MLA20RPDC

Mini Line Amplifier
Technical Product Data

Features

- **Amplifier Gain of 20dB**
  Gain ≥ 20dB
- **Small Form Factor**
  2.5 (not including connectors) x 0.75 x 0.875 in.
- **Extremely Flat Group Delay**
  Less that 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.

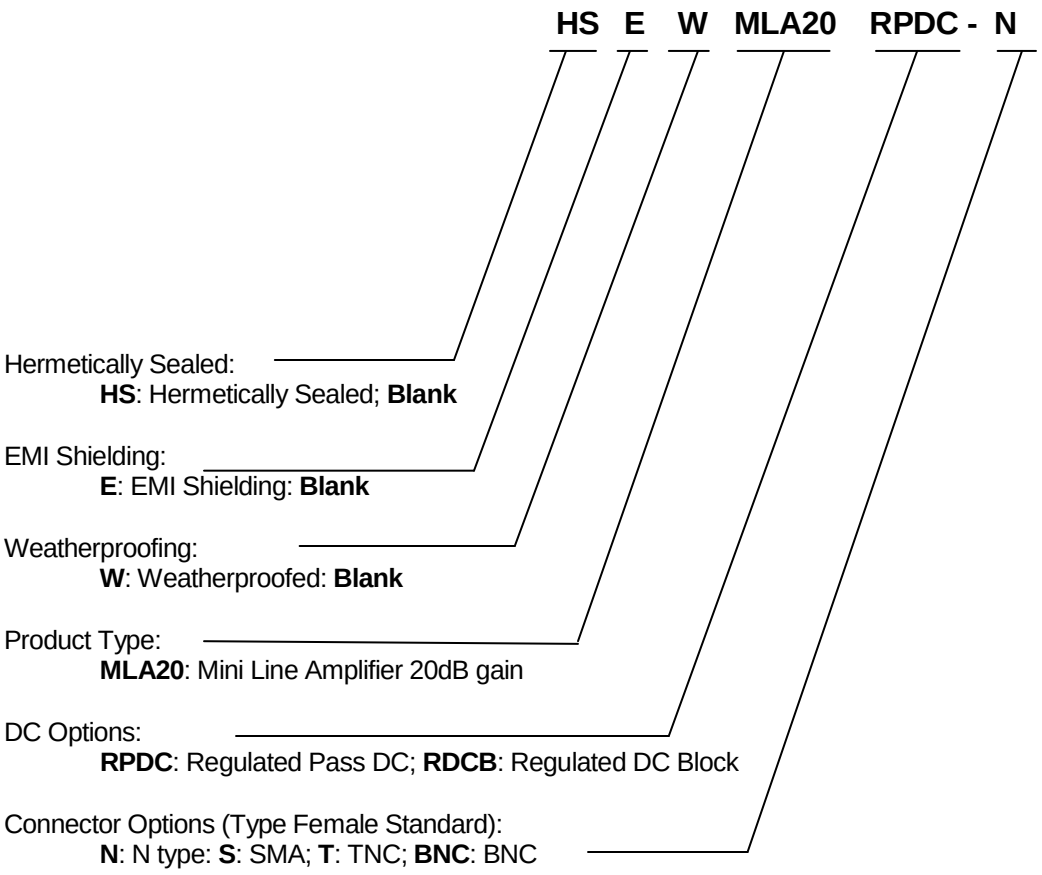
Electrical Specifications, $T_A = 25^0C$

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 - 50Ω			2.0:1	-
Output SWR	Ant - 50Ω			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
3rd order intercept	Ant – J1 referred to output		-22		dBm
Req. DC Input V.	DC Input on J1	3.2		15	Vdc
Current	Amplifier Current Draw, All ports - 50Ω			15	mA

Available Options

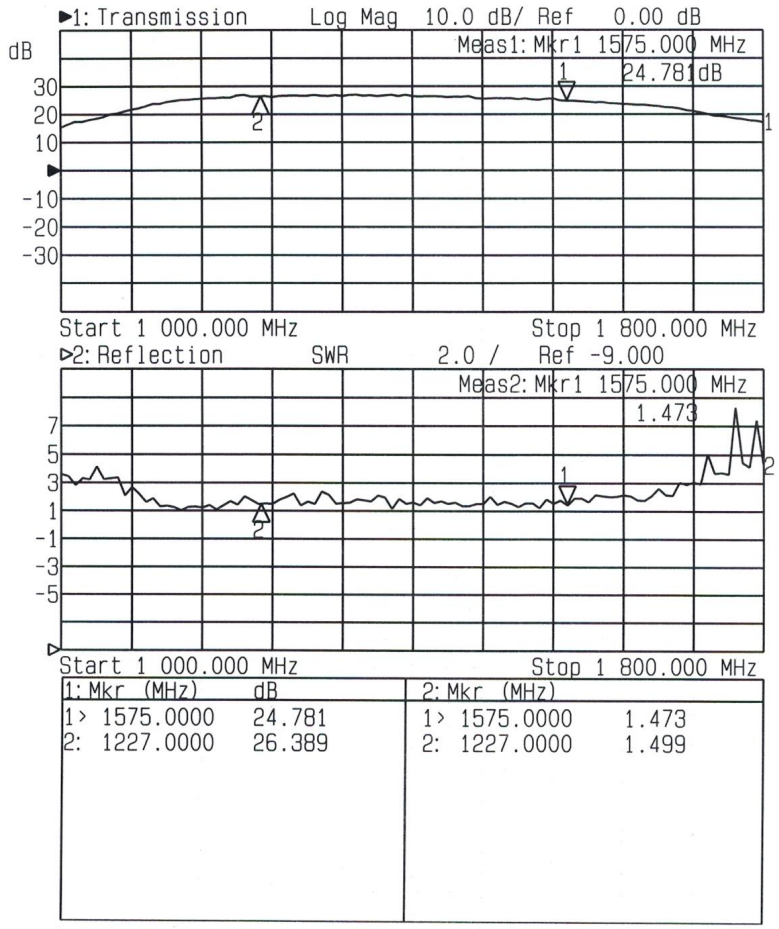
Pass/Block DC Options	
Pass DC	Pass DC J1 to Ant.
DC Blocked	Ant is DC blocked, Pass DC J1
RF Connector Options	
Connector Options	CONNECTOR STYLE
	Type N-female
	Type SMA-female
	Type TNC-female
	Type BNC-female

Part Number


HS E W MLA20 RPDC - N
Hermetically Sealed:
HS: Hermetically Sealed; Blank
EMI Shielding:
E: EMI Shielding: Blank
Weatherproofing:
W: Weatherproofed: Blank
Product Type:
MLA20: Mini Line Amplifier 20dB gain
DC Options:
RPDC: Regulated Pass DC; RDCB: Regulated DC Block
Connector Options (Type Female Standard):
N: N type: S: SMA; T: TNC; BNC: BNC

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