

# VATTENDCB

## Variable GPS Attenuator Technical Product Data



### Features

- **Variable Attenuation Range**  
Attenuation Range 0 - 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 Flatness**  
 $|L1 - L2| < 1.0$  dB
- **Low SWR** < 1.5dB typical
- **DC Block Antenna Voltage**

### Description

The VATTENDCB GPS RF Active Variable Attenuator is a one input, one output device with variable attenuation range from 0dB to -20dB, user selected pot range control. The device is available in a miniaturized housing. The frequency response covers the GPS L1/L2 and GLONASS bands with excellent flatness. In the DC Blocked configuration, the RF output (J1) will pass DC from the connected GPS receiver to power the active variable attenuator and then block the DC at the input of the attenuator going to the antenna.

### 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		$\Omega$
Attenuation	Ant - J1, User Selected Attenuation value (X) between 0 - 20dB	0	X	20	dB
Input SWR	J1 - 50 $\Omega$			2:1	-
Output SWR	Ant - 50 $\Omega$			2:1	-
Flatness	$ L1 - L2 $ ; Ant - J1		0.5	1	dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$ ; Ant - J1			1	ns
Required DC Input	DC Input on J1	3.6		15	Vdc
Current	Variable Attenuator Current Draw, All ports - 50 $\Omega$	12	15	18	mA

## Available Options

Connector Options	CONNECTOR STYLE
	Type N
	Type TNC
	Type BNC
	Type SMA

## Part Number

Product Type:

**VATTEN** = Mini Variable Attenuator(0-20dB)

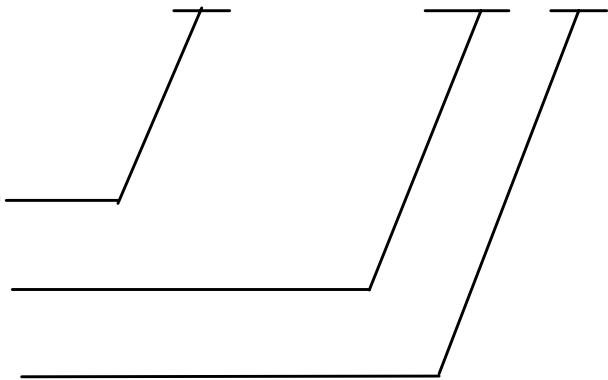
DC Options:

**DCB** = Antenna DC Blocked, J1 Pass DC

Connector Options:

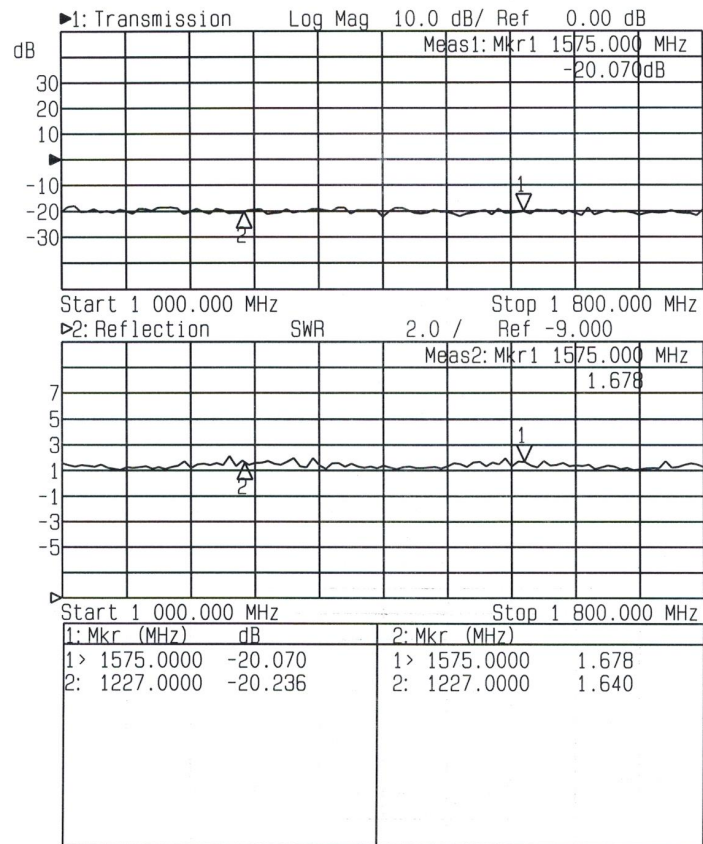
**N** = N type; **S** = SMA; **T** = TNC; **B** = BNC

**V ATTEN DCB - N**



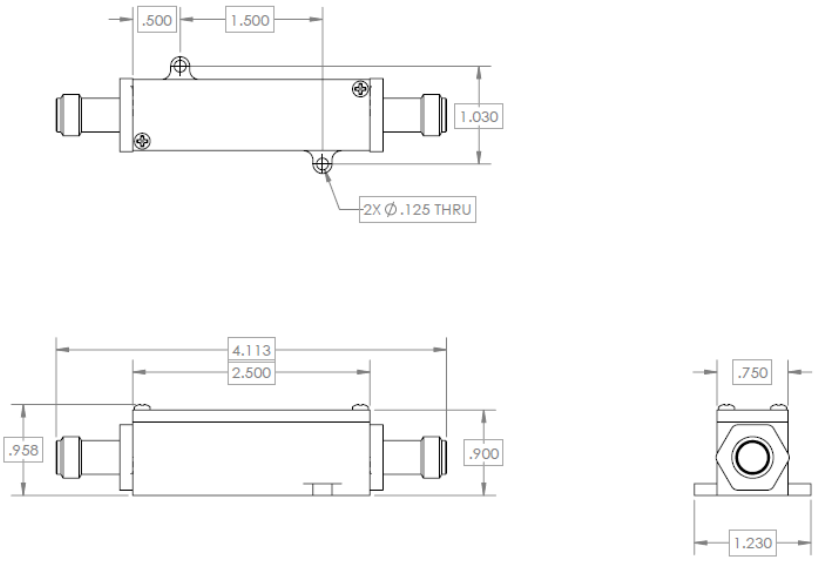
## Performance

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	<b>ASSY, 1X1 MINI</b>	Dis. Next Section Drawg Manufacture to Spec Final Design - 5/2005 For 200 Model Mark
FORMA BC	Date 08/17/15	Drawn By
Checked	Quantity	Unit
Scale	Material	Notes
Part Name/Number	SEE NOTE	1 of 1
Dwg Number ASSY, 1X1 MINI	REV	DATE