

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
- 40 ÷ 45 Volt (43V nominal)
- P_{out} 40 - 45 Watt rms DVB
- Gain : 18 dB min.
- Connectorized version available
- Devices: BLF871 or equivalent
- RoHs Compliant



Dimensions (LxWxH) 136x78x20mm
(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	50	V dc
I _S	Current Supply	8	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 angles	
	Max input power	See note ²	

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		862	MHz
Gp	Power gain	P _{ref} = 80 W (CW)	16	18	-	dB
				-	-	
I _q *	Quiescent Current	P _{out} = 0 W – Total ³ *	-	-	1.5	A
I _{tot} *	@ P _{Max}		-		6	A
Ω	Input/Output			50		Ohm
Irl	Input return loss	20 W POUT	15	18	-	dB
Ψ	Load mismatch	P _{ref} = 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	Gain Level Low		±1	±1.5	dB
	Pout DVB-T	Pout 45 Wrms without precorrection	-27	-30		dBc

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

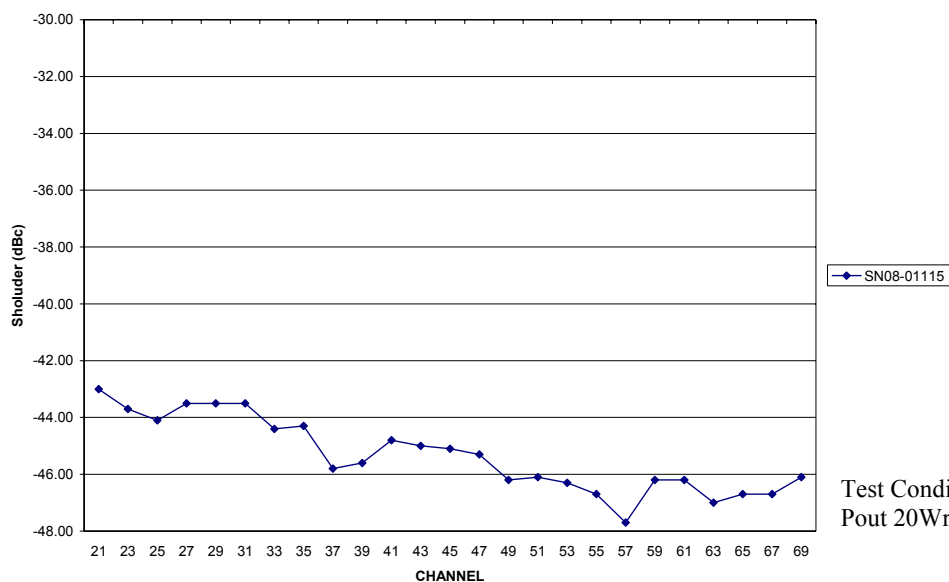
² The input power must not exceed +6dB, for 1 microsec., the nominal input power referred to the 1dBp power output.

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 Iq value).

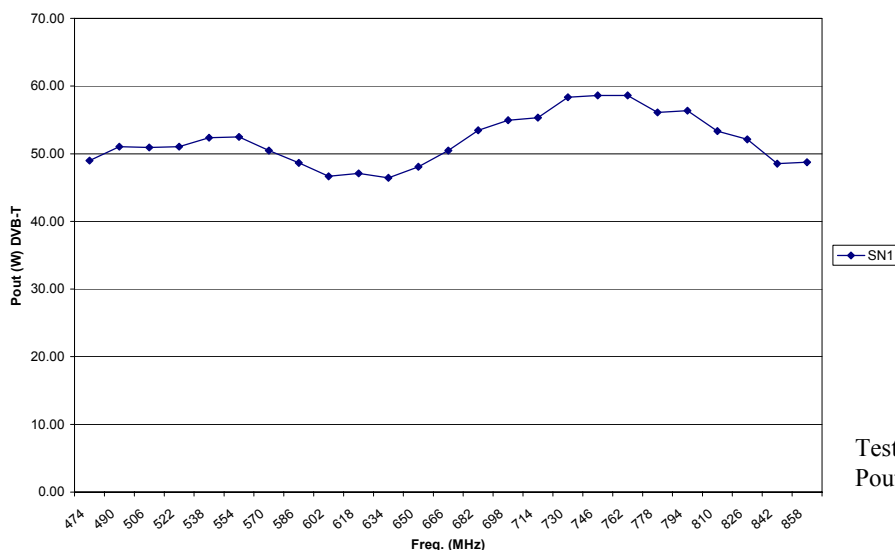
* Depending of handling signal (analog /digital)

SHOLUDER@Pout20W DVB-T



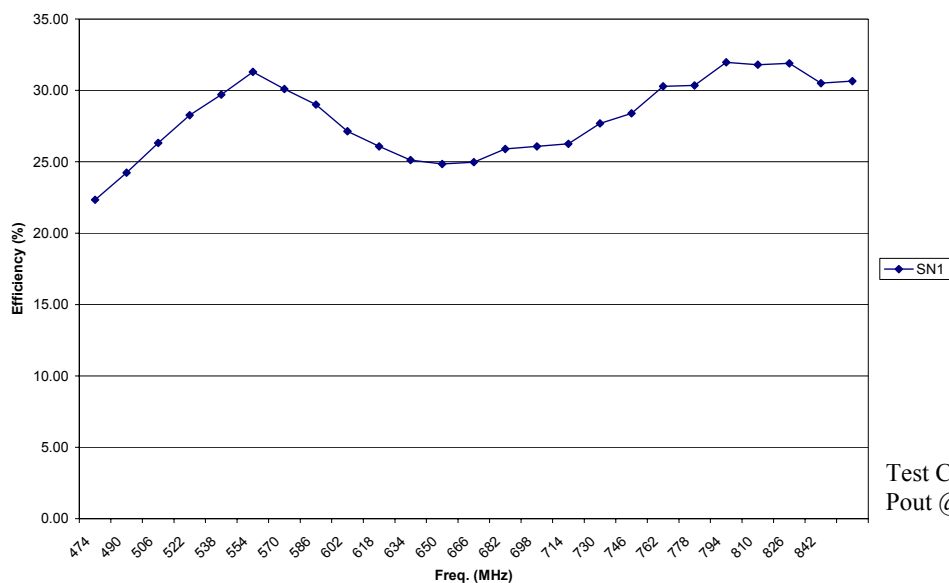
Test Condition: Vd 43V, Idq 2 x 500mA,
Pout 20Wrms DVB-T signal

Pout@-30dBc Shoulder

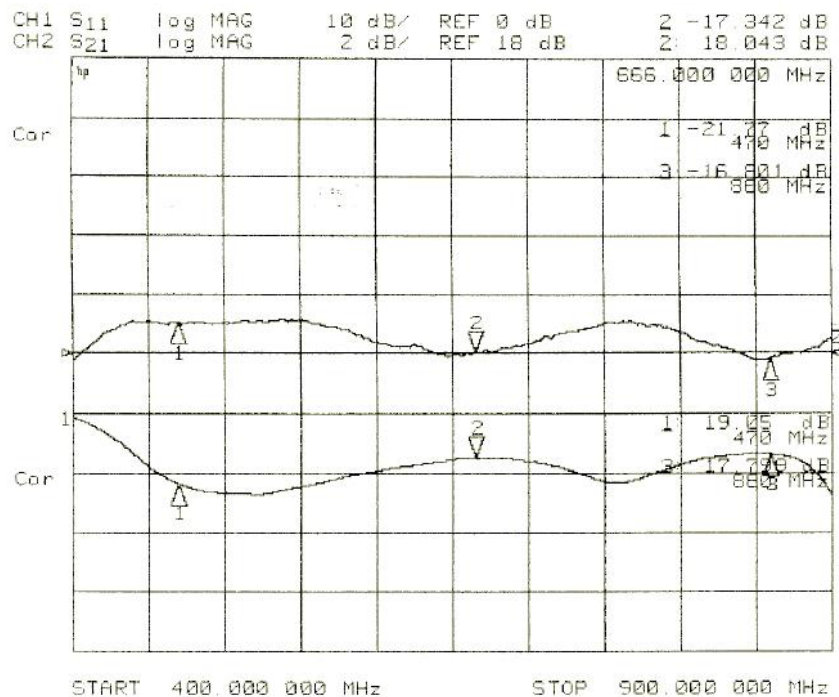


Test Condition: Vd 43V, Idq 2 x 500mA,
Pout @-30dBc Shoulder DVB-T signal

Drain Efficiency. Pout@-30 dBc Shoulder

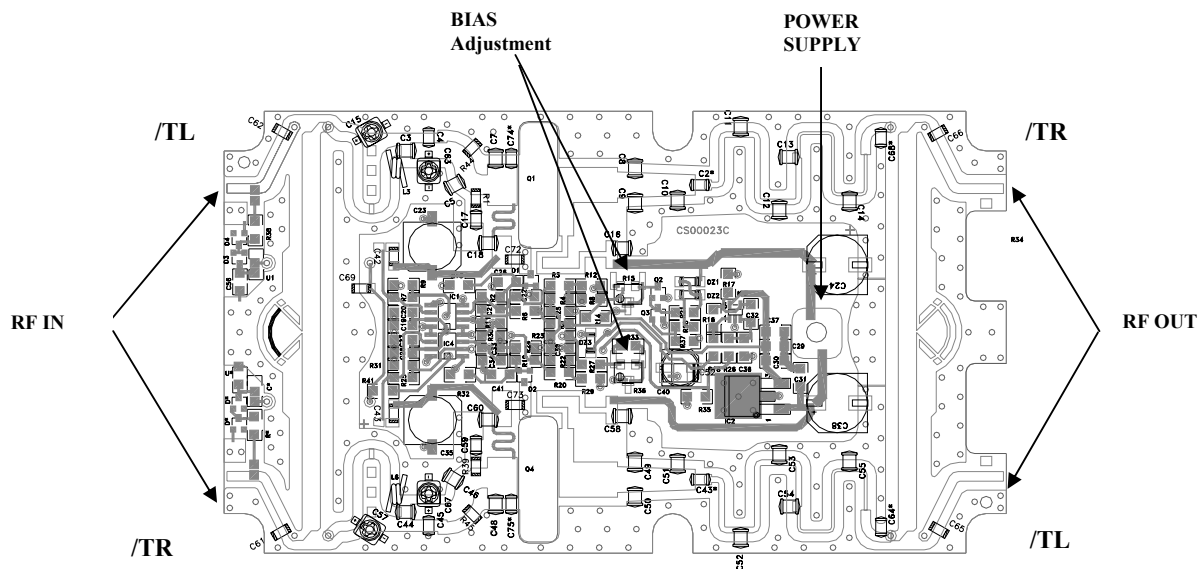


Test Condition: Vd 43V, Idq 2 x 500mA,
Pout @-30dBc Shoulder DVB-T signal



Test Condition: Vd 43V, Idq 2 x 500mA,
Gain low level: Input Return loss

LDU61-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

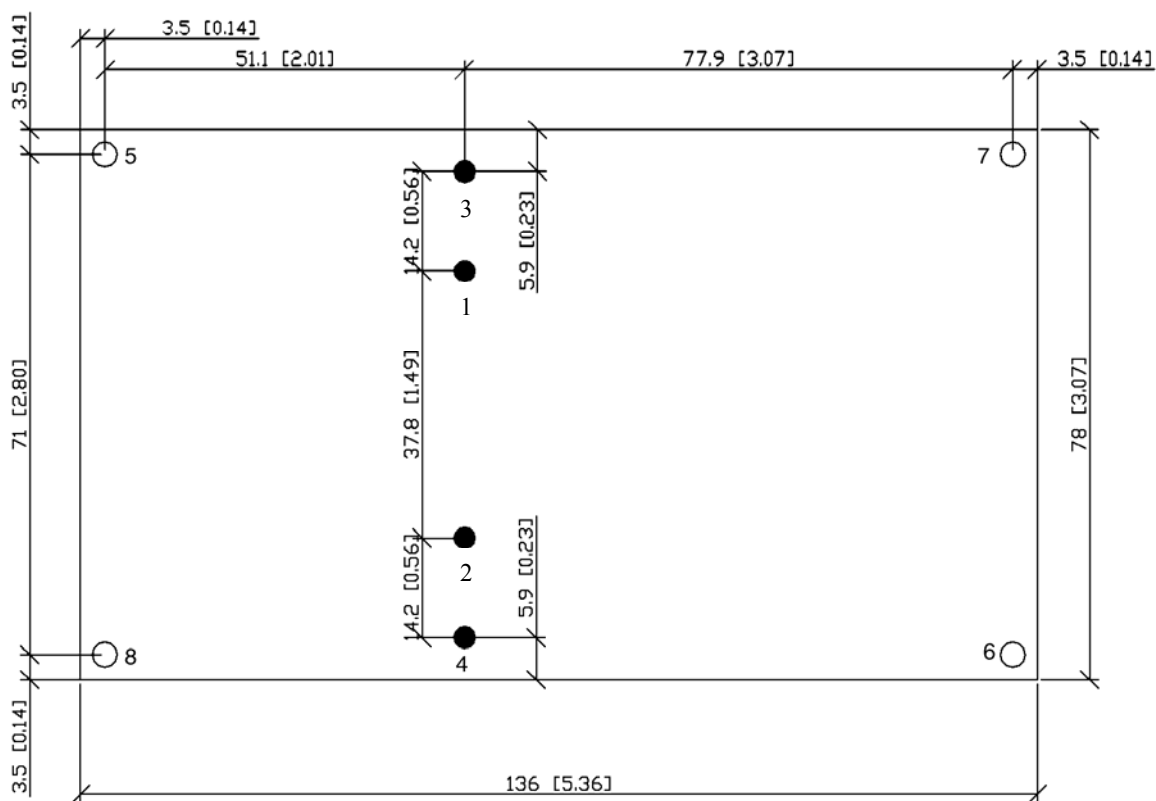
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

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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