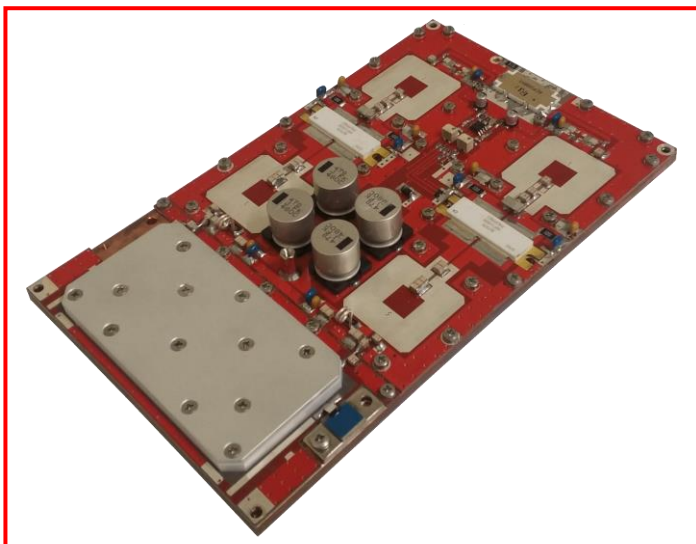




RF Power Amplifier VHF

Designed for digital and analog applications.

- 170 - 240 MHz
- Pout : 250 W_{rms} DVB-T/H – 300 W_{rms} DAB
- Pout : 1000W_{ps} Analog TV
- Gain : 25dB
- Devices : 2 x NXP BLF578
- Supply : 50V_{dc} typ.
- Dimensions (LxWxH): 200x120x21,5 mm
7,87"x4,72"x0,84"



Absolute maximum ratings

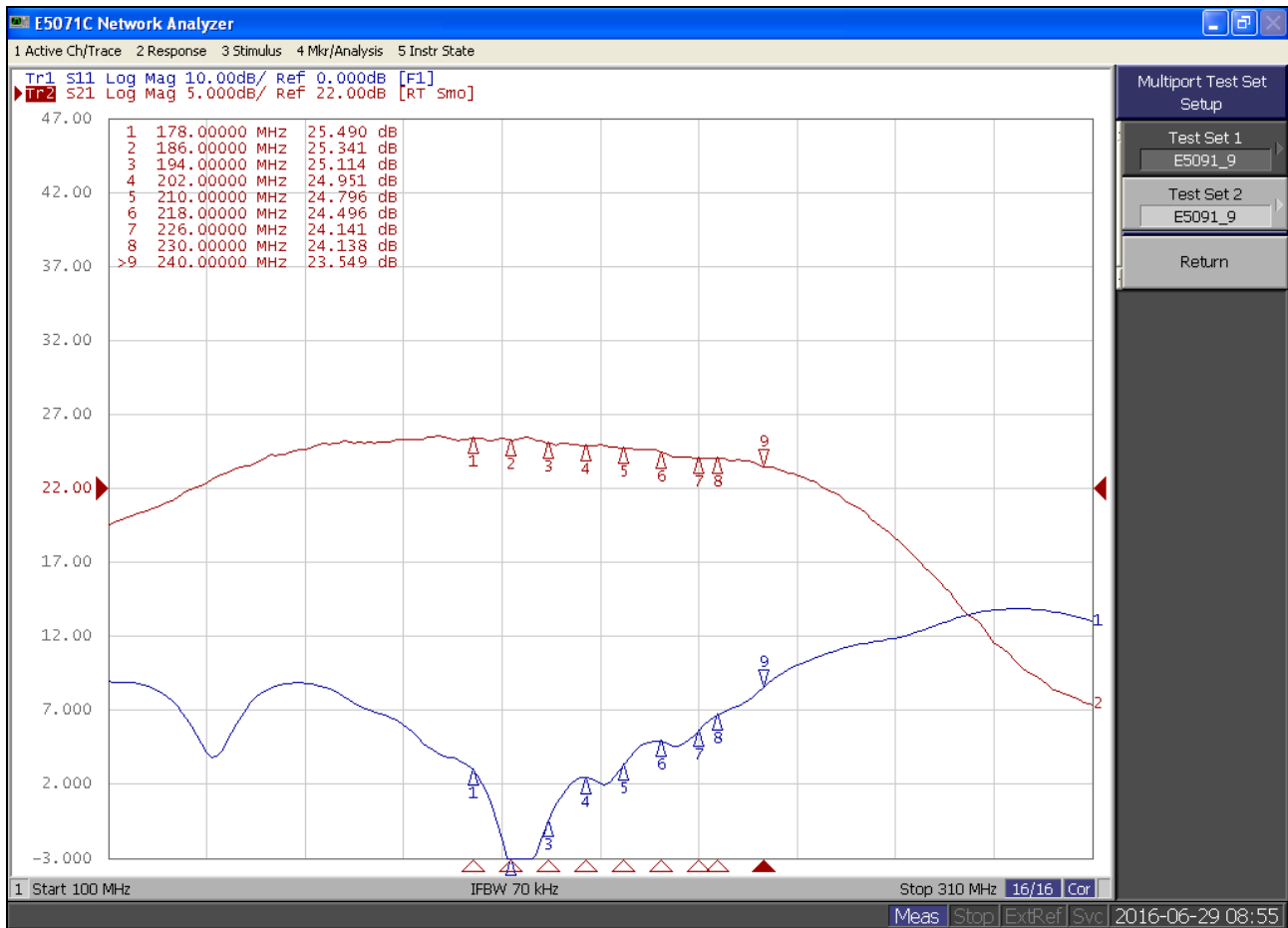
Parameter	Value	Symbol
Voltage supply	52 V _{dc}	V _s
Operating Temperature range	0 +85	°C Note 1
Storage Temperature range	-30 +90	°C
Load Mismatch (full power, all phase angle)	2:1	Note 2

Electrical Specifications

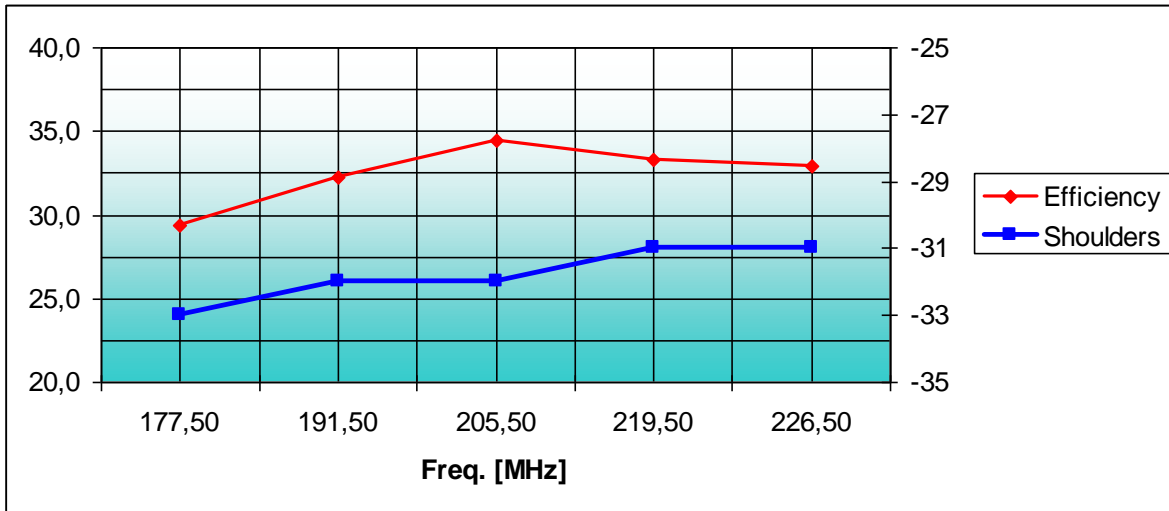
Parameter	Min.	Typ.	Max.	Units.	Note
Frequency range	170		240	MHz	
Power gain		25		dB	
DVB-T/H P _{out}		250	280	W _{rms}	No precorrection
DAB P _{out}		300	330	W _{rms}	No precorrection
Analog TV P _{out}	800	900	1000	W _{ps}	
Supply voltage	48	50	52	V	
Efficiency @ 250W _{rms} DVB-T/H	29	32		%	
Efficiency @ 300W _{rms} DAB	33	35		%	
Efficiency @ 1000W _{ps} Analog TV	40	45		%	



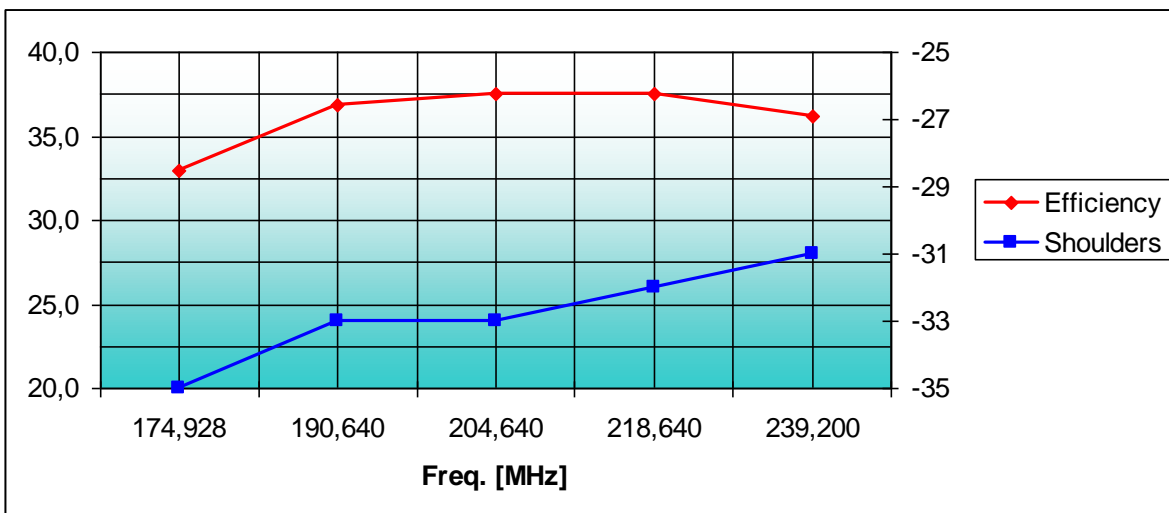
Typical performance



Low level Gain ($I_{dq} = 2A$ each device @ $V_{dc} = 50V$)



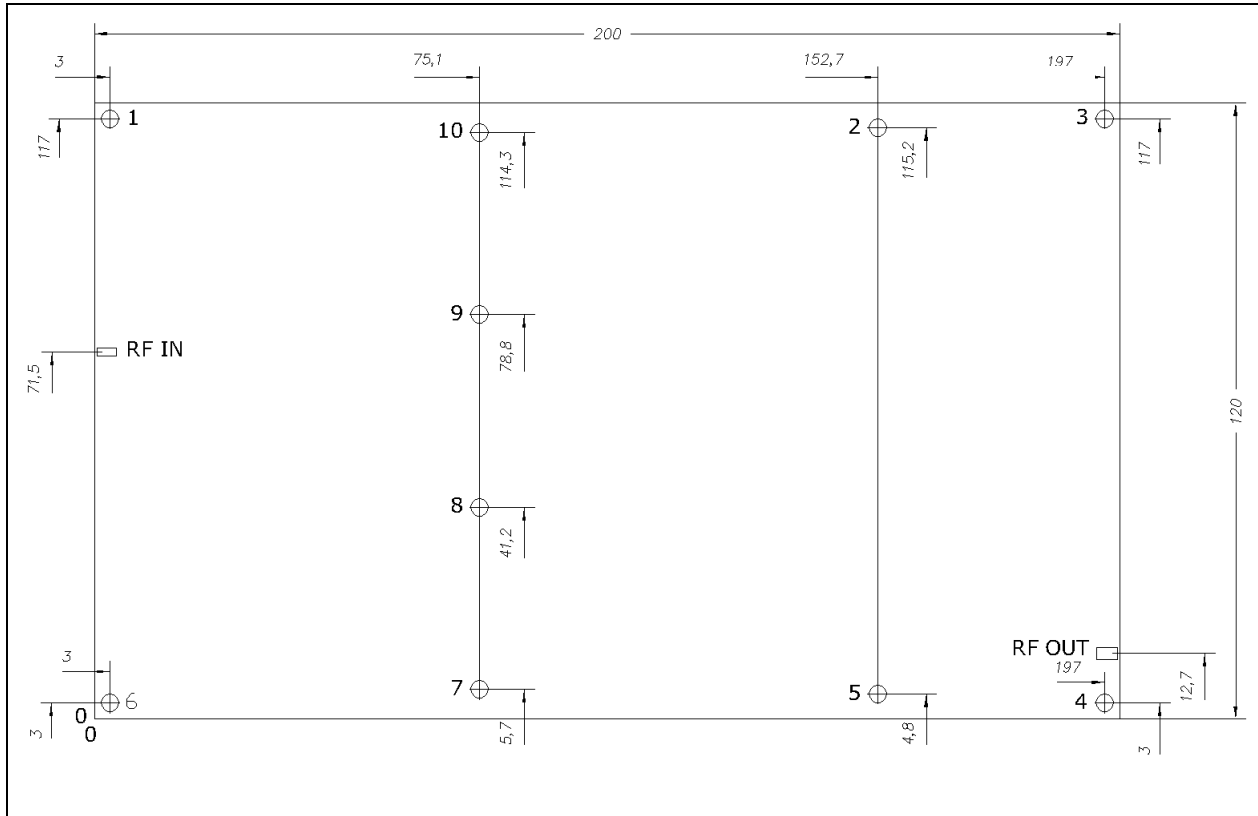
Efficiency and shoulders @ 250W_{rms} DVB-T/H



Efficiency and shoulders @ 300W_{rms} DAB



Mechanical Layout



Screws Type:

Screws point 1-2-3-4-5-6-7-8-9-10 M3 Socket head cap screws + 10 Split lock washers WZ \varnothing 3.5 + 10 Flat washers WZ \varnothing 3.5

Thermal Compound

Recommended Dow Corning 340 (heat sink compound) or equivalent



Application Notes:

Read carefully the following information, before design the system integration of this amplifier. Please remember that Italmec engineers are available to help customers in any Design activity.

Note 1 (Thermal exchanger requirements)

Max operating temperature is measured very close to the device flange and is referred to the nominal operative condition. In case of different working conditions, this limit can be different. Please contact our technical department for further information.

Note 2 (Load matching)

This amplifier can work without power reduction on a 2:1 VSWR load matching. In this condition phase and temperature are irrelevant. Please, remember that a load mismatch higher than 2:1 can damage the amplifier, a suitable protection system must be used.

Note 3 (Protections)

In order to take the amplifier safe in any working conditions, please add these protections in the final equipment.

a) Overdrive protection

If the input power of pallet exceed 2dB over the nominal, the device can be damaged, please use an appropriate fast protection to reduce or switch off the input signal.

b) Reflected power protection (note 2),

A suitable protection system should switch off (or reduce) the input power in case of excessive reflected power.

c) Thermal protection

Switch-off the supply voltage if device flange temperature exceed 85C° when amplifier works at full power.

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