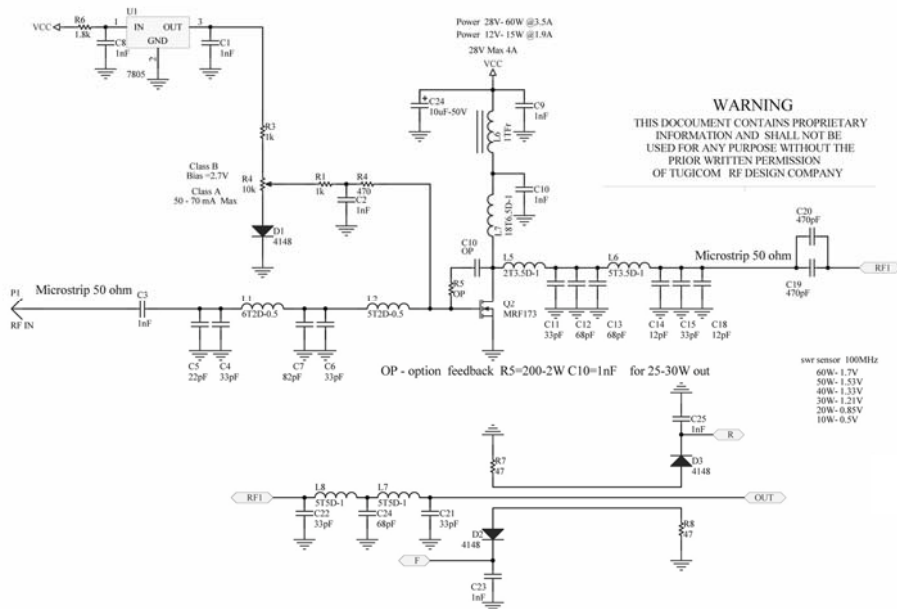
- M3 hexagon socket head cap screws
- The recommended Torque is 12 Kg/cm for M3 type screws and 10 Kg/cm for M2.5 type screws.

4.TIGHTENING ORDER

- See next figure: (all dimensions are in mm)



Electrical diagram





PLT80

Tugicom LTD

Giborey Israel 24

New industrial zone

Netanya

Israel

Telephone: +972-98615533

Fax: +972-98351036

Internet: www.tugicom.com

E-Mail: info@tugicom.com

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WARRANTY

All OEM modules have 1 year warranty in Tugicom laboratory Israel
the warranty not include the RF power transistor.

Shipping to our laboratory and back for a repair is not included in the warranty.