

DIGITAL TV UHF RF POWER AMPLIFIER 
100W

Key Features:

- Designed For Digital TV
- LDMOS Power Amplifier
- Broadband (470 - 860MHz)
- Output DVB-T/H Power 100 Watts
- Ultra-linear Design
- RS232/RS485/USB Interface
- OMT Software
- Squelch Function
- Plug and Play



RF Performance

Operating Frequency Range	470-860MHz
Input/Output Impedance	50Ω
Input Signal Range	-10 to 0dBm
P1dB	typical >800W
P _{out} DVB-T	47dBm to 50dBm step 0.1dB
Shoulder (Without Precorrection)	> -32dBc@100W
Output Power Stability	±0.2dB from 470MHz to 860MHz
Squelch Switch ON/OFF Threshold	-10dBm < ON < 0dBm
Input Return Loss	> 18dB
Output Return Loss	> 22dB
Monitoring Signal Intensity in dBm	45 ±0.5dB below P _{out} in dBm

Note :

We suggest that when using the product, customer should choose a proper output filter according to actual application condition, so that the whole system will comply with the requirements of Clause 4.2.2 of ETSI EN 302 296 V1.1.1 (2005-01).

Electrical Requirements

Power Supply	100-240V AC 50/60Hz
Power Consumption	<1000W @ 100W RF Output

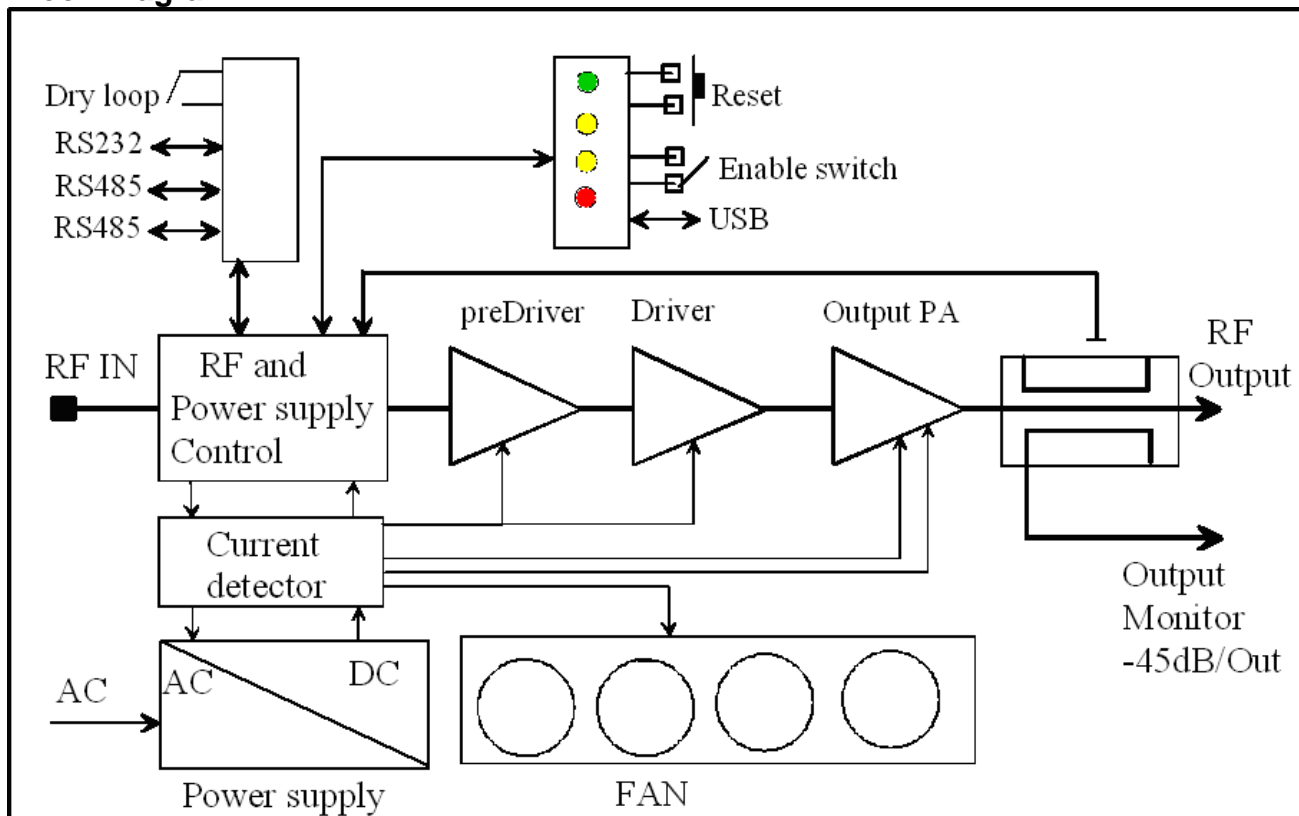
Environmental

Operating Temperature	0 to +45°C
Storage Temperature	-25 to 70°C
Humidity	Up to 90% (Non condensing)
Cooling	Fan Cooling

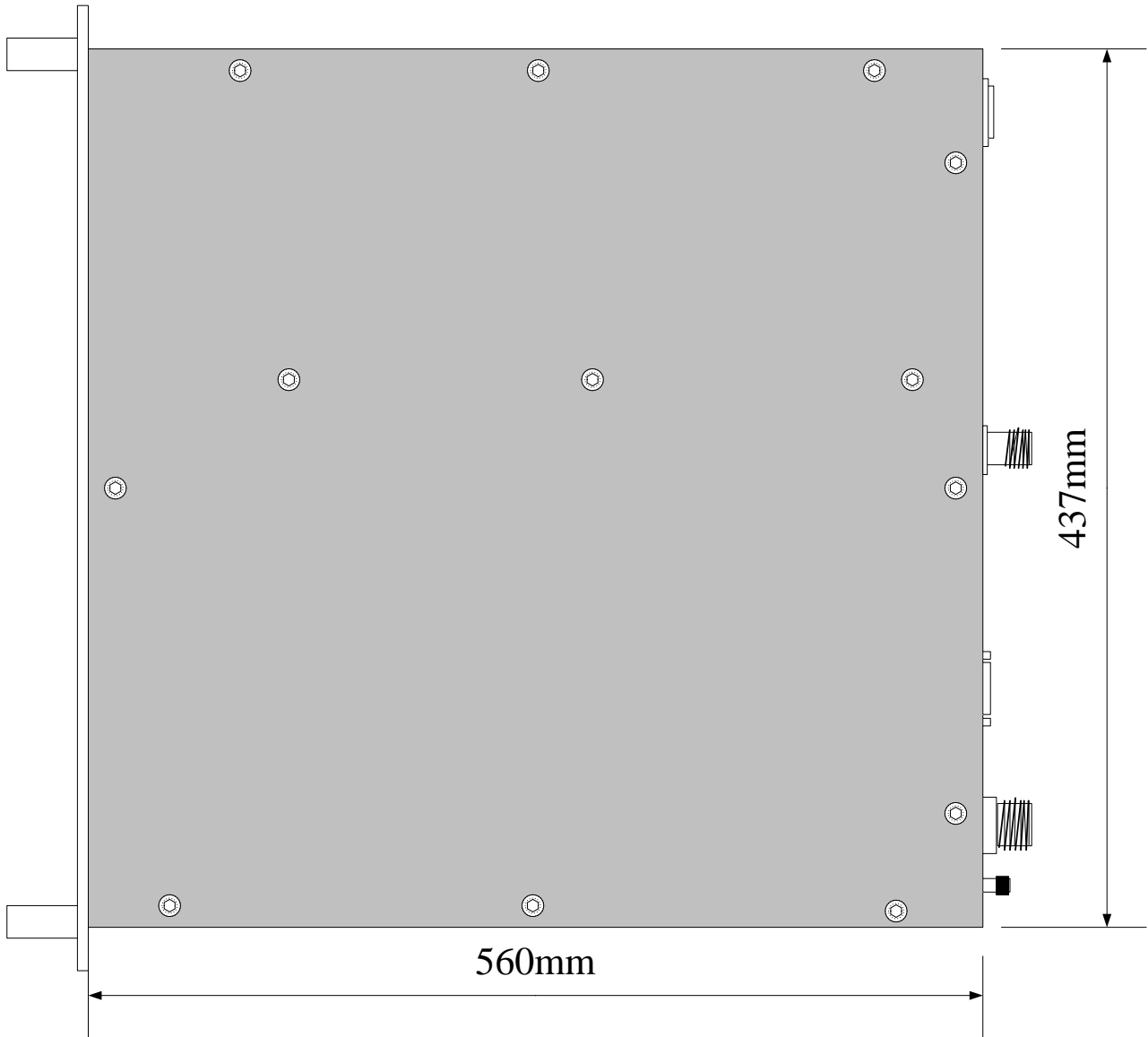
Mechanical data and Interfaces

Dimensions	19" 3HU std 560mm depth
Weight	22.5Kg
Main Power	Rear panel
RF Input	N connector rear panel
RF Output	7/16 connector rear panel
RF Monitor	SMA connector rear panel
RS232	DB9 connector rear panel
RS485	RJ45 (2 parallel) rear panel
USB	Front panel
Local Enable/Disable	Switch front panel Two-pole connector rear panel

Block Diagram



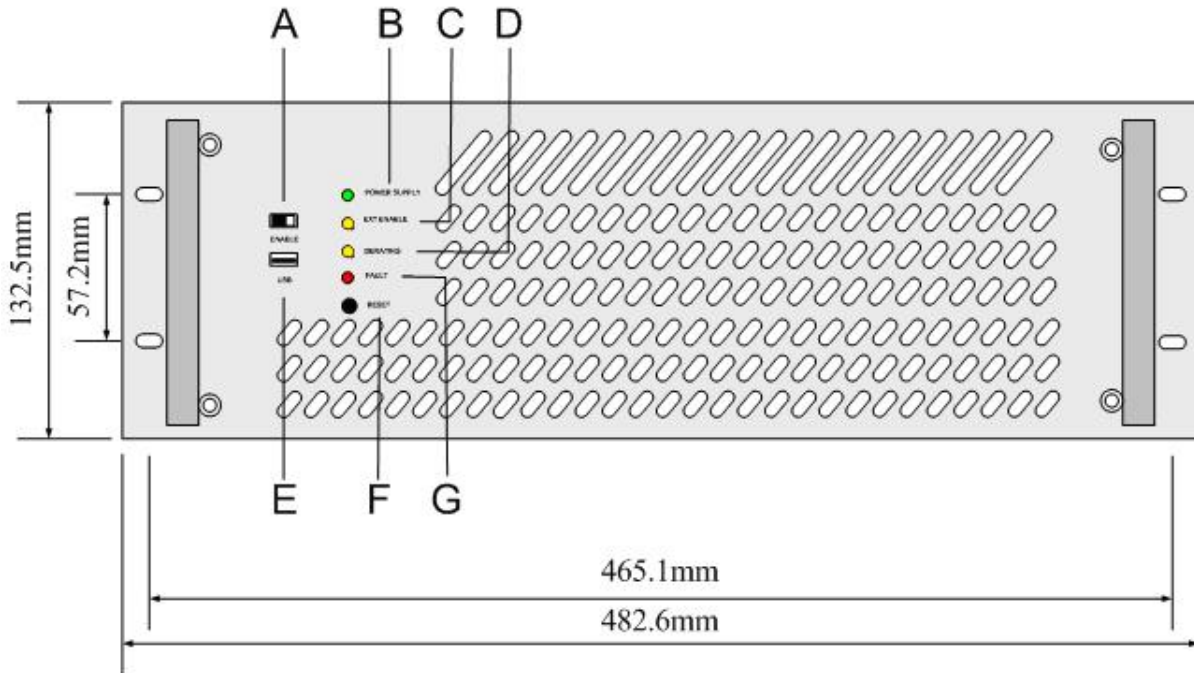
Top View



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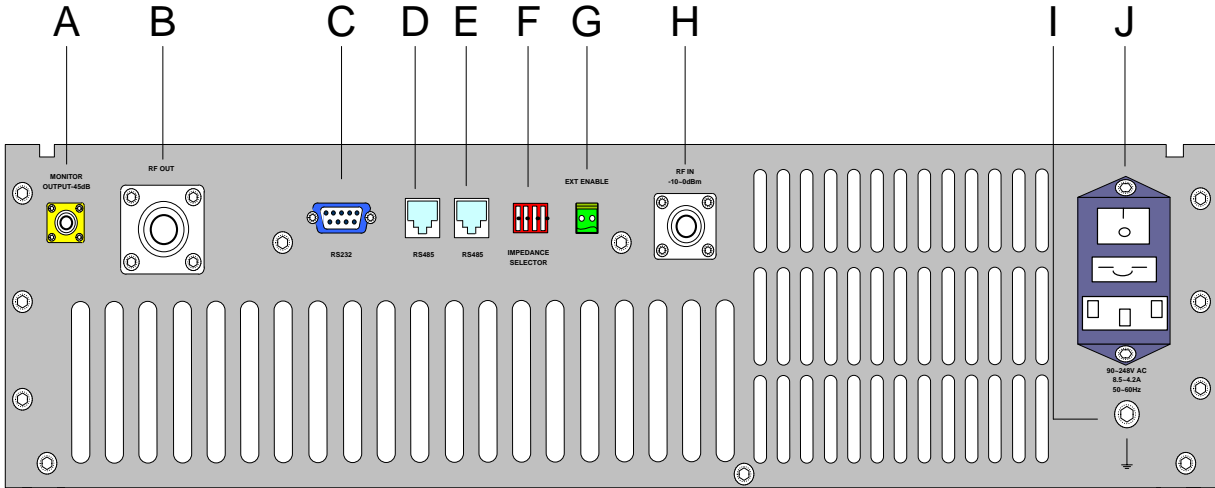
Internal Richardson Document #	Origination Date: October 2008	Rev: 2P Date: July 2011	Page 3/8
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Front Panel

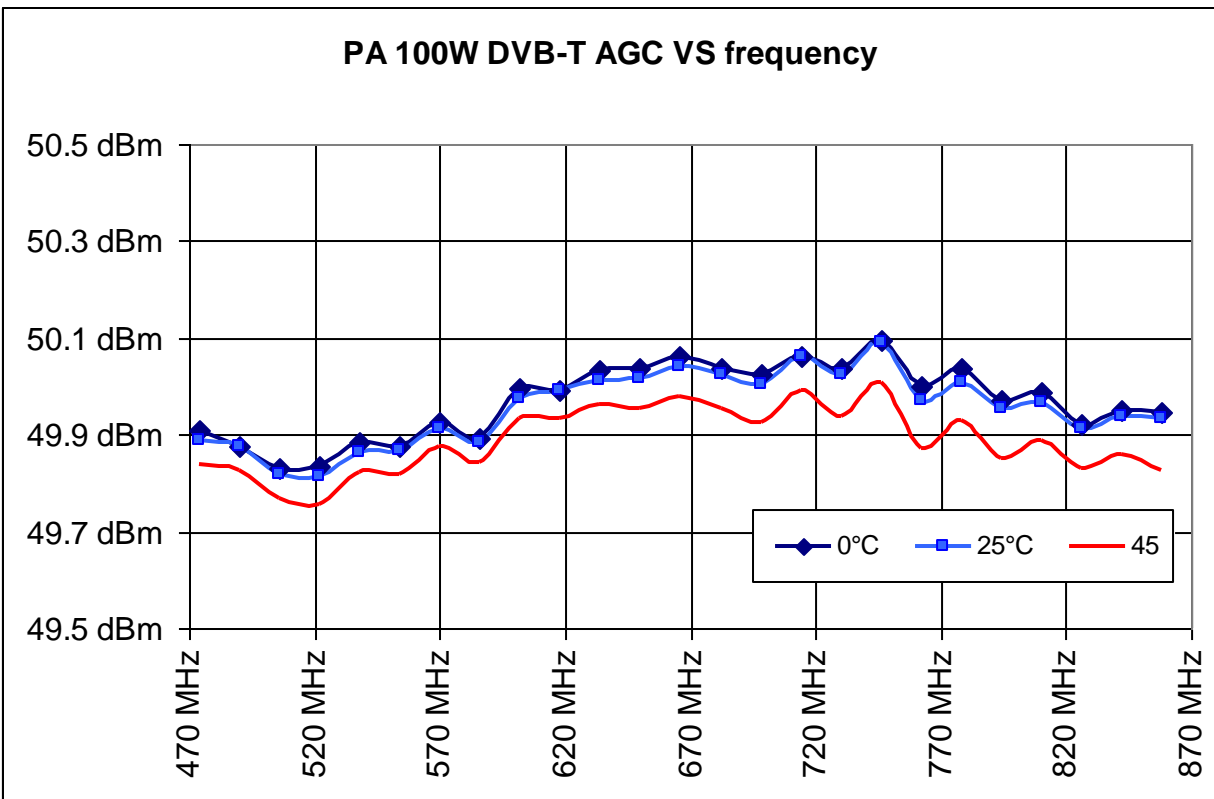
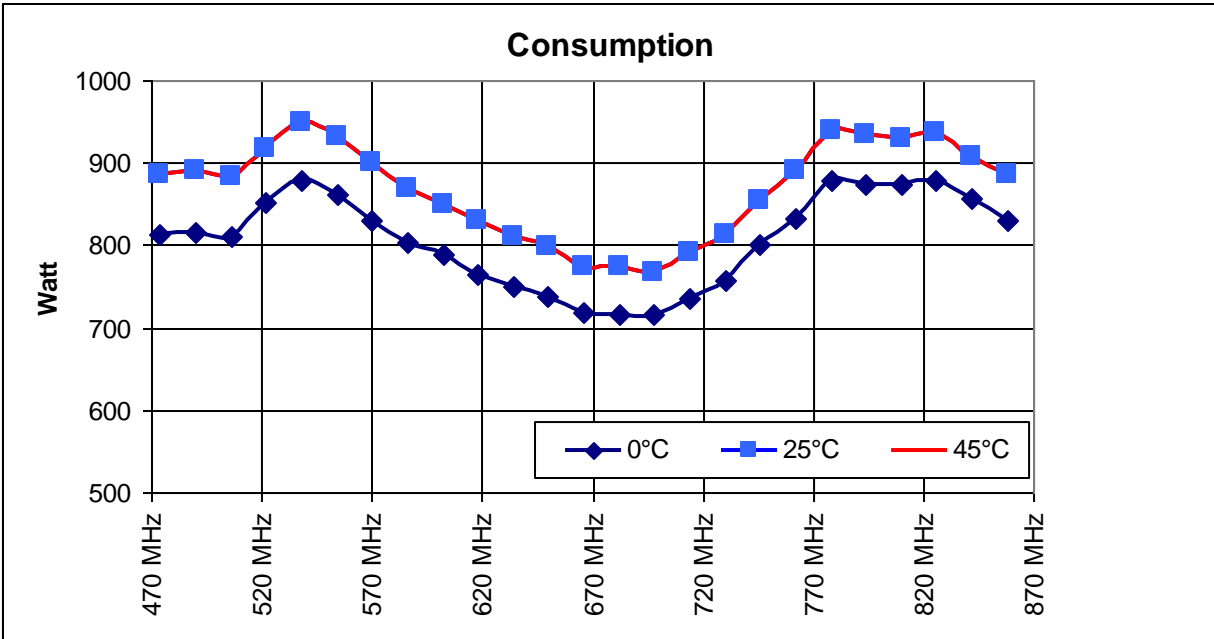


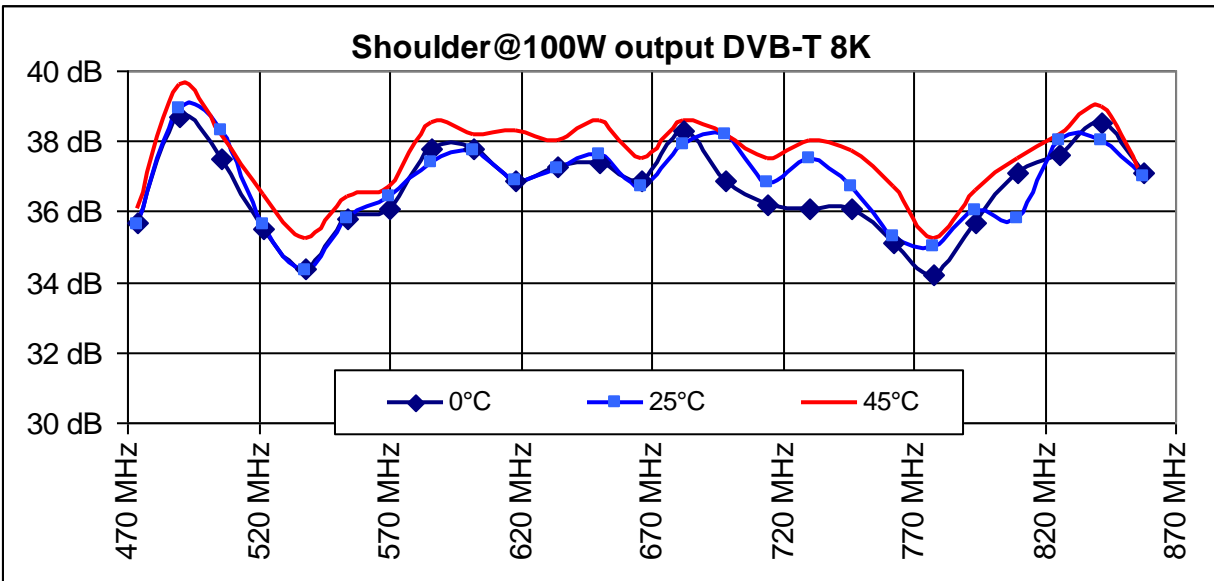
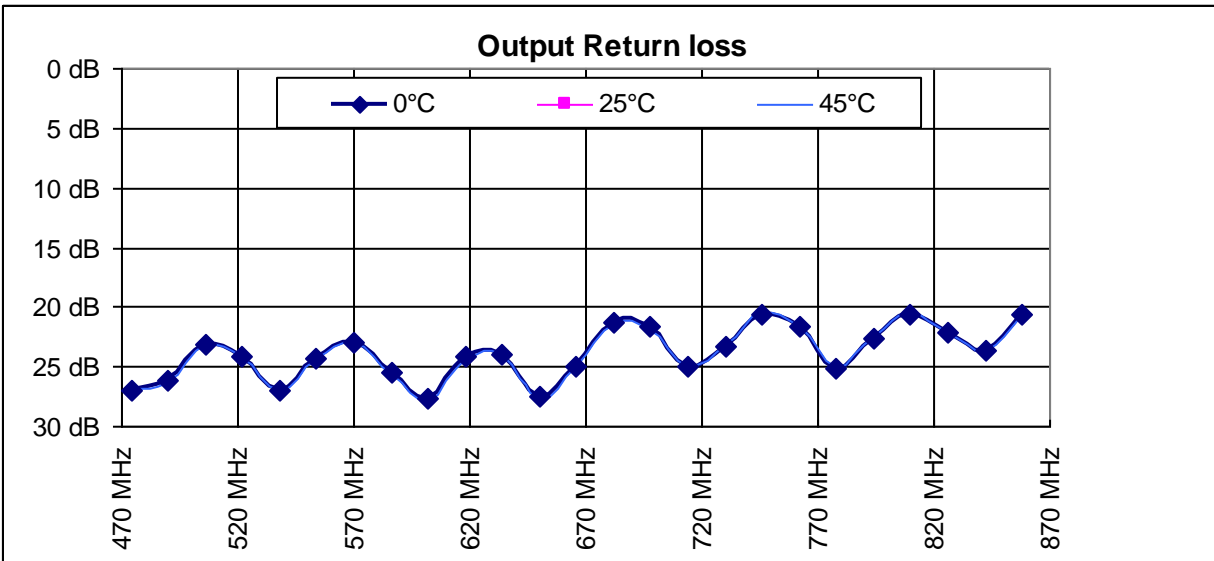
	Interface	Description
A	Enable Switch	Switch left = Disable Switch right = Enable
B	LED Power Supply	LED green = Normal LED off = Power Supply fault
C	LED Ext Enable	LED on = Enable LED off = Disable
D	LED derating	LED on = Power Derated
E	USB	Serial interface USB
F	Reset	To reset Power Amplifier
G	LED Fault	Major fault in Power Amplifier

Rear Panel



	Interface	Description																				
A	RF Monitor	P_{out} = Output Power in dBm																				
B	RF Out	RF Output																				
C	RS232	Serial interface RS232																				
D	RS485	Serial interface RS485																				
E	RS485	Serial interface RS485																				
F	RS485 Impedance selector (for D and E)	4 position DIP switch is used to select impedance. Switch Up = ON Switch Down = OFF																				
		<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>RS485 Impedance</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>ON</td> <td>OFF</td> <td>470 ohms</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>OFF</td> <td>ON</td> <td>120 ohms</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Default (12K ohms)</td> </tr> </table>	1	2	3	4	RS485 Impedance	ON	OFF	ON	OFF	470 ohms	OFF	ON	OFF	ON	120 ohms	OFF	OFF	OFF	OFF	Default (12K ohms)
		1	2	3	4	RS485 Impedance																
		ON	OFF	ON	OFF	470 ohms																
OFF	ON	OFF	ON	120 ohms																		
OFF	OFF	OFF	OFF	Default (12K ohms)																		
<p>If Enable Switch (on the front panel) is off, EXT Enable is inoperative. If Enable Switch is on, Power Amplifier is enabled when EXT Enable pins are shorted together (factory default). Power Amplifier is disabled if EXT Enable is open</p>																						
H	RF In	RF input																				
I	Ground	Ground connection																				
J	AC Input	AC																				





Ordering Information

Part Number	RPAR470860M100
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Internal Richardson Document #	Origination Date: October 2008	Rev: 2P Date: July 2011	Page 8/8
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