



UA50-R

10-20 Wrms UHF DVB-T Amplifier

50W p.s. UHF Analog Amplifier

UA50-R is a full LD-MOS Broadcast Power Amplifier designed for digital and analog signal repeaters and gap-fillers. The unit is the state of the art in terms of easy assembly, reliability and performance. The complete unit can assure the compliance to all relevant international standards.

- Full LD-MOS Power Amplifier
- 10-20 Wrms Out DVB-T
- 50W p.s. Out Analog
- Broadband (470-862 MHz)
- Internal cabling free
- Easy maintenance without special tools
- RS232-RS485 interface
- Measures and Thresholds auto-ranging at amplifier setting up
- Control software included
- Extremely strong mechanical structure



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

Electrical Data

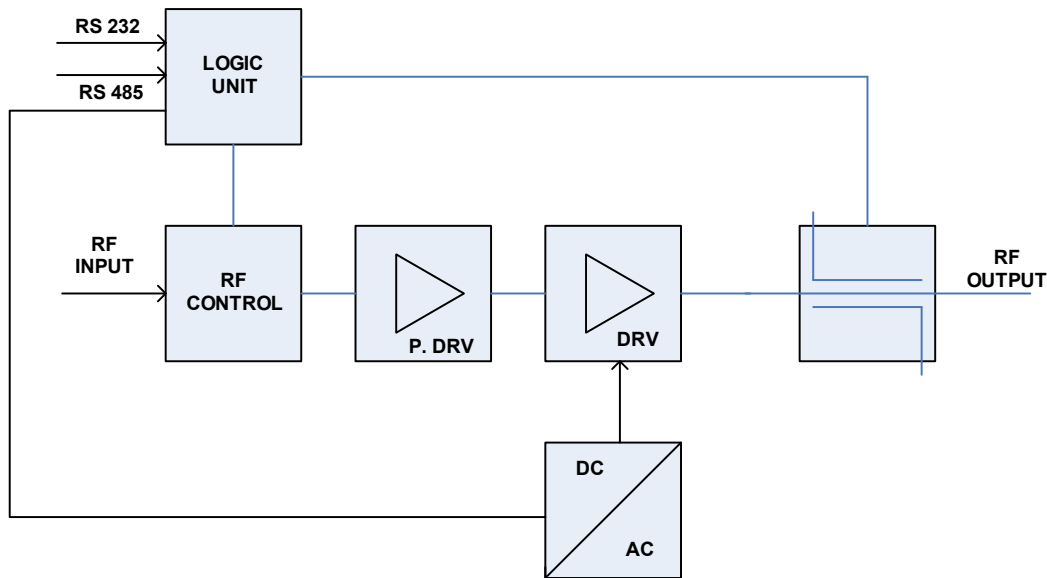
Voltage Supply	100 to 240Vac
Power Consumption	200W @ 20 Wrms DVB-T @650MHz (typ.) 500W @ 50W p.s. Analog signal @ 650MHz (typ.)
Current Consumption	0.9 A max @ 220 V digital application 2.5 A max @ 220 V analog application
Operating Temperature	0 to +45 °C
Humidity	Up to 90% (non condensing)
Gain	47dB nom.
Power Out (@1dB compression)	Min. 45W (Typ. 55W)
Input Return Loss	Min. -16dB (Typ. -20dB)
Output Return Loss	Min. -18dB (Typ. -20dB)
Load Mismatch (CW 40W F ₀ 860MHz VSWR=2:1)	No degradation
P _{out} DVB-T	Up to 20 Wrms shoulder < -35dBc (without pre correction) typ. 30 Wrms shoulder < -36dBc (with pre correction) typ.
Pout Common Amplif.	50W p.s. IMD < -50dBc Red Field (without pre correction) and Sound 1 = -13dB and Sound 2 = -20dB

Mechanical data and Interfaces

Dimensions	19" 1HU std 400mm depth ¹
Weight	11.5 Kg.
RF in	SMA connector front panel
RF out	SMA connector front panel
RF mon	SMA connector front panel
RS232	D 9 poles front panel
RS485	D 9 poles front panel hardware selection
Local Enable	Switch front panel

¹ See pag. 4

Block Diagram



Remote control

Enable	RF Enable ON/Stand By
GAIN (option)	Gain setting

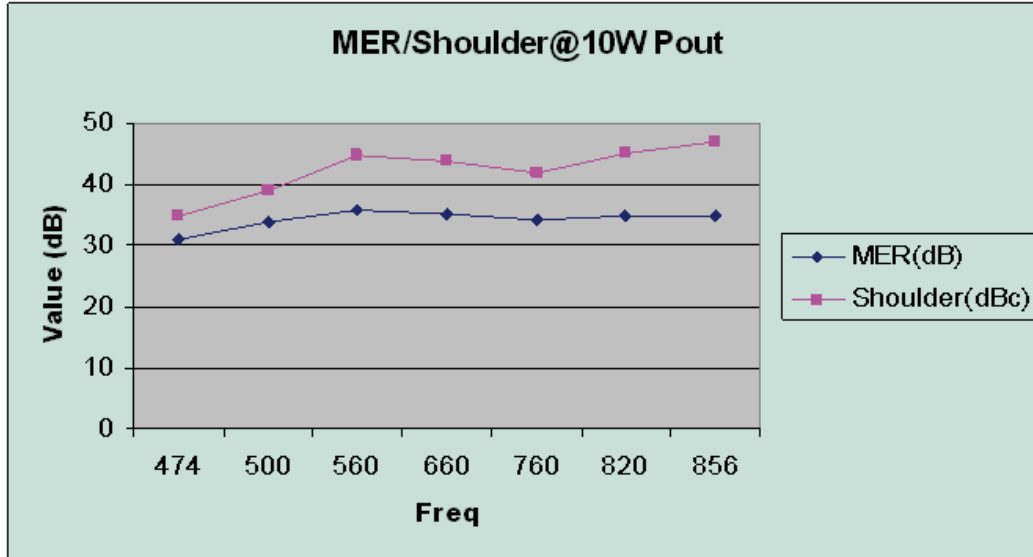
Readable data by remote computer or Control Logic Unit (through RS232/RS485)

STATUS/ALARMS	NOTES
Enable	ON/STAND BY
RF Faults	ACTIVE if Gain < 6dB referred to nominal
°C max	ACTIVE when RF Thermal Protection is ON
Pin max	ACTIVE when RF Overdrive Protection is ON
VSWR max	ACTIVE if VSWR max Protection is ON
I max	ACTIVE when Current is too high
MEASUREMENTS	
RF in	Input Power in uW (RMS for DVB-T/ p.s. for analog)
RF out	Output Power in W (RMS for DVB-T/ p.s. for analog)
RF REF	Reflected Power in W (RMS for DVB-T/ p.s. for analog)
RF Heatsink Temperature	Temperature in °C
IDC RF Section	Value in A
VDC	PS Output Voltage

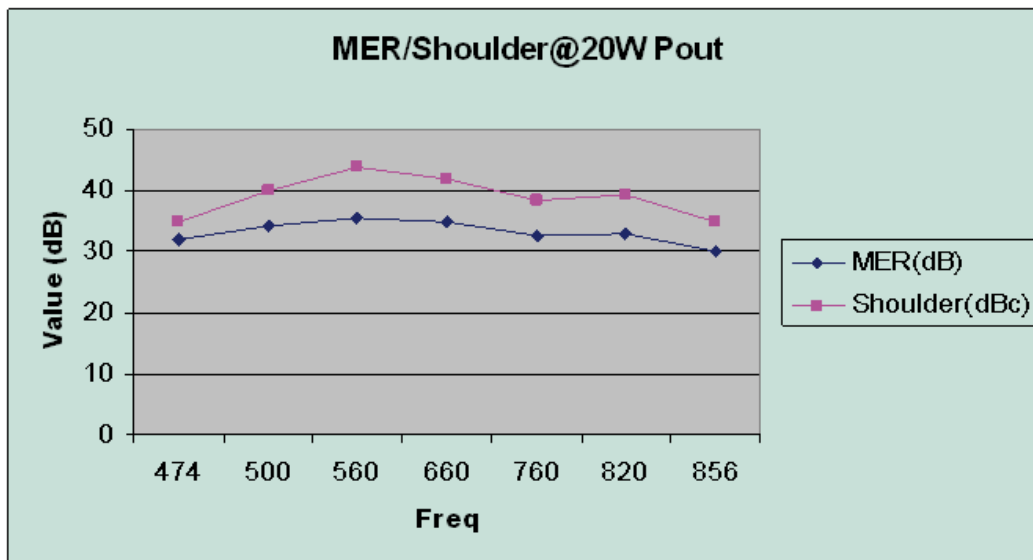
Self Protections

RF Thermal Protection	
Overdrive	Pin max must be set on the working channel with the used DVB-T or analog signal
VSWR max	VSWR max must be set on the working channel with the used DVB-T or analog signal
I max	

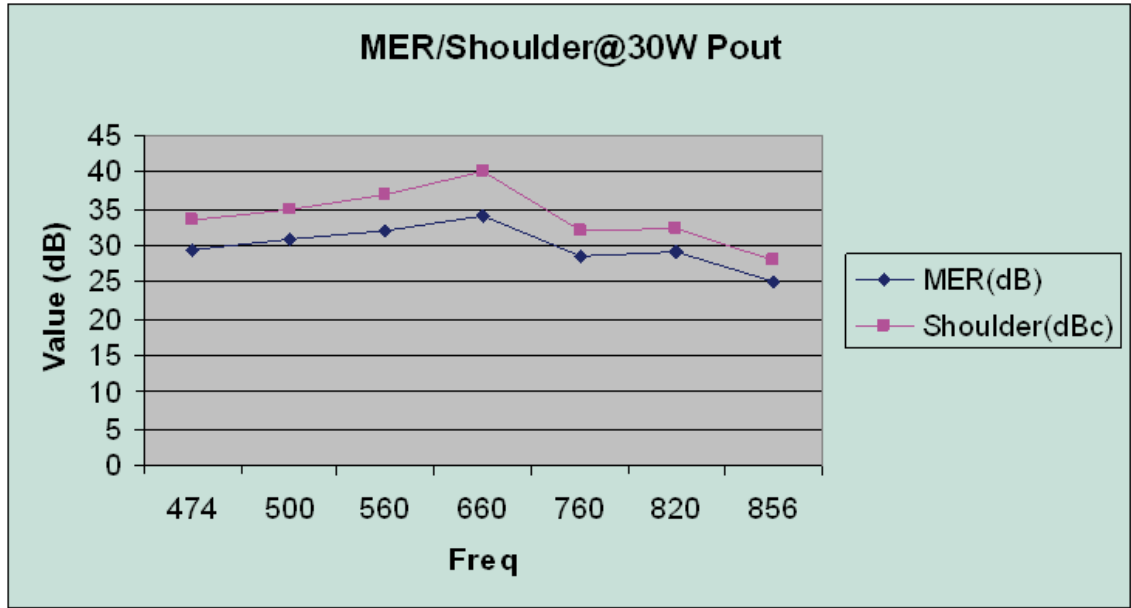
NOTE: all RF measures and protection thresholds automatically set up on the working frequency set by the user.



Without pre correction

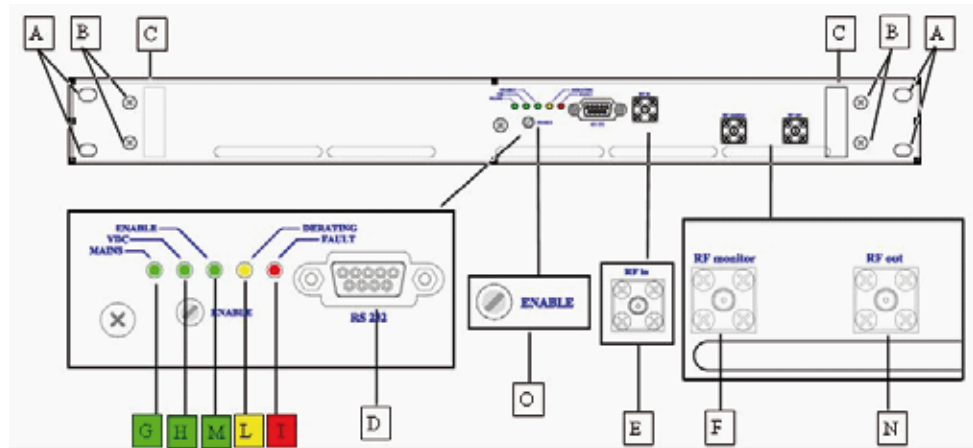


Without pre correction



Without precorrection

FRONT PANEL



- A: Rack fixing
- B: Front Panel fixing Screws
- C: Handles
- D: RS232/RS485 Connector
- E: RF In
- F: RF Mon
- N: RF Out
- O: Hardware Enable Switch



UA50-R

LED INDICATORS

G: Mains Led (ON with VAC Power Supply connected)

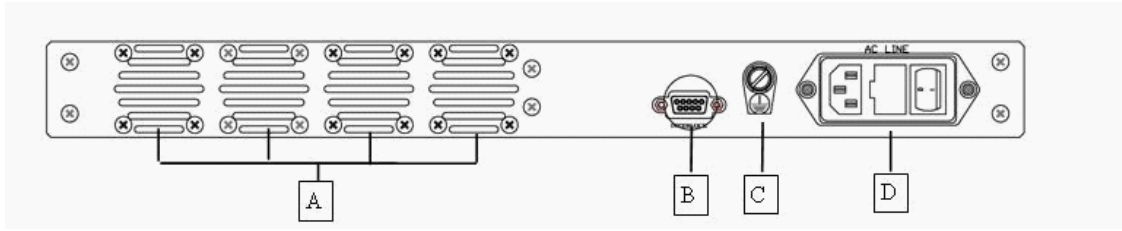
H: Vdc Led (ON with Power Supply active)

I: Fault Led (ON when amplifier gain is 6dB less than nominal. If led flashes, the amplifier is under protection condition)

L: Derating Led (ON when temperature is too high and Output Power is automatically reduced)

M: Hardware + Software Enable (Active when amplifier is ON)

REAR PANEL



A: Fan

B: Interlock

C: Ground

D: AC Power Supply Input 100/240 V AC (standard)

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