





LD600-10.80

Product Name

GR04040

Part Number

Technical Specification Summary						
Frequency Range	10-80MHz	Temperature Range	-10 to +60 ℃			
Pout	600Wmin	Max VSWR	5:1@ 300 W peak			
Typ. Gain	40 dB	Working Class	AB			
Typ. Efficiency	>40 %	Supply Voltage	48 Vdc			

Device:MRF6V2300N (Freescale Sem.) or equivalent

General Description

A new 600W Peak Power pallet, capable of 40dB gain and unsurpassed flatness all across the HF-VHF band, between 10 to 80MHz. The pallet is dedicate to all those Industrial, Scientific and Medical (ISM) application operating with pulsed signals, as well as for Military application up to 200W CW. The LD600-10.80 utilize the last generation of 50V LDMOS and incorporate a driver stage and four final power amplifiers working in parallel.

Carefully read integration instructions and warnings in this datasheet before operate this Power Amplifier

Actual Power Amplifier Picture



Electrical Specifications					
Parameter	Min.	Тур.	Max	Units	Notes
Frequency	10		80	MHz	
Output Power	600			W	Fundamental Output power
Power Input		18		dBm]
Power Gain	39	40		dB	@600W peak output
Drain Current		3,1	10	A	
Collector Efficiency		40%		%	Load @ 50Ω
Input VSWR		3:1	5:1		3:1 @600W peak , 5:1@ 300 W peak
Insertion Phase Variation		± 10		Degrees	Unit to Unit
Power Gain Variation		± 1		dB	1
F2 Second Harmonic	-30			dB	1
F3 Third Harmonic	-35			dB	1
- Physical Dimensions	95mm :	x 163mm x 2		4" x 6,42" x	- : 1,06"

Weight 450 g. / 1 lbs

All Specifications are valid for load impedance 50 Ohm, V=48Vdc, I=15A







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Graphs and Charts

IMD 3 rd Order PLOTs























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Pulsed mode: typ. PLOTs. PW = 4μ s; PRT = 80μ s; Duty Cicle = 5%

Measured by Agilent Spectrum Analyzer in ZERO span mode























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S21 Typ. Small Signal Gain, @ Pout 100W CW.



Mechanical specifications

PHYSICAL LAYOUT AND HEATSINK MOUNTING/HARDWARE



1.HEATSINK TOOLING

-Planarity: typical value 0.8µ -Roughness: better than 0.8µ

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

- hexagon socket head cap screws or equivalent: (7 x M3 and 7 Split lock washers WZØ3.5+x Flat washers ZU Ø3.5)

- -The maximum Torque is 0.6 N-m for M3 or 4-40 type screws
- The screw tightening must be done at ambient temperature.

4.TIGHTENING ORDER

-See the figure.

WARNING:

when mounting this mechanical component, please add thermal compound between its bottom part and the device surface, as described in point 2 of this paragraph. Ensure a minimum air flow on the components surface of the pallet









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Integration and important Operating instructions

The LD600-10.80 is designed for operation of up to 600W

Designed for FM radio transposers and transmitters, this amplifier incorporates microstrip technology and LDMOS device to enhance ruggedness and reliability.

The pallet is delivered within its sealed ESD packaging. Use all professional caution during unpacking, handling and mounting.

Please consult RES-INGENIUM factory with any integration questions.

Ordering informations					
Product Name	Manufacturer's Part n.	Feature Description			
LD600-10.80	GR04040	Standard version			

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