LDU60-R

80W pep –27dBc 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.

- **470 - 860 MHz**
- **28 ÷32 Volt (30V nominal)**
- **P_{out} 80 Watt (CW)**
- **P_{out} 80 Watt p.s. Separate Amplification**
- **P_{out} 60 Watt p.s. Common Amplification**
- **P_{out} 20 Watt rms DVB**
- **Gain : 15 dB min.**
- **Connectorized version available**
- **APL corrector on board**
- **Devices: MRF373A or equivalent**
- **RoHs Compliant**

Dimensions (LxWxH) 136x78x20*mm*
(5.36"x3.07"x0.79")

This picture is a mere example, it does not bind the provided product

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

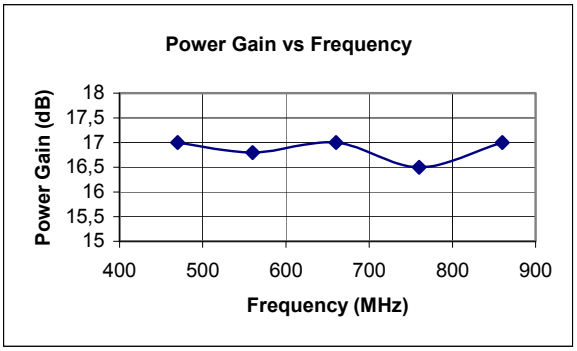
Symbol	Parameter	Value	Unit
V_S	**Voltage Supply**	35	**V dc**
I_S	**Current Supply**	8	**A dc**
Tstg	**Storage Temperature Range**	-30 + 100	**°C**
Tc	**Operating Base Plate Temperature**	0 + 75[1]	**°C**
ψ	**VSWR max**	3:1 all phase angles	
	Max input power	See note[2]	
	Max cw output power	80	**Watt**

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

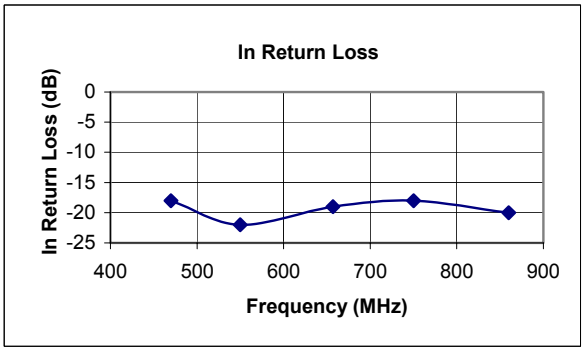
Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typ.	Max	
BW	**Bandwidth**	P_{out} = 80 W (CW)	470		860	**MHz**
Gp	**Power gain**	P_{ref} = 80 W (CW)	15	16	-	**dB**
P_{out} – 1dB	**Power Output @ 1dB Compression**	Referred to P_{out} = 5W (CW)	45	-	-	**W**
I_q *	**Supply Current**	P_{out} = 0 W – Total[3] *	-	-	1.5	**A**
I_{tot} *	**@ P_{Max}**		-		6	**A**
Ω	**Input/Output**	50 Ohm				**Ohm**
Irl	**Input return loss**	P_{out} = 80 W CW	15	18	-	**dB**
Ψ	**Load mismatch**	Pref = 80 W CW, f= 860MHz, load VSWR = 2:1, all phase angles		No degradation in Pout		
η	**Drain Efficiency**	P_{out} = 80 W (CW)	35	40	-	**%**
Gr	**Gain Flatness**	Pref = 80 W CW, BW: 470-860MHz		±0.5	±1	**dB**
	Pout separate ampl.	Sync. Compression < 1dB without correction	80			**Wps**
	Pout common ampl.	Pout 60W ps common ampl. dual sound, with Red Field sound 1 @ -13dB and sound 2 @ -20dB without precorrection	-50	-52		**dBc**
	Pout DVB-T	Pout 20Wrms without precorrection	-27	-30		**dBc**

[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 Quiescient 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 Iq value).
* Depending of handling signal (analog /digital)

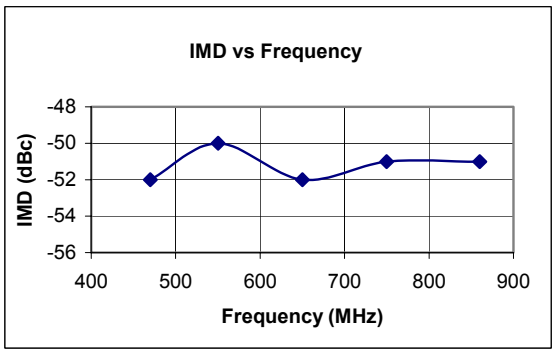
Conctat Res-Ingenium, +39 0763 316333 Fax +39 0763316002- or visit www.res-ingenium.com for a complete listing.



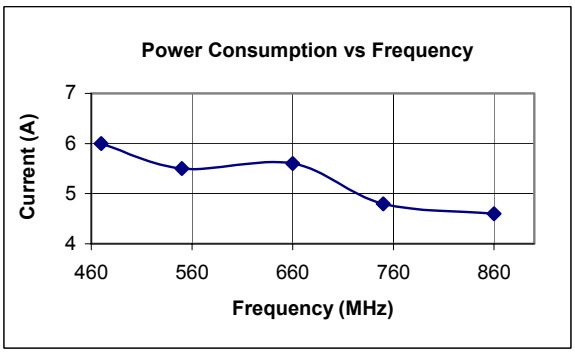
Test Condition: Vd 30V, Idq 2 x 500mA, Pout 60W ps



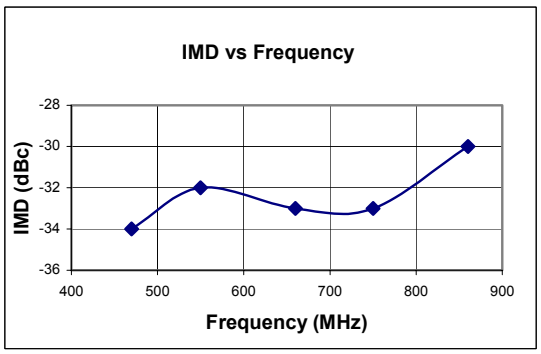
Test Condition: Vd 30V, Idq 2 x 500mA, Pout Low Level



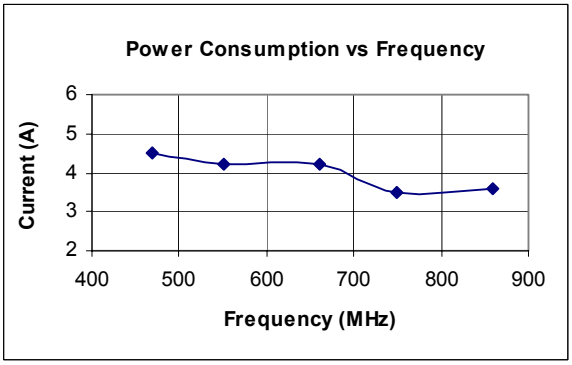
Test Condition: Vd 30V, Idq 2 x 500mA, Pout 60W ps (red field with sound 1 @-13dB and sound 2 @-20dB)



Test Condition: Vd 30V, Idq 2 x 500mA, Pout 60W ps with black field

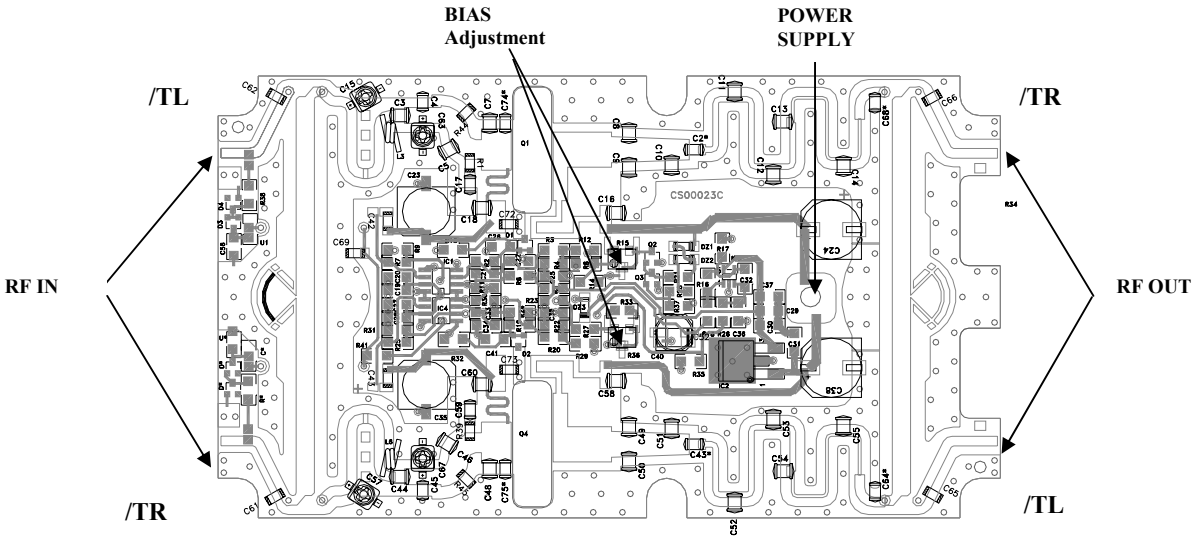


Test Condition: Vd 30V, Idq 2 x 500mA, Pout 20Wrms DVB-T signal



Test Condition: Vd 30V, Idq 2 x 500mA, Pout 20Wrms DVB-T signal

LDU60-R Layout and Connections



NOTE. In response to customer request, this pallet has been designed to allow two different positions of IN/OUT connections: **/TL** = connection on the left side, **/TR** = connection on the right side.

HEATSINK MOUNTING/HARDWARE

1.HEATSINK TOOLING

-Planarity: typical value 0.8

-Roughness: better than 0.03 mm

2.THERMAL COMPOUND

-Paste with silicones

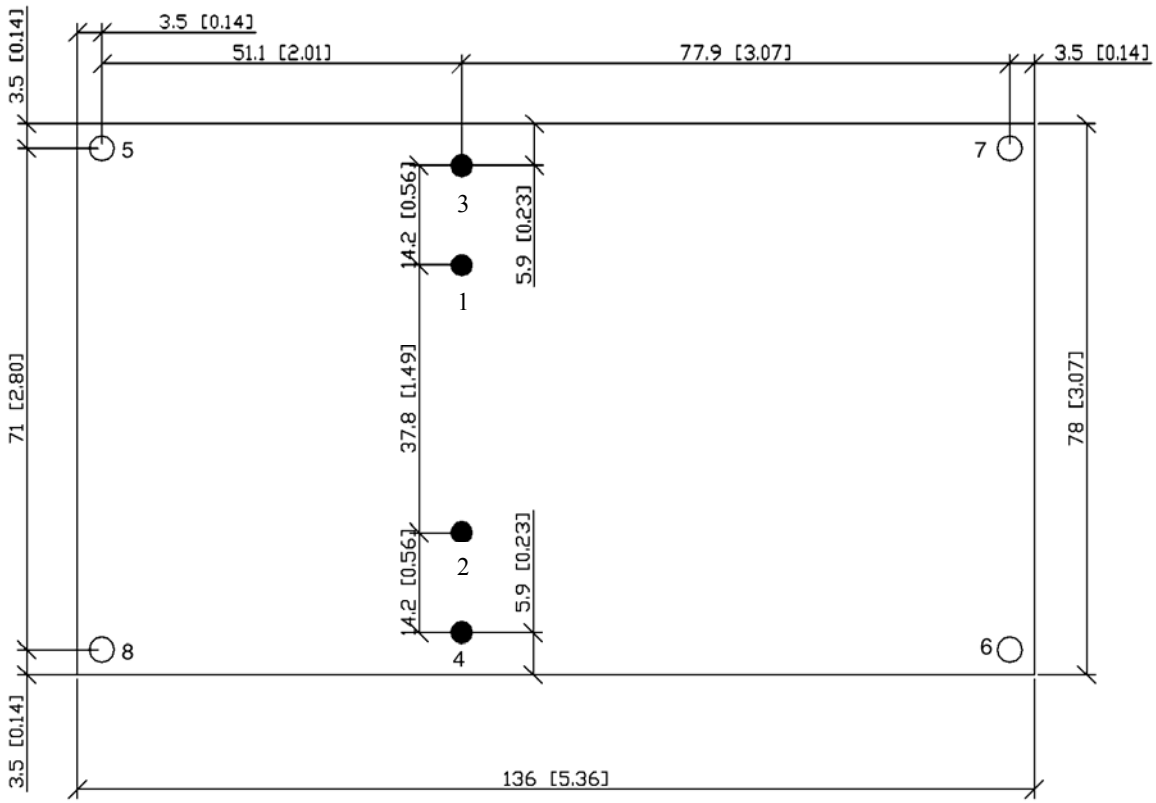
-Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

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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