DCB

DC Block

Technical Product Data

Features

- **Blocks DC voltage**

- **Small Form Factor**
  2.5 (not including connectors) x 0.75 x 0.875 in.

- **Extremely Flat Group Delay**
  Less that 1ns variation

- **Excellent Flatness**
  Gain | L1 – L2 | < 1.0 dB

- **Low Insertion Loss** < 1.0dB typical

Description

The DCB GPS DC Block (GNSS DC Block) is a one input, one output device that is designed to block unwanted DC voltage anywhere in a system network. The DCB features a miniaturized housing to use when small form factors are required. The frequency response covers the GPS L1, L2, L5, Galileo and GLONASS frequencies (entire L-band) with excellent flatness. In the normal configuration, the RF input and output will block DC from both the input and output.
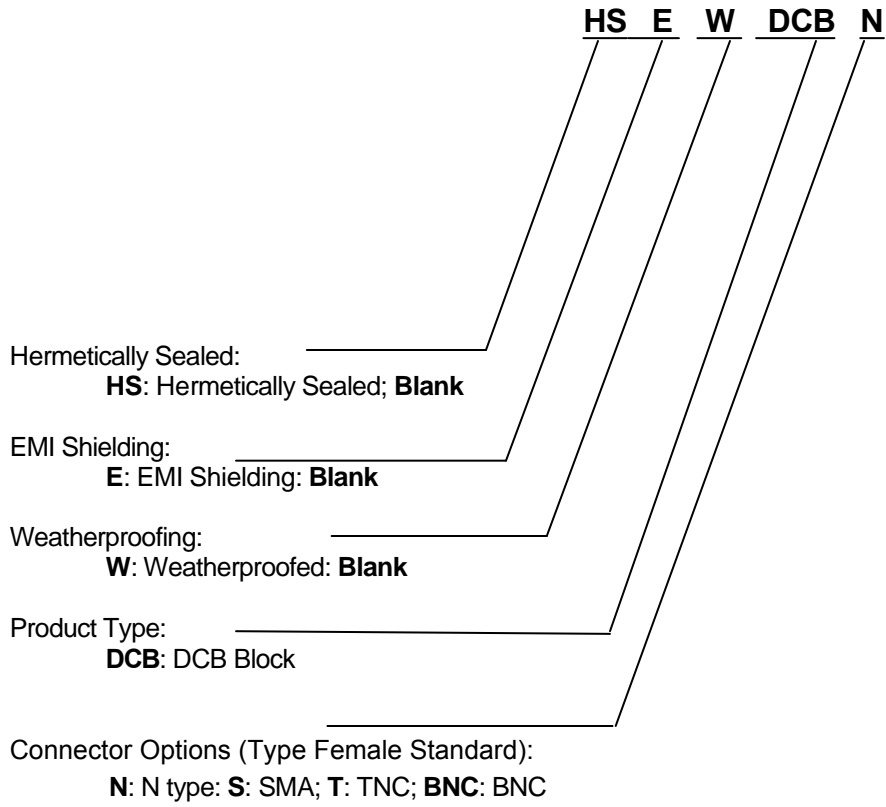
Electrical Specifications, $T_A = 25^0C$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – J1	1.1		1.7	GHz
In/Out Imped.	Ant, J1		50		Ω
Insertion Loss	Ant – J1,	0.5	1.0	1.5	dB
Input SWR	J1 - 50Ω			1.5:1	-
Output SWR	Ant - 50Ω			1.5:1	-
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

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Available Options

Pass/Block DC Options			
	Both Input/Antenna Port and Output are DC Blocked		
RF Connector Options			
Connector Options	CONNECTOR STYLE		
	Type N-female		
	Type SMA-female		
	Type TNC-female		
	Type BNC-female		

Part Number

                                        HS E W DCB N

Hermetically Sealed:
     HS: Hermetically Sealed; **Blank**

EMI Shielding:
     E: EMI Shielding: **Blank**

Weatherproofing:
     W: Weatherproofed: **Blank**

Product Type:
     DCB: DCB 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.):


```
►1: Transmission    Log Mag  10.0 dB/ Ref    0.00 dB
dB                              Meas1: Mkr1 1575.000 MHz
                                            -0.943dB
  30
  20
  10

 -10
 -20
 -30

Start 1 000.000 MHz              Stop 1 800.000 MHz
▷2: Reflection       SWR      2.0 /  Ref -9.000
                                Meas2: Mkr1 1575.000 MHz
                                            1.282
  7
  5
  3
  1
 -1
 -3
 -5

Start 1 000.000 MHz              Stop 1 800.000 MHz
```

1: Mkr (MHz)	dB	2: Mkr (MHz)	
1> 1575.0000	-0.943	1> 1575.0000	1.282
2: 1227.0000	-1.504	2: 1227.0000	1.343

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