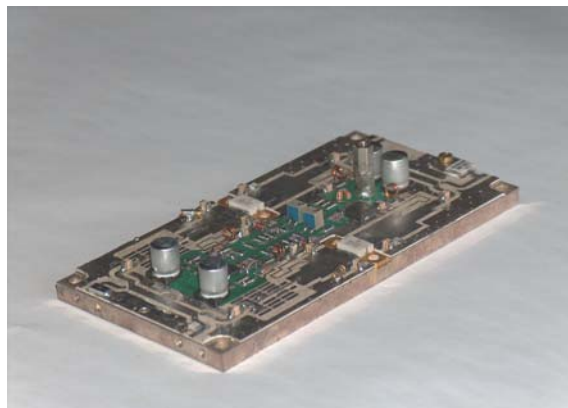


15W DAB LDMos Technology

Designed for Digital Audio Broadcasting, this amplifier incorporates microstrip technology and single end LDMos Devices to enhance ruggedness and reliability.

- 1450 - 1500 MHz
- 28 ÷ 32 Volts (30V nominal)
- Input/Output 50 Ω - 50 Ω
- P_{out} : 45W CW
15Wrms DAB
- Shoulder -28dBc
- Gain : 13 dB min
- Class AB
- Devices: MRF284 or equivalent
- Connectorized version available



Dimensions (LxWxH) 126x64x30 mm (4.96"x 2.51"x 1.18")

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 _S	Voltage Supply	35	V dc
I _S	Current Supply	5	A dc
T _{stg}	Storage Temperature Range	-30 + 100	°C
T _c	Operating Base Plate Temperature	0 + 75 ¹	°C
ψ	VSWR max	3:1 all phase angle	-
	Max input power	See note ²	-

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

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typ.	Max	
BW	Bandwidth	P _{out} = 45 W (CW)	1450		1500	MHz
G _p	Power gain	P _{ref} = 15 W (CW)	13	14	-	dB
P _{out} - 1dB	Power Output @ 1dB Compression	Referred to P _{out} = 15W (CW)	45	-	-	W
I _q *	Quiescent Current	P _{out} = 0 W - Total ³ *	-	-	1	A
I _{tot} *	@ P _{Max}		-		3,5	A
I _{rl}	Input return loss	P _{out} = 45 W CW or 15Wrms DAB	16	18	-	dB
Ψ	Load mismatch	P _{ref} = 45 W CW, f= 1500MHz, load VSWR = 2:1, all phase angles	No degradation in Pout			
Gr	Gain Flatness	P _{ref} = 45 W CW, BW: 1450-1500MHz		±0.5	±1	dB
η	Drain Efficiency	P _{out} = 45 W (CW)	35	45	-	%

¹ Warning: The base plate temperature must be 75 °C max, using an appropriate Heatsink.

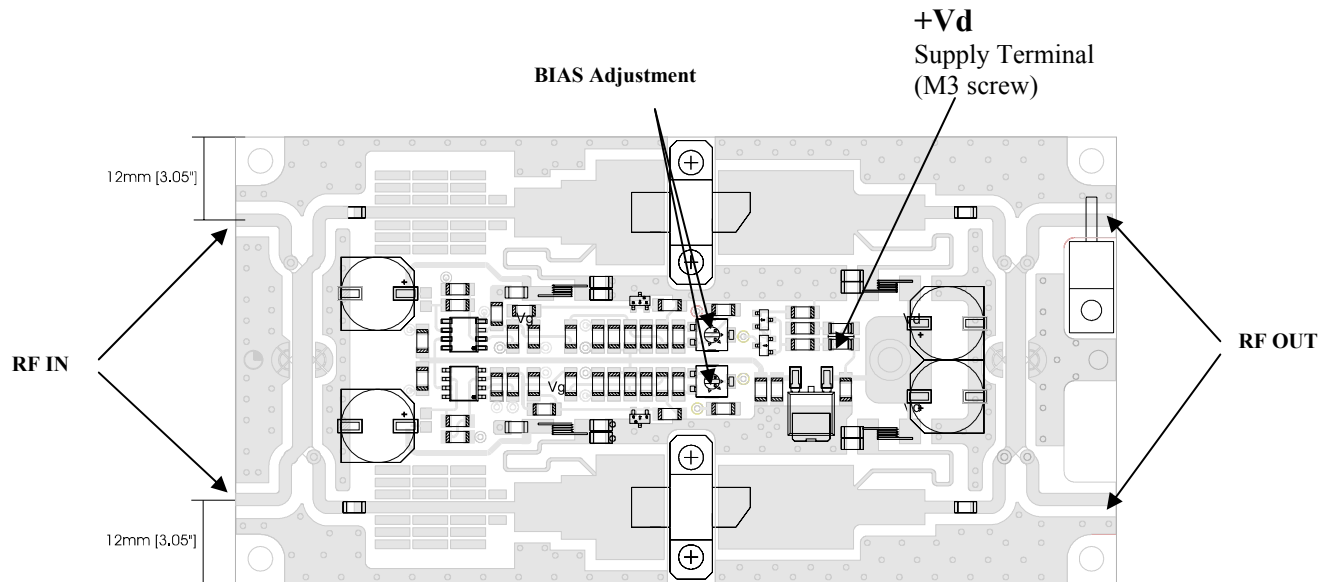
² The input power must not exceed +6dB, for 1 microsec., the nominal input power referred to the 1dBcp power output.

³ 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_q value).

* Depending of handling signal (analog /digital)

Contact Res-Ingenium, +39 0763 316333 Fax +39 0763316002- or visit 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

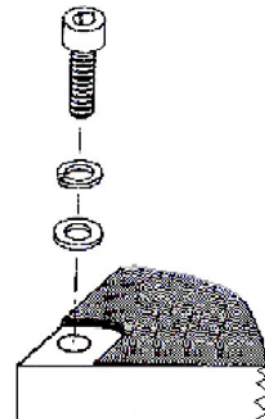
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

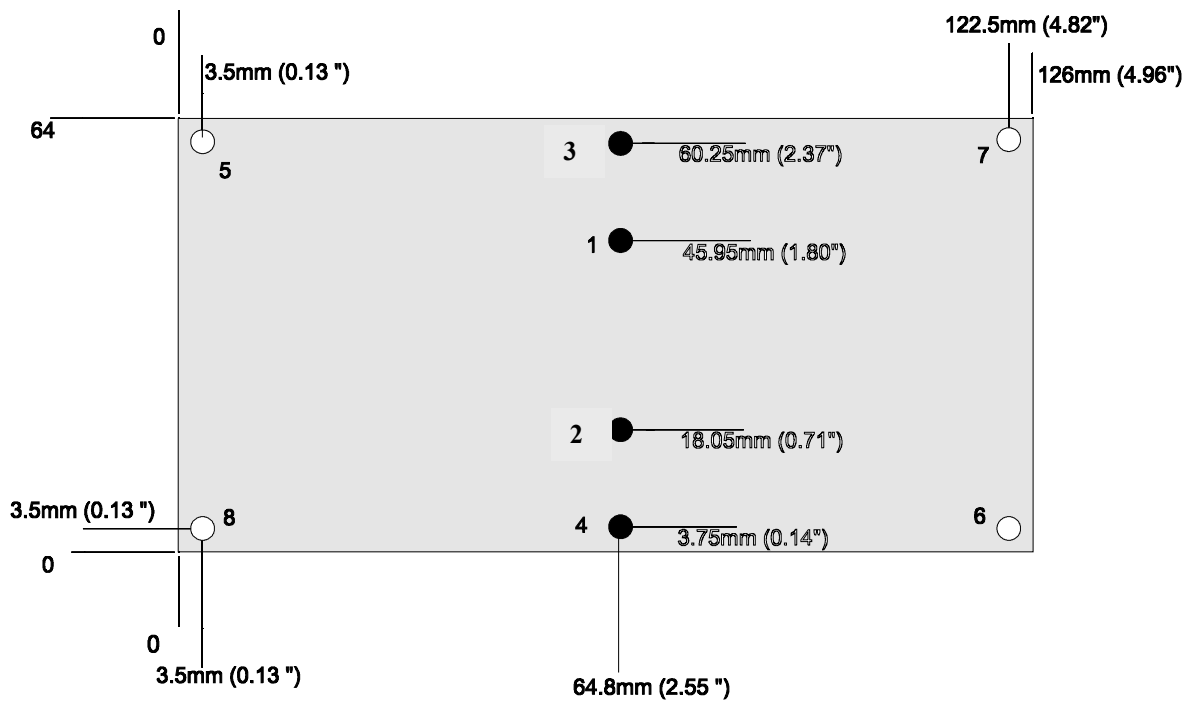
3. SCREWS

- 4 x M3 -Cross head screws (position 5, 6, 7, 8) – 4 x M2.5 (position 1, 2, 3, 4).
- 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: mm[inch.]

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