

Broadcast Power Xperience Design



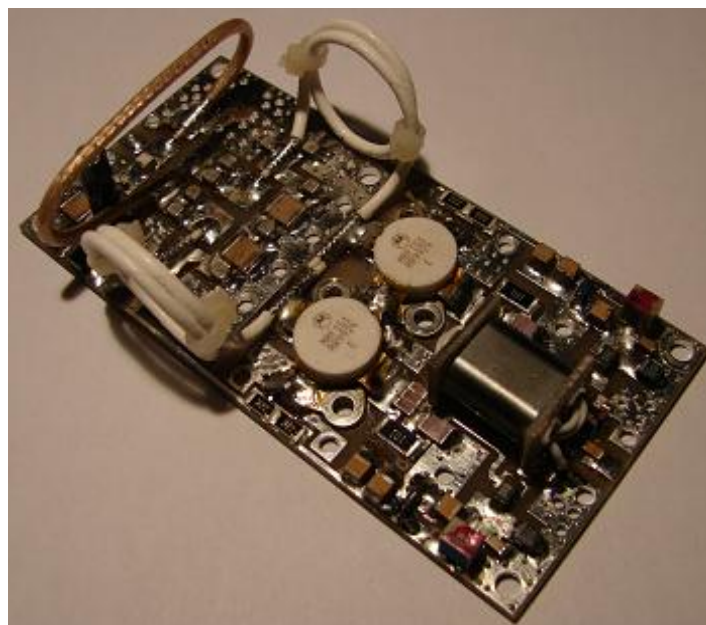
PAFM250W

250W - BROADCAST FM POWER AMPLIFIER MODULE

Designed for FM radio transposers and transmitters, this amplifier incorporates MOSFET transistors to enhance ruggedness and reliability.

General characteristics:

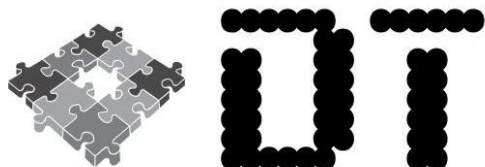
- 87.5 - 108.0 MHz.
- 48 Volts.
- Internal Bias.
- Input/Output 50 Ω .
- Pout : 250 W typical, 350 W max.
- Gain : 17 dB typical, 19dB Max.
- Class A, AB, B or C (ajustable)
- Devices: MRF151 or equivalent.
- ROHS Compliant.



Dimensions (L x W x H): 102 x 50 x 32mm (4" x 2" x 1.25")
This picture is a mere example, it does not bind the provided product

ABSOLUTE MAXIMUM RATINGS (Heatsink Temperature = 50 °C)

SYMBOL	PARAMETER	VALUE	UNIT
Vs	Drain Voltage Supply	50	V
Is	Supply Current	11	A
VSWR	Load Mismatch (all phase angles, T-heatsink =40°C, Id=9A)	3:1	-
Tstg	Storage Temperature Range	-30 to +100	°C
T-heatsink	Operating Temperature	-20 to +70	°C



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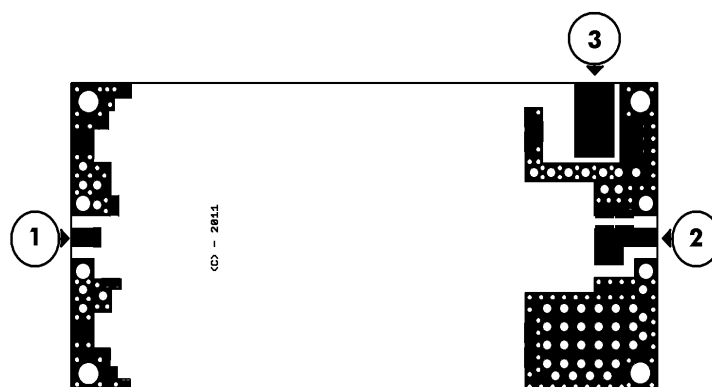
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ELECTRICAL SPECIFICATIONS (T-heatsink = 50 °C, 50Ω loaded, Vs = 48 V)

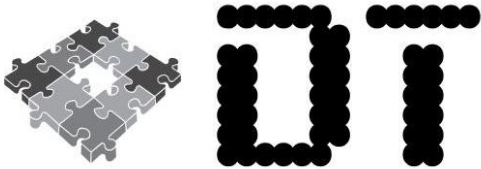
CHARACTERISTICS	MIN.	TYP.	MAX.	UNIT
Operating Frequency Range	87.5		108.0	Mhz
RF Output Power (RFOUT)	0	250	350	W
RF Power Input (RFIN)	2	4	8	W
Power Gain (250W output)	14	17	19	dB
Power Supply Module (Vs)	42	48	50	V
Mosfet Gate Current (Igs)	50	100	150	mA
Current (+48V)	-	7	11	A
Collector Efficiency (Load 50Ω)	65	74	80	%
Input VSWR	1.1:1	1.3:1	1.5:1	
F2 Second Harmonic (without L.P.F.)	-27	-36	-42	dBc
F3 Third Harmonic (without L.P.F.)	-16	-19	-26	dBc

CONNECTIONS



- 1. RF Input (0-8W).** You connect 50 ohm coaxial cable (RG316 or RG178 type) in this connection.
- 2. RF Output (0-250W).** You connect 50 ohm coaxial cable (RG316, RG303, RG400 or RG142 type) in this connection.
- 3. +48V input power supply connection Vs.** Connect to you +48V power supply. +48V/7.5A min. RECOMMENDED.

Note: You connect GND to a M3 screw board or aluminium heatsink.



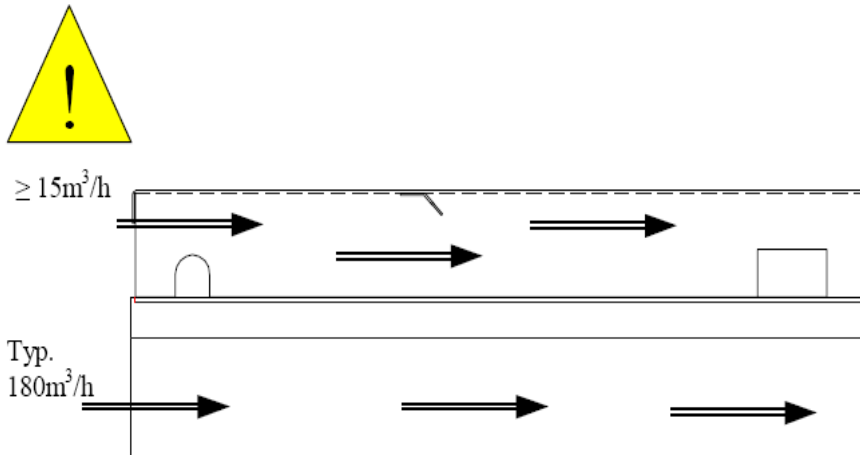
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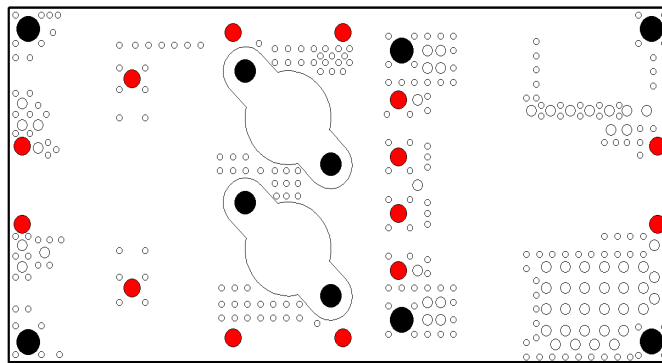
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AIR FLOW DETAIL

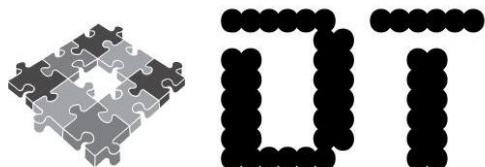


- Is very important you install 1 or 2 fans in FM amplifier.

MECHANICAL



- Use M2 screws in point marked (Red point).
- Use M3 screws in point marked.(Black point)
- Use special paste silicone of RF semiconductors in RF Power Mosfet Transistors. RF Power Mosfet can to die if you use bad paste silicone.
- Use aluminium heatsink, minimum size board. 270mm (10.4") x 100mm (4") recommended.
- Is necessary to use spacer nuts in M3 screws of RF Power Mosfets.
- We recommended that you use 5mm copper laminate (10.2x5cm (4"x2")) between PCB board and aluminium heatsink to dissipate heat faster RF Power Mosfets.



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REVISION 4.2 - 01/2012

REVISION 4.1 - 10/2011

REVISION 4.0 - 08/2011

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WARRANTY

All OEM modules have 1 year warranty in Digit@lion Technologies.

The warranty not include the RF power transistor installed.

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

This product is manufactured by Digitalion Technologies. Made in Spain.

For more information of others products you send e-mail to: support@digitaliontechnologies.com