

Product Information: Rev 1A, Issue July 2011, Revised October 2011

ODLA60G-BPS is outdoor wideband low noise amplifier intended for very precision measurements of RF-signals up to 6GHz. Built-in switch allows by-pass of the signals also up to 6GHz. ODLA60G-BPS is powered through RF-OUT connector only, thanks to what need of special power cable is eliminated.

KEY FEATURES

- Low noise
- By-pass switch mode
- Wideband
- High and flat gain
- Built-in bias-T circuit
- Outdoor and waterproof
- Compact and reliable

APPLICATIONS

- Radio-monitoring
- Small signals receiving
- IF-systems
- Cable loss compensation



Image is for illustrative purposes only.

TECHNICAL SPECIFICATIONS

RF characteristics in amplifier mode*

Frequency range	1.0-6.0						GHz
IN/OUT impedance	50/50						Ohm
Frequency	1.0	2.0	3.0	4.0	5.0	6.0	GHz
Gain	26.5	27.5	26.0	24.5	23.5	22.0	dB
Noise figure	2.6	2.2	2.6	2.8	2.8	3.3	dB
VSWR IN	2.0	1.5	1.8	2.6	2.6	2.0	
VSWR OUT	2.3	1.6	2.6	3.5	3.5	3.5	
Amplifier isolation	40.0	40.0	40.0	40.0	40.0	40.0	dB
Output 1dB	19.0	19.0	16.0	14.0	13.5	13.0	dBm
Output IP3 spacing 1MHz	37.0	34.0	30.0	27.0	26.0	24.0	dBm

* Measured at temperature T=+25°C

RF characteristics in by-pass mode*

Frequency range	1.0-6.0						GHz
IN/OUT impedance	50/50						Ohm
Frequency	1.0	2.0	3.0	4.0	5.0	6.0	GHz
Insertion loss	0.6	0.6	1.0	1.3	1.5	2.7	dB
VSWR IN/OUT	2.0	2.0	2.0	2.0	2.0	2.0	
Relay sum isolation	>70	>70	>70	>70	>60	>50	dB

* Measured at temperature T=+25°C

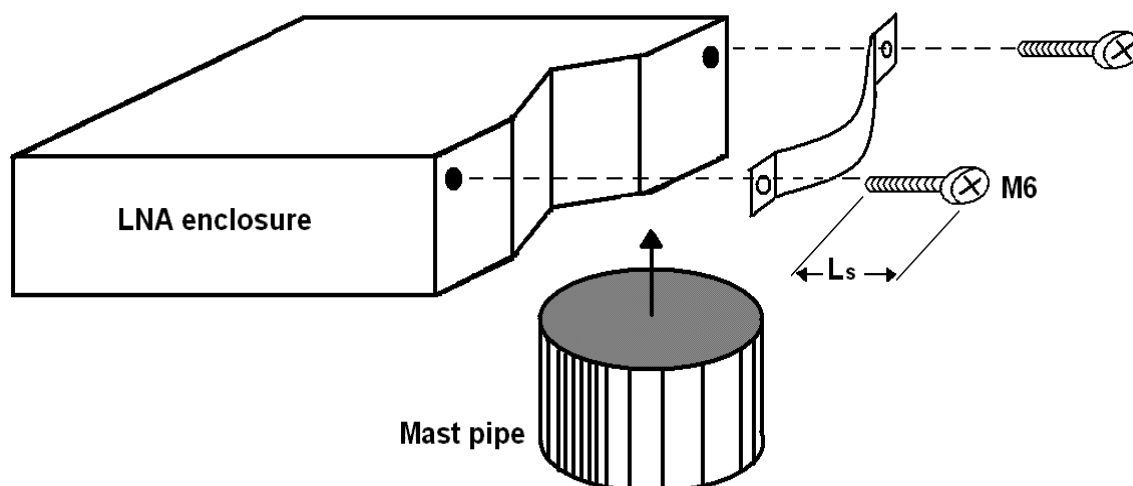
DC and mechanical characteristics

Device current	180	mA
Device voltage (DC)	+12...+20 <i>(positive on central pin)</i>	V
IN/OUT Connector	SMA female/ SMA female	
Enclosure type	Outdoor, aluminium	
Mounting	Suitable for mounting onto mast up to 2"	
Dimensions (without mounting clip)	80x80x45	mm

Absolute maximum ratings

Device current	200	mA
Device voltage	+20	V
CW RF input power (in amplifier mode)	0	dBm
CW RF input power (in by-pass mode)	+30	dBm
Voltage at RF-input	+50	Vdc
Internal switch mechanical endurance	10^7	Times
Switching rate (without load)	50	Times/s
Temperature	-40...+85	°C

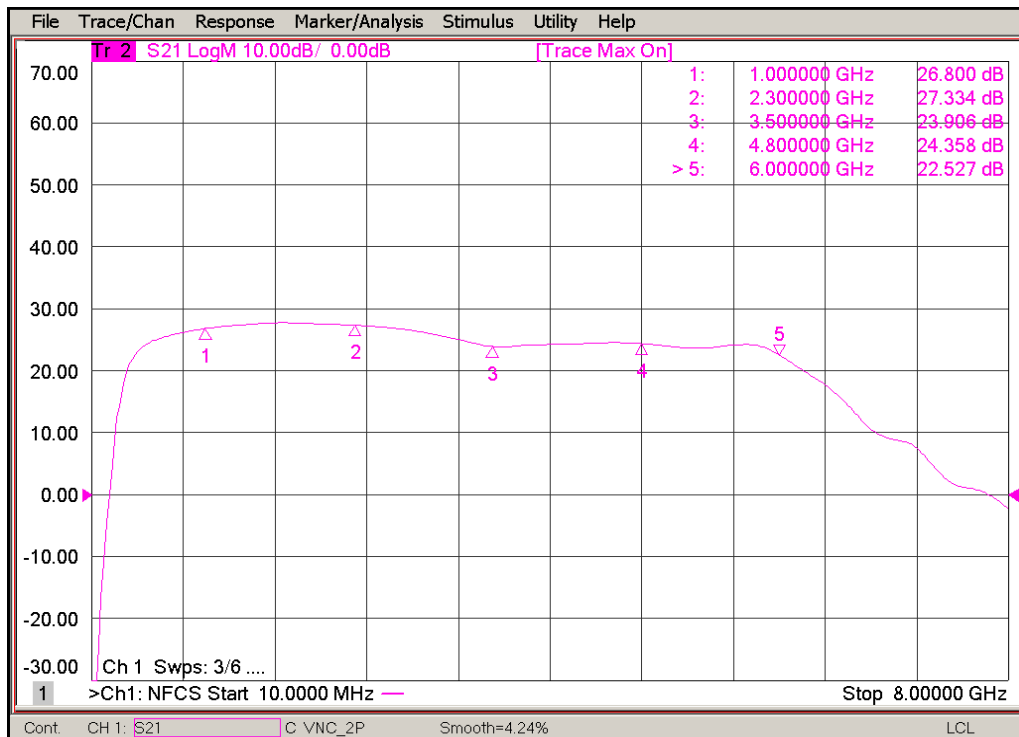
INSTALLATION AND OPERATION INSTRUCTIONS



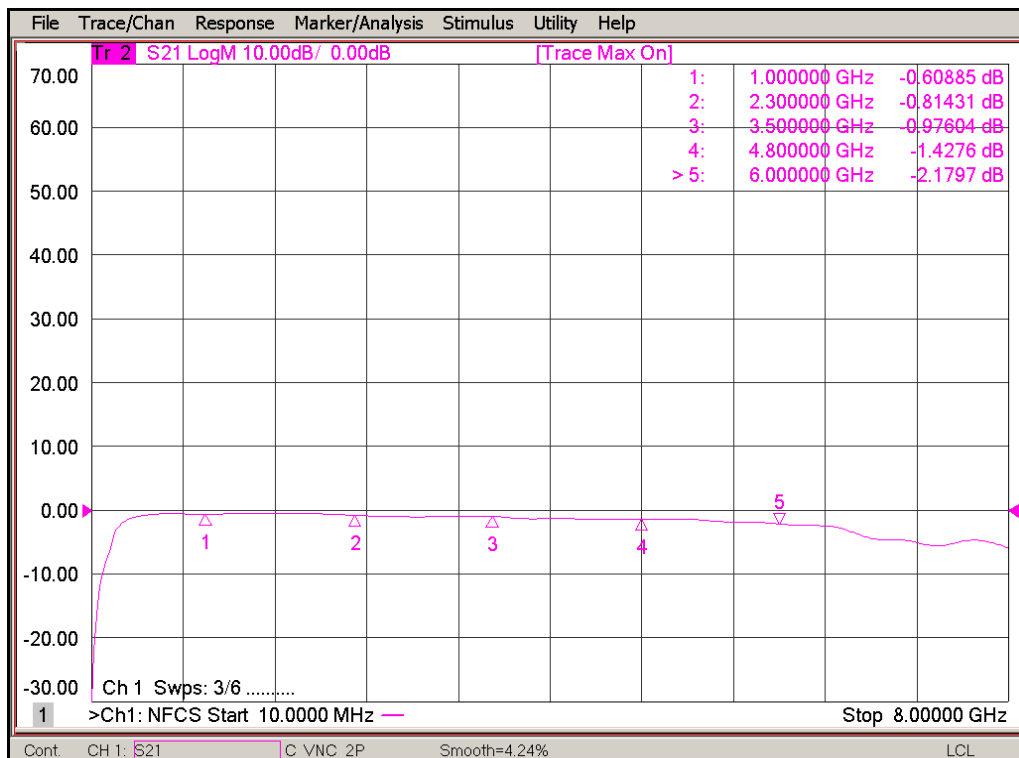
For convenience pair of M6-screws are included in the final set. $L_s = 45\text{mm}$.

ODLA60G-BPS is unidirectional amplifier. RF signal, that must be amplified, comes to RF IN input only. On the RF OUT+DC output amplified input signal can be found. Since ODLA60G-BPS is powered through output RF connector only, proper voltage and sufficient current must be provided onto RF OUT+DC output. If the device is not powered internal switches go into by-pass mode. In this mode ODLA60G-BPS works just like through connection with very low its own insertion loss.

Example of ODLA60G-BPS transfer function curve in amplifier mode



Example of ODLA60G-BPS transfer function curve in by-pass mode



Rantelon reserves the right to change the specification without notice.