IDCB180A

10 MHz – 18.0 GHz DC BLOCK

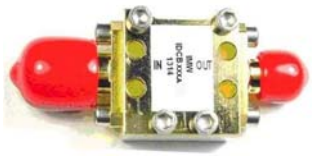
REV B
July 2015

Key Features

- Wide Band, 10 MHz ~ 18.0 GHz
- Low Insertion Loss, 0.30 dB Typ.
- 1.25 :1 VSWR
- 16 V DC Voltage Handling
- 2 W CW Power Handling
- Precision Machined Housing
- Single DC Power Supply
- Meet MIL-STD-202g

Applications

- Up to 18.0 GHz Band
- Satellite Communications
- Broadcast
- RF Bench Tests
- Mobile Base Station



Absolute Maximum Ratings

Parameters	Units	Ratings
DC Voltage	V	16
Input Power, CW	dBm	33
Storage Temperature	°C	-40 ~ +85
Operating Temperature	°C	-40 ~ +85

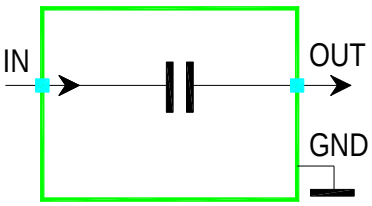
Operation of this device beyond any one of these parameters may cause permanent damage.

Specifications

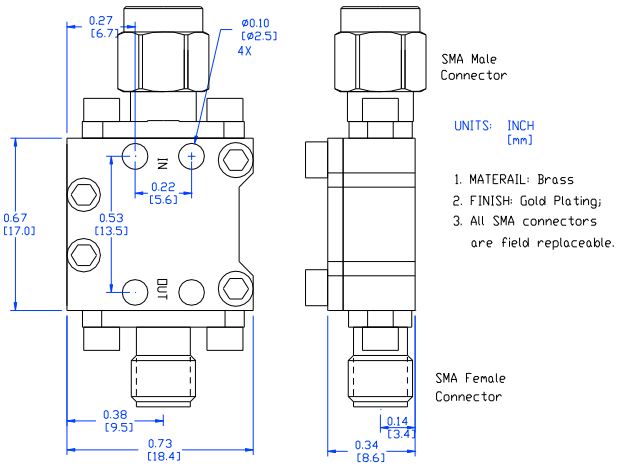
Summary of the key electrical specifications at 25°C

Index	Testing Item	Symbol	Test Constraints	Min	Typ	Max	Unit
1	Frequency Range	BW	50 Ohm Impedance	0.01		18.0	GHz
2	Insertion Loss	S_{21} , S_{31}	0.01 – 18.0 GHz		0.3	0.8	dB
3	VSWR	SWR_i	0.01 – 18.0 GHz		1.25:1	1.5:1	Ratio
4	Maximum Power Handling	P_{MAX}	0.01 – 18.0 GHz, CW			33	dBm
5	Maximum DC Voltage	V_{DCMAX}				16	V
6	Operating Temperature	T_o		-40		+85	°C

Functional Block Diagram



Outline, IP-4C Housing



Ordering Information

Model Number	Connectors	
	IN	OUT
IDCB180A	SMA Male	SMA Female

Specifications and information are subject to change without notice.

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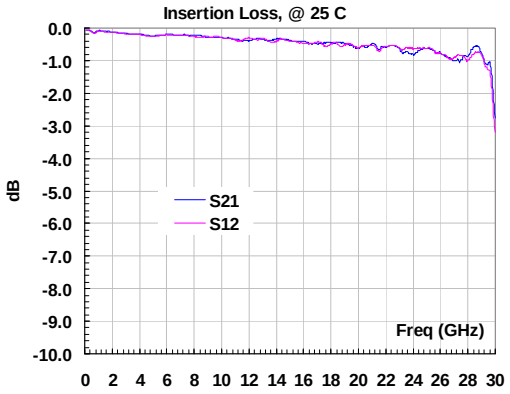
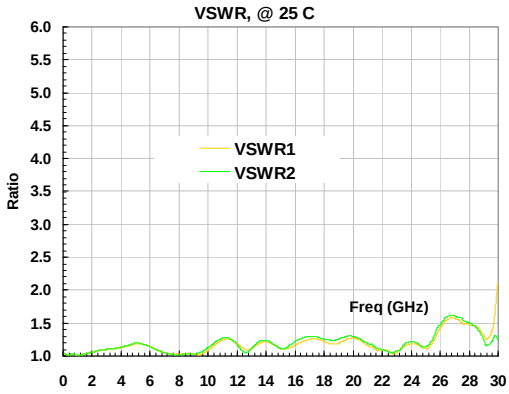
Typical Data





Application Notes:

A. SMA Torque Wrench Selection

Always use a torque wrench with 5 ~ 6 inch-lb coupling torque setting for mating the SMA cables to the DC block. Never use torque more than 8 inch-lb wrench for tightening the mating cable to the connector. Otherwise, the permanent damage will occur to the SMA connectors of the amplifier. 8710-1582 (5 inch-lb) is one of the ideal torque wrench choice from Agilent Technology.

B. Mounting the DC Block

Use four pieces of #2-56 with longer than 9/16” screws for mounting the DC block on a metal-based chase. Flat and spring washers are needed to prevent the screw loosening during the shock and vibration. Always use the appropriate torque setting of the power screwdriver to mount them.

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