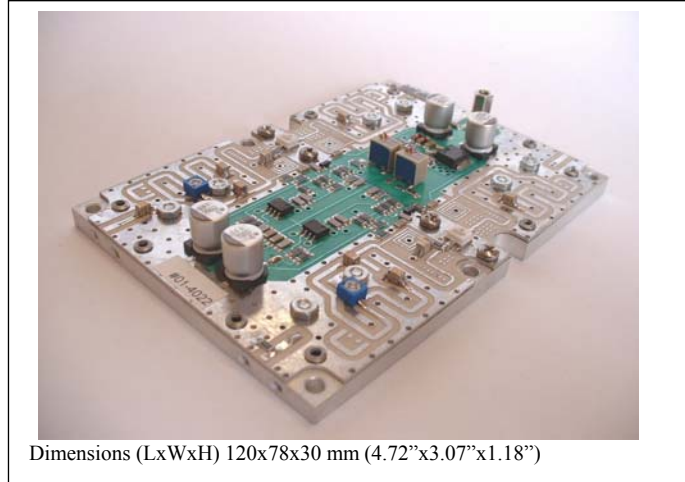


## 5W LDMos Technology Amplifier

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

- 170 - 230 MHz
- (28 ±32 V) 30V Nominal
- Input/Output 50 Ω - 50 Ω
- Pout : 5W CW  
5Wps separate amplification  
3Wps common amplification  
1,5Wrms DAB
- Gain : 21 dB min
- Class AB - *very linear*
- Devices: MRF282SR1 or equivalent
- Connectorized version available



Dimensions (LxWxH) 120x78x30 mm (4.72"x3.07"x1.18")

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 <sub>s</sub>	Voltage Supply	35	V dc
I <sub>s</sub>	Current Supply	4	A dc
T <sub>stg</sub>	Storage Temperature Range	-30 + 100	°C
T <sub>c</sub>	Operating base plate Temperature	0 + 75 <sup>1</sup>	°C
ψ	VSWR max	3:1 all phase angle	-
	Max input power	See note <sup>2</sup>	-

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

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typ.	Max	
BW	Bandwidth	P <sub>out</sub> = 5 W (CW)	170	-	230	MHz
G <sub>p</sub>	Power gain	P <sub>ref</sub> = 5 W (CW)	21	22	-	dB
P <sub>out</sub> - 1dB	Power Output @ 1dB Compression	Reference to P <sub>out</sub> = 1W (CW)	7	12	-	W
I <sub>q</sub> *	Quiescent Current	P <sub>out</sub> = 0 W - Total <sup>3</sup> *	-	-	0,6	A
I <sub>tot</sub> *	@ P <sub>Max</sub>		-	-	1.5	A
I <sub>rl</sub>	Input return loss	P <sub>out</sub> = 5W CW	16	20	-	dB
Ψ	Load mismatch	P <sub>ref</sub> = 5W CW, f= 230MHz, load VSWR = 2:1, all phase angles	No degradation in P <sub>out</sub>			
Gr	Gain Flatness	P <sub>ref</sub> = 5W CW, BW: 170-230MHz	-	-	±0,5	dB
η	Drain Efficiency	P <sub>out</sub> = 5W (CW)	25	-	-	%

<sup>1</sup> **Warning:** The base plate temperature must be 75 °C max, using an appropriate Heatsink.

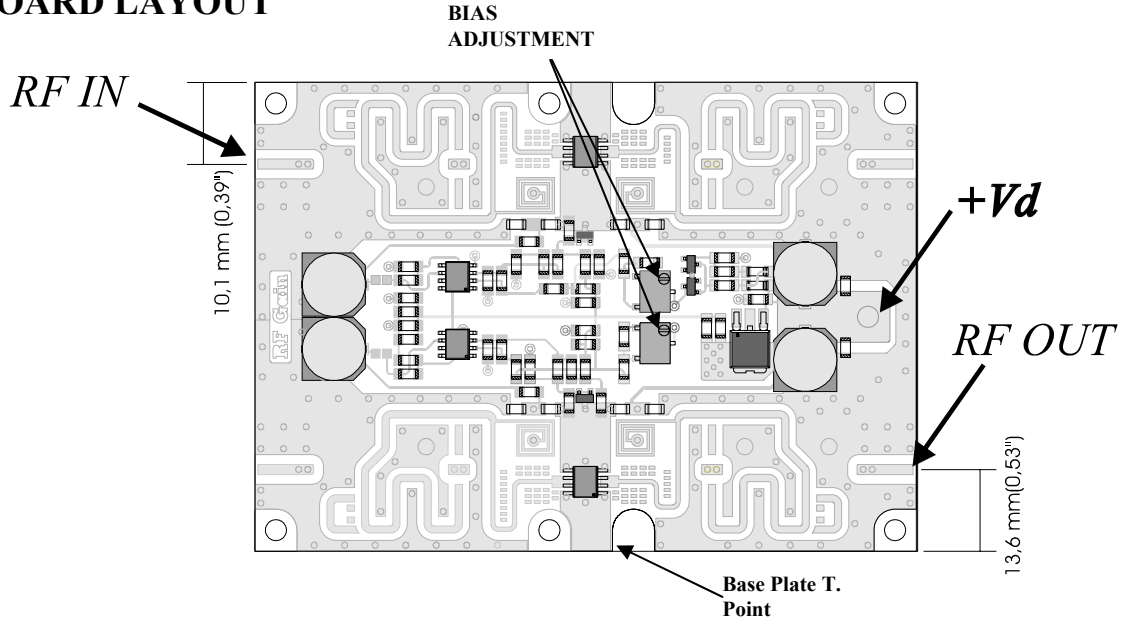
<sup>2</sup> The input power must not exceed +6dB, for 1 microsec. , the nominal input power referred to the 1dBcp power output.

<sup>3</sup> 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<sub>q</sub> value).

\* Depending of handling signal (analog /digital)

Contact Res-Ingenium, +39 0763 316333 Fax +39 0763316002- or visit [www.res-ingenium.com](http://www.res-ingenium.com) for a complete listing.

## PC BOARD LAYOUT



## HEATSINK MOUNTING/HARDWARE

### 1. HEATSINK TOOLING

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

### 2. THERMAL COMPOUND

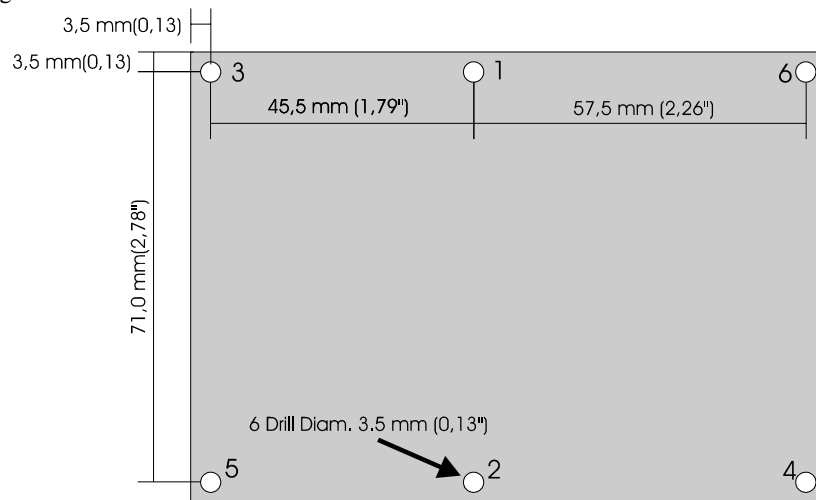
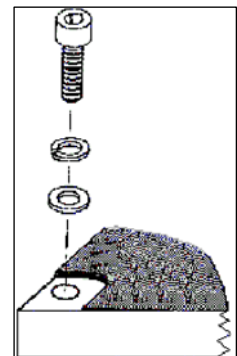
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

### 3. SCREWS

- M3 -Cross head 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:



Dimensions: 78x110 mm [ 3 x 4,3 inch.]

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