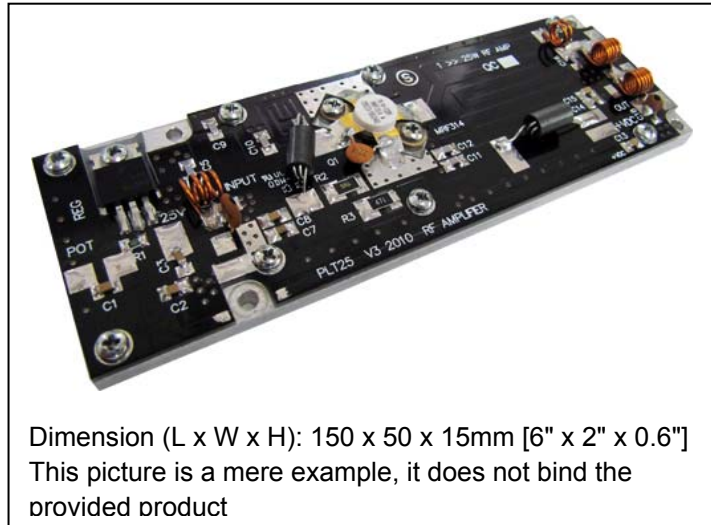


25 W – FM Amplifier Pallet

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

optional regulator on board for output Power adjust

- 87.5 ÷ 108 MHz 1.2W input
- 28 Volts
- Input/Output 50 Ω
- Pout : 25W min 32W max
- Gain : 13 dB typ 14 db max
- Class A B
- Low pass filter on board
- Devices: MRF314 or equivalent



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

Symbol	Parameter	Value	Unit
Vdc	Drain Voltage Supply	30	V
Idc	Supply Current	3	A
swr	Load Mismatch (all phase angles, Tc=40°C, Id=4A)	10:1	SWR
Pin	Input RF Power	3	W
Tstg	Storage Temperature Range	-40 to +80	°C
Tc	Operating Temperature	+70	°C

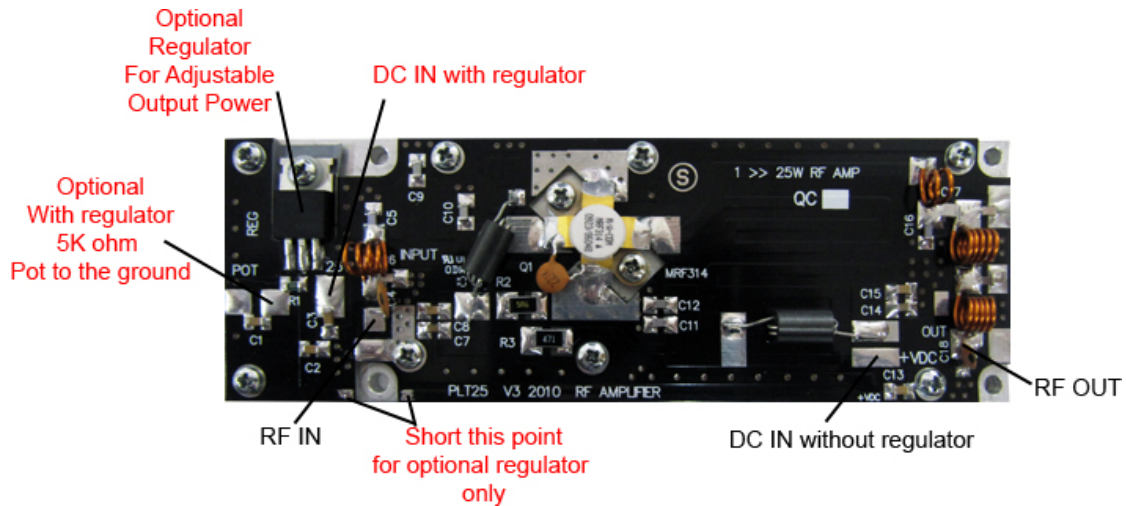
ELECTRICAL SPECIFICATIONS (Base Plate T = 45 °C, 50Ω loaded, Vcc = 28 V @ 1.9A)

Characteristics	Min	Typ	Max	Unit
Operating Frequency Range	86	98	109	MHz
Fundamental Output Power		25	35	W
Input Power	1	1.2		W
Power Gain (50W output)		13	14	db
Collector Efficiency (Load 50Ω)		60	70	%
Input SWR	1.5:1	2:1		SWR
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 placed on a heat sink that is at least 160X80X30 mm

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

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

1. HEATSINK TOOLING

- Planarity: typical value 1μ
- Roughness: better than 0.05 mm

2. THERMAL COMPOUND

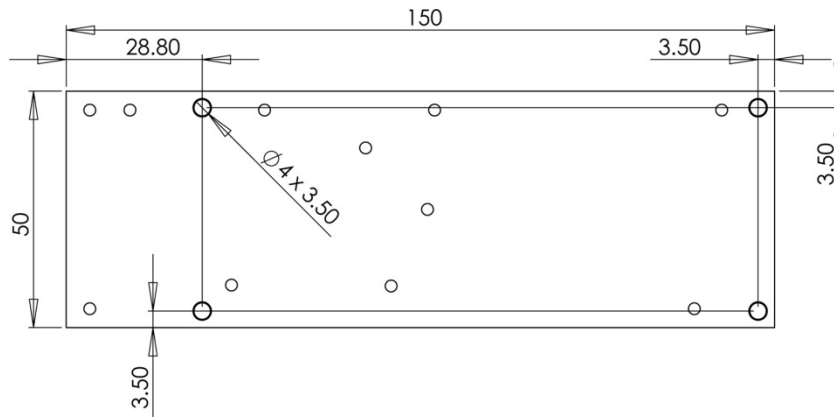
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

3. SCREWS

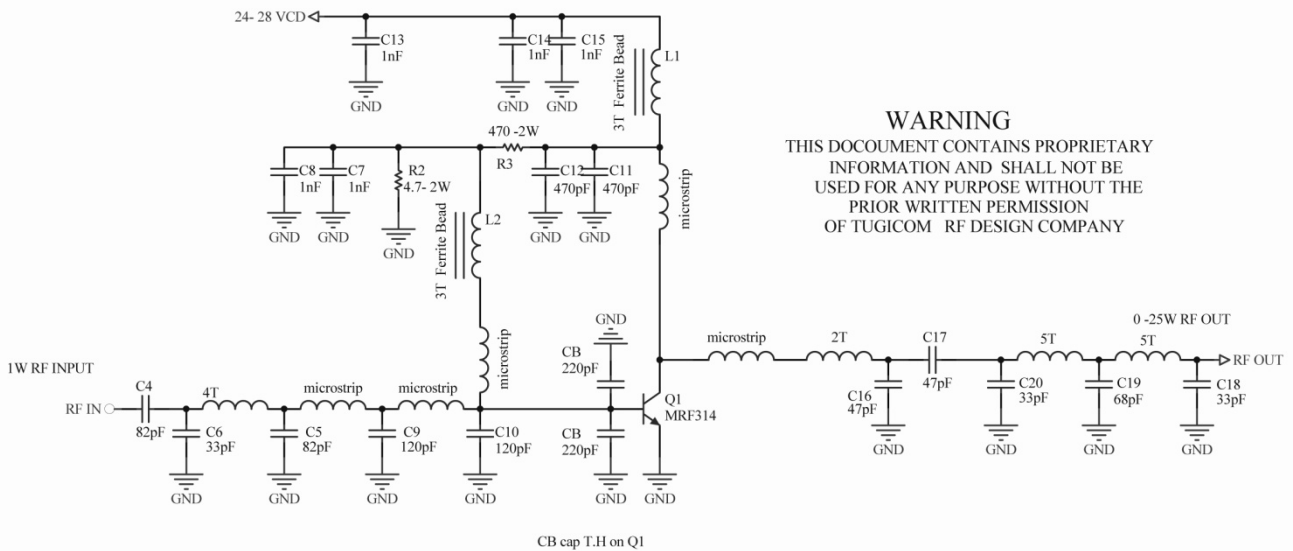
- M3 hexagon socket head cap screws
- The recommended Torque is 12 Kg/cm for M3 type screws

4. TIGHTENING ORDER

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



Electrical diagram



Optional regulator on board (LM350) and 5K ohm potentiometer to adjust the output power from 0-25W by request.

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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.