



# UA300-R

## 80Wrms DVB-T/250W p-synk UHF Amplifier

UA300-R is a full LD-MOS Broadcast Power Amplifier designed for both digital and analog applications. The unit is the state of the art in terms of easy assembly, reliability and performances. The complete unit can assure the compliance to all relevant international standards.

- Full LD-MOS Power Amplifier
- 250W Out ps
- 80Wrms Out DVB-T
- DTV (8 VSB): 140Wrms
- Broadband (470-862 MHz)
- Designed for SKD sales
- Internal cabling free
- Easy maintenance without special tools
- RS232-RS485 interface
- Control software included

Extremely strong mechanical structure



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

### Electrical Data

<b>Voltage Supply</b>	220Vac +15% -20% nominal 100-240Vac 50-60Hz for Pout up to 100Wrms 176-240Vac 50-60Hz for Pout over 100Wrms
<b>Power Consumption</b>	800W @250W Ps Black Field @650MHz (typ.) 450W @80Wrms DVB-T @650MHz (typ.)
<b>Current Consumption</b>	3.6 A max @ 220 V analog application
<b>Operating Temperature</b>	0 to +45 °C
<b>Humidity</b>	Up to 90% (non condensing)
<b>Gain Stability</b>	0 to 45 deg. +/-0.5dB[1]
<b>Gain</b>	56dB nom. ±2dB (fine ADJ available)
<b>Power Out (@1dB compression)</b>	Min. 300W (Typ. 350W)
<b>Input Return Loss</b>	Min. -16dB (Typ. -20dB)
<b>Output Return Loss</b>	Min. -18dB (Typ. -20dB)
<b>Load Mismatch</b>	No degradation
<b>(CW 250W F<sub>0</sub> 860MHz VSWR=2:1) all phase angle</b>	
<b>P<sub>out</sub> Common Amplif.</b>	250W Ps IMD < -47dBc Red Field (without pre correction)
<b>P<sub>out</sub> DVB-T</b>	80Wrms shoulder < -36dBc (with pre correction)
<b>DTV (8 VSB)</b>	140Wrms
<b>P<sub>out</sub> PEP</b>	400W IMD < -27 dBc

<sup>1</sup> WARM UP:

To achieve the stability vs temperature correct value when the equipment is cold, please wait 30 minutes at least after switching on.

<sup>2</sup> See pag. 4

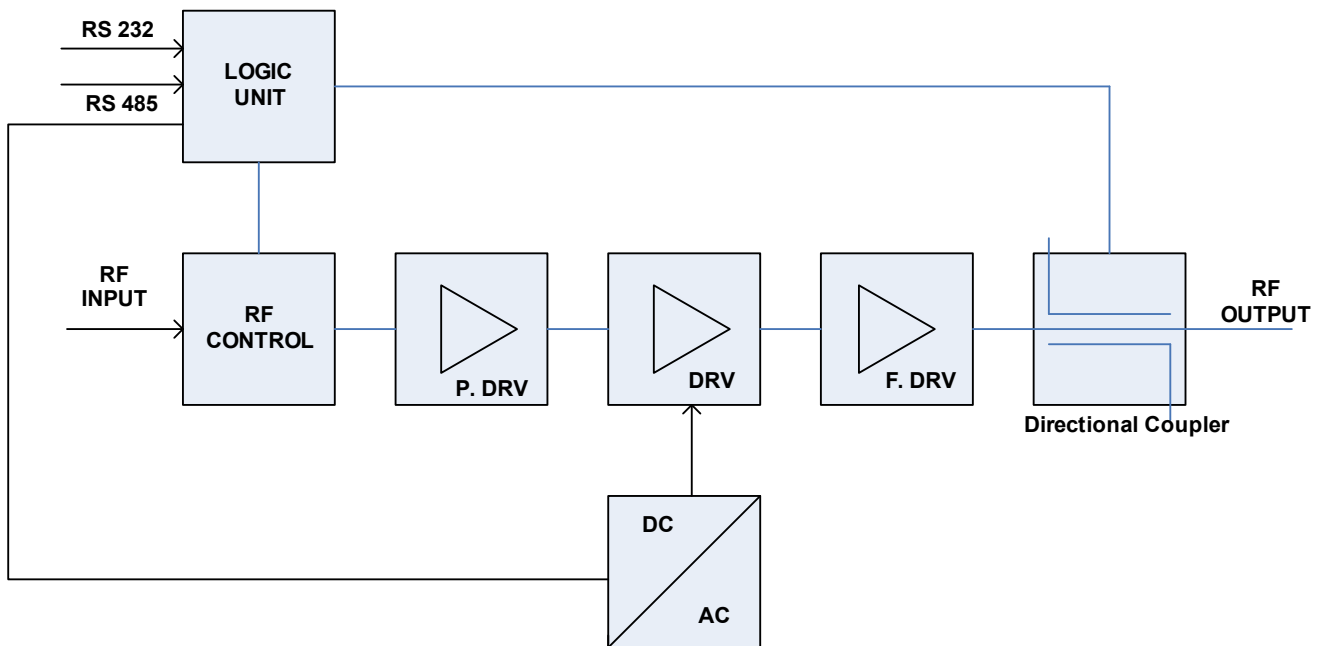


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## Mechanical data and Interfaces

Dimensions	19" 3HU std 400mm depth[1]
Weight	15 Kg.
RF in	N connector rear panel
RF out	N connector rear panel
RF mon	SMA connector rear panel
RS232	D 9 poles front and rear panel
RS485	D 9 poles rear panel
Local Enable	Switch front panel Two-pole connector rear panel

## Block Diagram



## Remote control

Enable[1]	RF Enable ON/Stand By
GAIN (option)	Gain setting



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

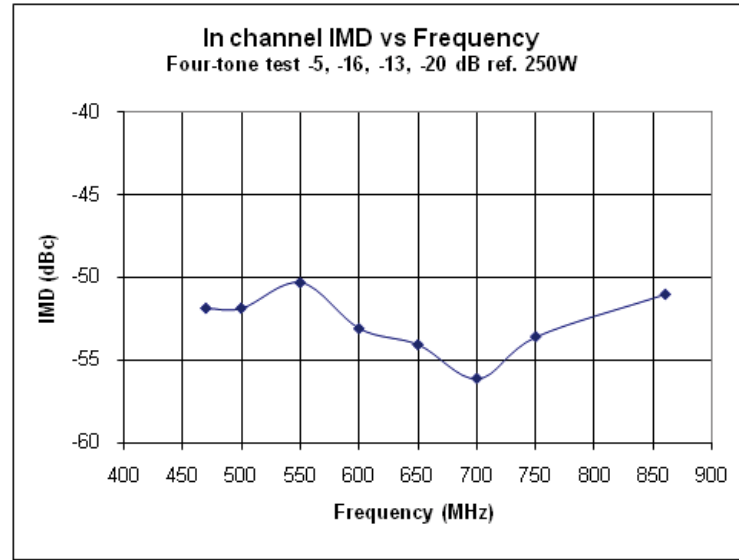
STATUS/ALARMS	NOTES
Enable	ON/STAND BY
RF Faults	ACTIVE if Gain < 6dB referred to nominal
°C max	ACTIVE when RF Thermal Protection is ON
Pin max	ACTIVE when RF Overdrive Protection is ON
VSWR max	ACTIVE if VSWR max Protection is ON
I max	ACTIVE when Current is too high
<b>MEASUREMENTS</b>	
RF in	Input Power in mW (PS for analog, RMS for DVBT)
RF out	Output Power in W (PS for analog, RMS for DVBT)
RF DRV	RF Driver Output in W (PS for analog, RMS for DVBT)
RF Heatsink Temperature	Temperature in °C
IDC Driver	Value in A
IDC Final Stage	Value in A
VDC	PS Output Voltage

## Self Protections

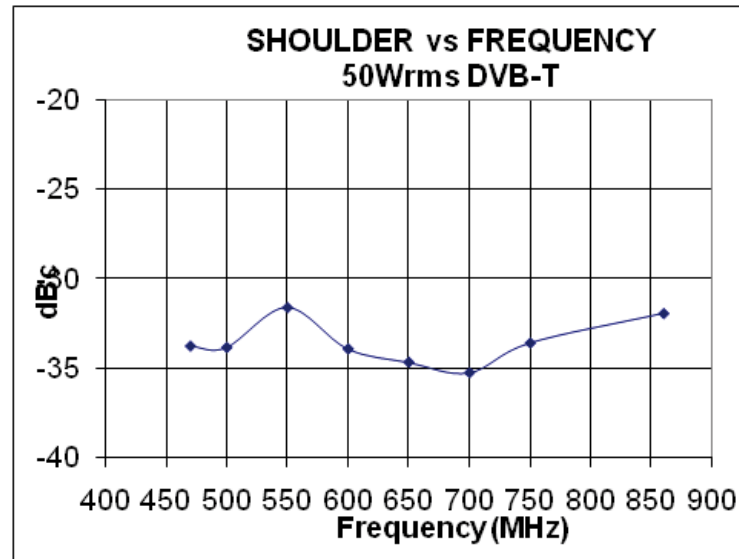
RF Thermal Protection	
Overdrive	Pin max must be set on the working channel with the used DVB-T or Analog signal
VSWR max	VSWR max must be set on the working channel with the used DVB-T or Analog signal
I max	



# UA300-R



Without precorrection



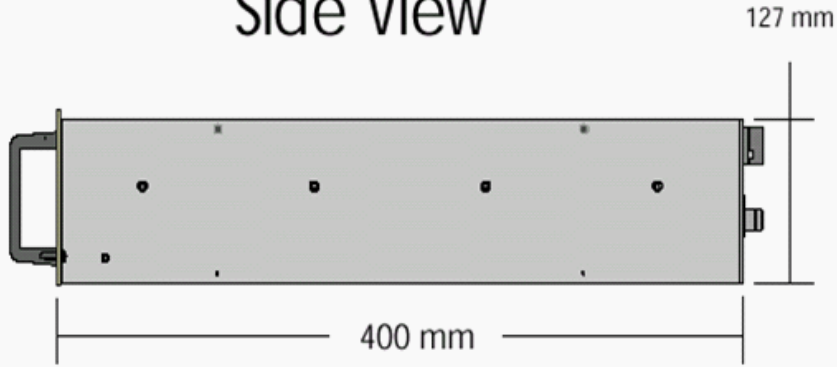
Without precorrection

**Note:** By the use of UBS DVB-T Modulator Mod. PT8750 + PT8731 option, and the proper precorrection, the UA300-R is able to deliver 80Wrms at better than  $-36\text{dBc}$  shoulders on the entire band



UA300-R

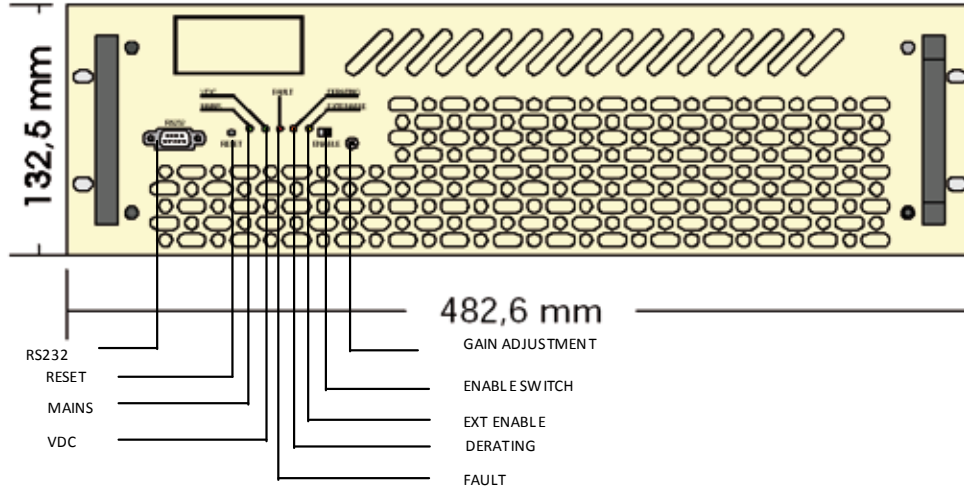
Side View



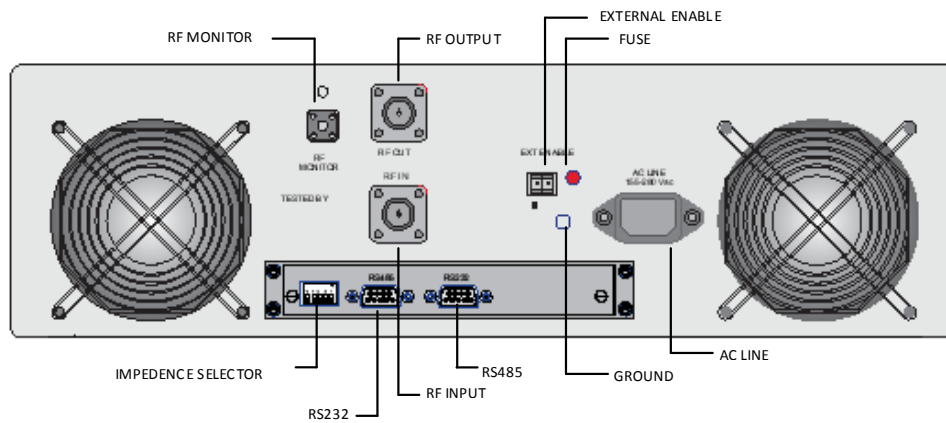
Top View



## Front Panel



## Rear Panel





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