



MLA20RPDC

Mini Line Amplifier

Technical Product Data



Features

- **Amplifier Gain of 20dB**
Gain \geq 20dB
- **Small Form Factor**
2.5 (not including connectors) x 0.75 x 0.875 in.
- **Extremely Flat Group Delay**
Less than 1ns variation
- **Excellent Gain Flatness**
Gain $|L1 - L2| < 1.0$ dB
- **Excellent 1dB compression point, 3rd order intercept**

Description

The MLA20RPDC GPS Line Amplifier (GNSS Line Amplifier) is a one input, one output device with 20dB gain typical in a miniaturized housing. The frequency response covers the GPS L1, L2, L5, Galileo and GLONASS frequencies (entire L-band) with excellent gain flatness. In the normal configuration, the RF output (J1) passes DC from the connected GPS receiver through the amplifier to the antenna, allowing the GPS receiver to power both the antenna and the mini amplifier.

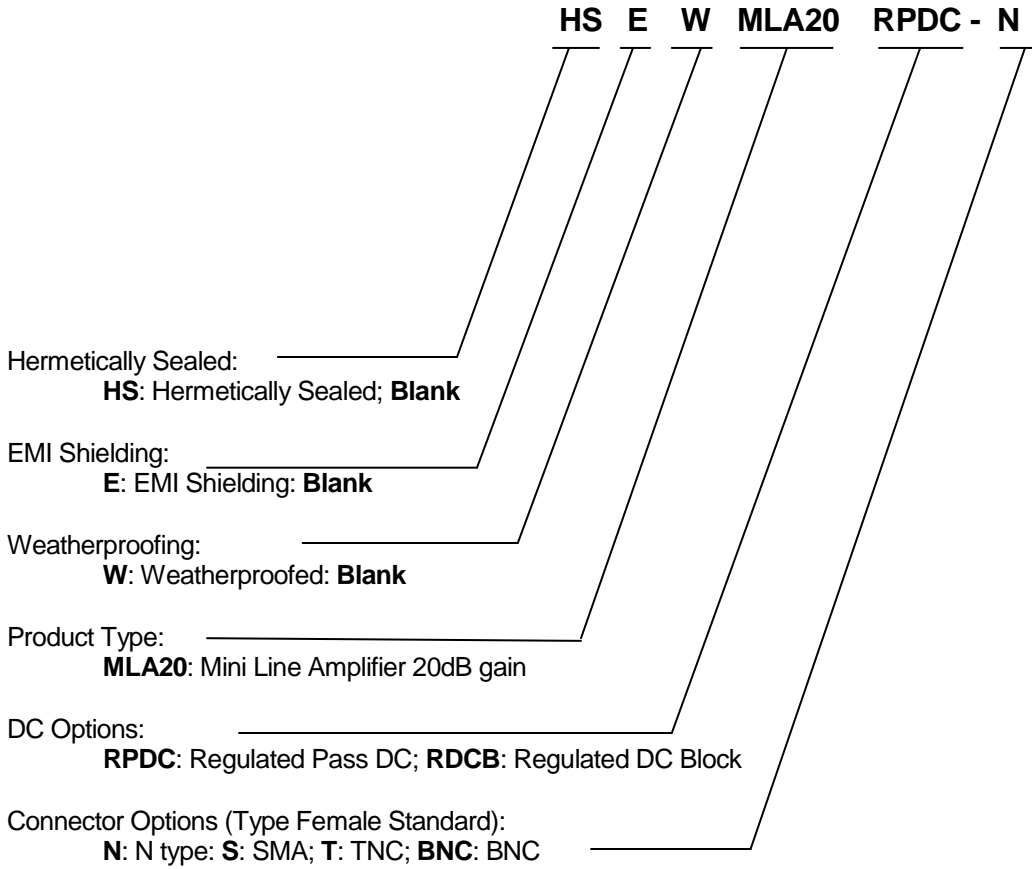
Electrical Specifications, $T_A = 25^{\circ}\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – J1	1.1		1.7	GHz
In/Out Imped.	Ant, J1		50		Ω
Gain	Ant – J1	19	20	21	dB
Input SWR	J1 - 50 Ω			1.8:1	-
Output SWR	Ant - 50 Ω			1.8:1	-
Noise Figure	Ant – J1		3.3	3.5	dB
Gain Flatness	L1 – L2 ; Ant – J1		0.5	1	dB
Reverse Isolation	J1 – Ant	35			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1			1	ns
1dB compression	Ant – J1		-32		dBm
3 rd order intercept	Ant – J1 referred to output		-22		dBm
Req. DC Input V.	DC Input on J1	3.6		15	Vdc
Current	Amplifier Current Draw, All ports - 50 Ω			15	mA

Available Options

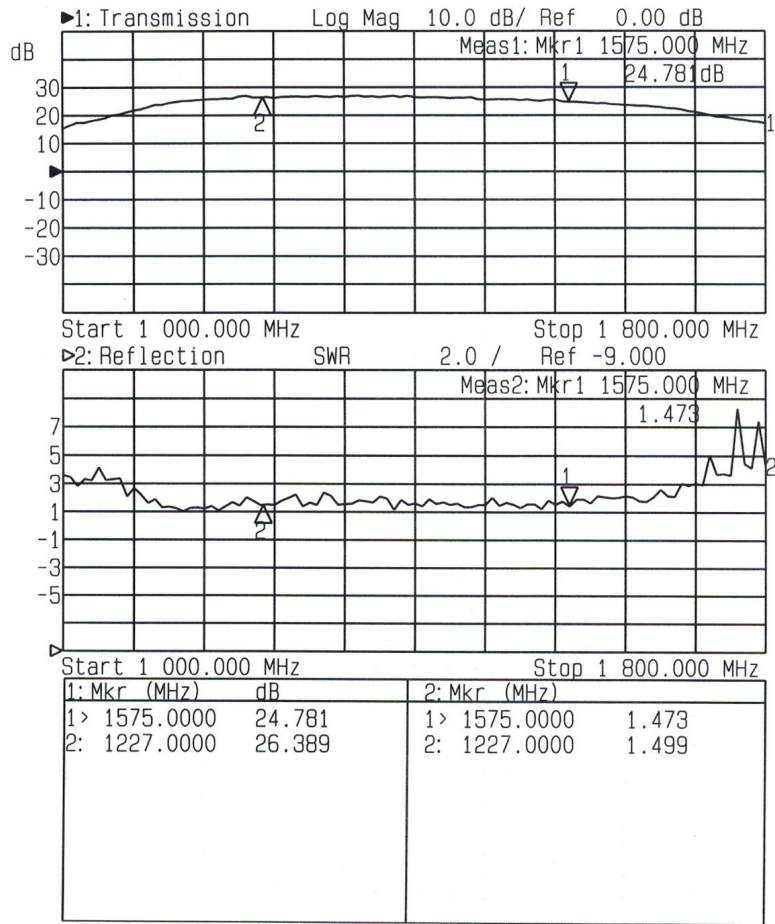
Pass/Block DC Options	
Pass DC	Pass DC J1 to Ant.
DC Blocked	Ant is DC blocked, Pass DC J1
RF Connector Options	
Connector Options	CONNECTOR STYLE
	Type N-female
	Type SMA-female
	Type TNC-female
	Type BNC-female

Part Number



Performance

Input SWR (Ant. Port) and Frequency Response: Ant. To J1 (Typical, type N conn.):

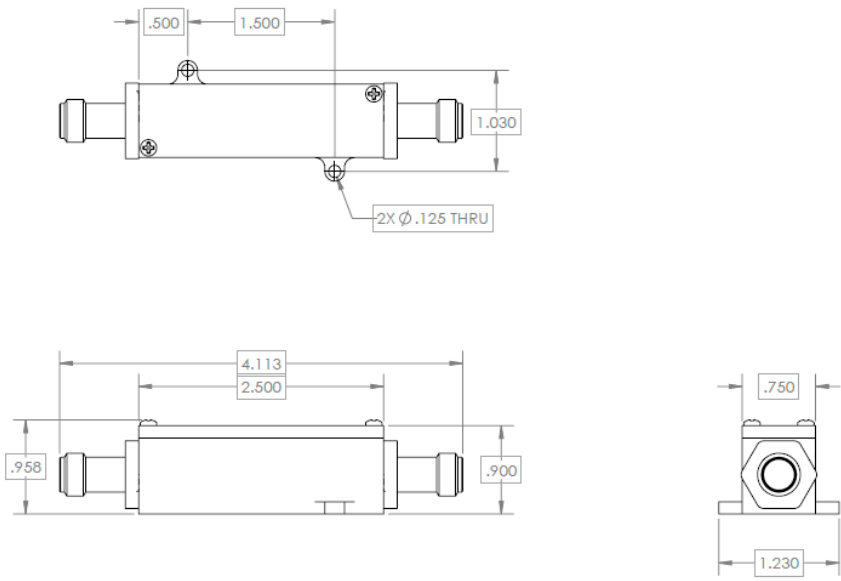


Mechanical

Dimensions: Height: 0.875"
Length (not including connectors) Body: 2.5"
Width: 0.75" (+0.438" including mounting tabs)

Weight: 3.13 oz. (88.7 grams)

Operating Temp. Range: -40° to + 75°C



GPS NETWORKING	ASSY, 1X1 MINI	2x .001 Dia. Hole 2x .001 Dia. Hole And Sharp Edges For 200 Rad Allow
REV: 1	DATE: 08/17/15	DESIGNER: [Name]
BC	Checked	DATE: [Date]
Issue	Quantity / Prod. Qty.	Rev. No. / Rev. Date
TRC Angle Protection	Material	SEE NOTE
Design Number	ASSY - 1X1 MINI	REV: 1
SEE 1	REV: 1	SHEET 1 OF 1