

April 2013, REV B



- Wide band, 2000 - 4000 MHZ
- Low insertion loss, 0.50 dB typ.
- High isolation, 18 dB min.
- Excellent VSWR, 1.22:1 typ.
- 90 degree Hybrid, SMA Connector
- Built-in DC block capacitors
- Precision machined housing

- Balance wide band power amplifier
- PCS, 3G, ISM, C Bands
- RF bench test
- Wireless applications



Input Power (at port 1)	CW, 10W
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Model	Connector
WHC2040A	SMA Female

Item	Symbol	Test Constraints	Min	Typ	Max	Unit
Frequency Range	BW	50 Ohm Impedance	2000		4000	MHz
Insertion Loss	S_{21} , S_{31}	2000 - 4000 MHz, above 3 dB		0.5	1.2	dB
Isolation	S_{23}	2000 - 4000 MHz, 50 Ohm load at port C	18	20		dB
VSWR	SWR_i	2000 - 4000 MHz, all ports		1.22:1	1.5:1	Ratio
Amplitude Unbalance	$S_{21} - S_{31}$	2000 - 4000 MHz			1.3	dB
Phase Offset	$S_{21} - S_{31}$	2000 - 4000 MHz	85	90	95	Deg
Power Handling	P_{MAX}	2000 - 4000 MHz, CW			10	W
Operating Temp	T_o		-40		+85	°C

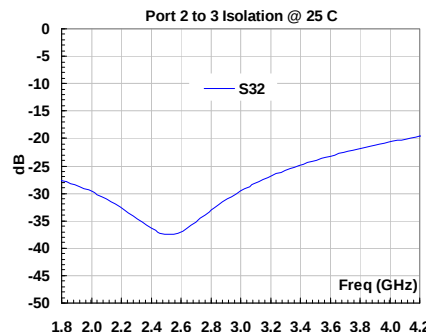
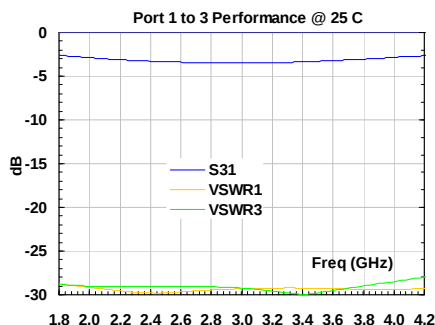
Port 1 to 2 Performance @ 25 C

The graph shows the performance of the device across a frequency range from 1.8 GHz to 4.2 GHz. The y-axis represents the magnitude in dB, ranging from 0 to -30. The x-axis represents the frequency in GHz.

Legend:

- S21 (Blue line): Return loss, which is consistently high (near 0 dB) across the entire frequency range.
- VSWR1 (Orange line): Standing wave ratio, which is consistently low (near -30 dB) across the entire frequency range.
- VSWR2 (Green line): Standing wave ratio, which is consistently low (near -30 dB) across the entire frequency range.

The graph indicates that the device has excellent performance, with high return loss and low standing wave ratio across the entire frequency range.



Port 2 to 3 Unbalances @ 25 C

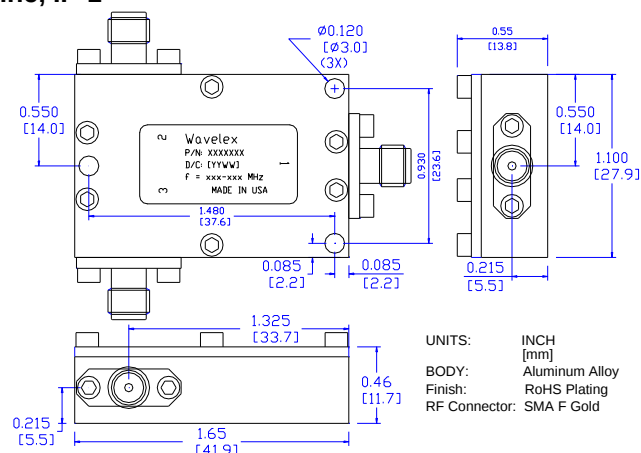
dB

— S21-S31

— ANG[S21]-ANG[S31]

Freq (GHz)

Degree



UNITS: INCH
[mm]
BODY: Aluminum Alloy
Finish: RoHS Plating
RF Connector: SMA F Gold