

Data Sheet

QF1600Q06A

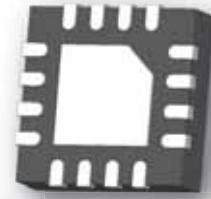
Quadrifilar Directional Coupler

1520 MHz-1660 MHz



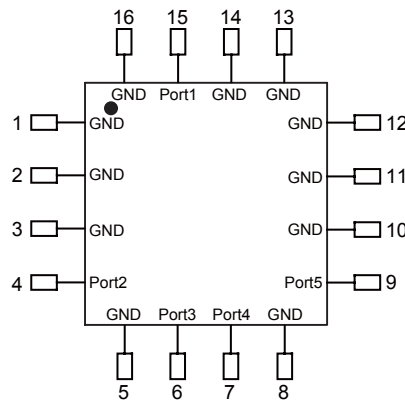
Features

- Ultra Small Size (3×3mm)
- Excellent phase & amplitude balance
- Excellent repeatability
- With internal 50 ohm termination (no need external termination)
- Built with leading edge RFIC design technology
- Have one Input port and four Output port that have 0°, 90°, 180°, 270° of phase difference
- Tape & Reel



Applications

- GNSS (Compass, GPS, Glonass, Galileo) Antenna



TOP VIEW

Port 1	Port 2	Port 3	Port4	Port 5
Input	Output1 -6dB, 0°	Output2 -6dB, -90°	Output3 -6dB, -180°	Output4 -6dB, -270°

Electrical Specifications at 25° C

Part No.	Freq. Range (MHz) FL~FU	Power (W)	Size LxW (mm)	Typical Return Loss (dB)	Typical Insertion Loss (dB)	Typical Isolation (dB)	Typical Phase Balance (deg)	Typical Amplitude Balance (dB)
QF1600Q06A	1520-1660	5	3X3	13	1	10	90±3	±0.5

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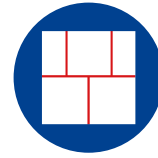
Add : 3F, Building 3, Southern District 2 of Zhongguan Honghualing Industrial Park, Xili, Nanshan, Shenzhen, China
Tel : 86-755-8355-1886 Fax : 86-755-8355-2533

For detailed performance specs & shopping online see Yantel web site : www.yantel-corp.com

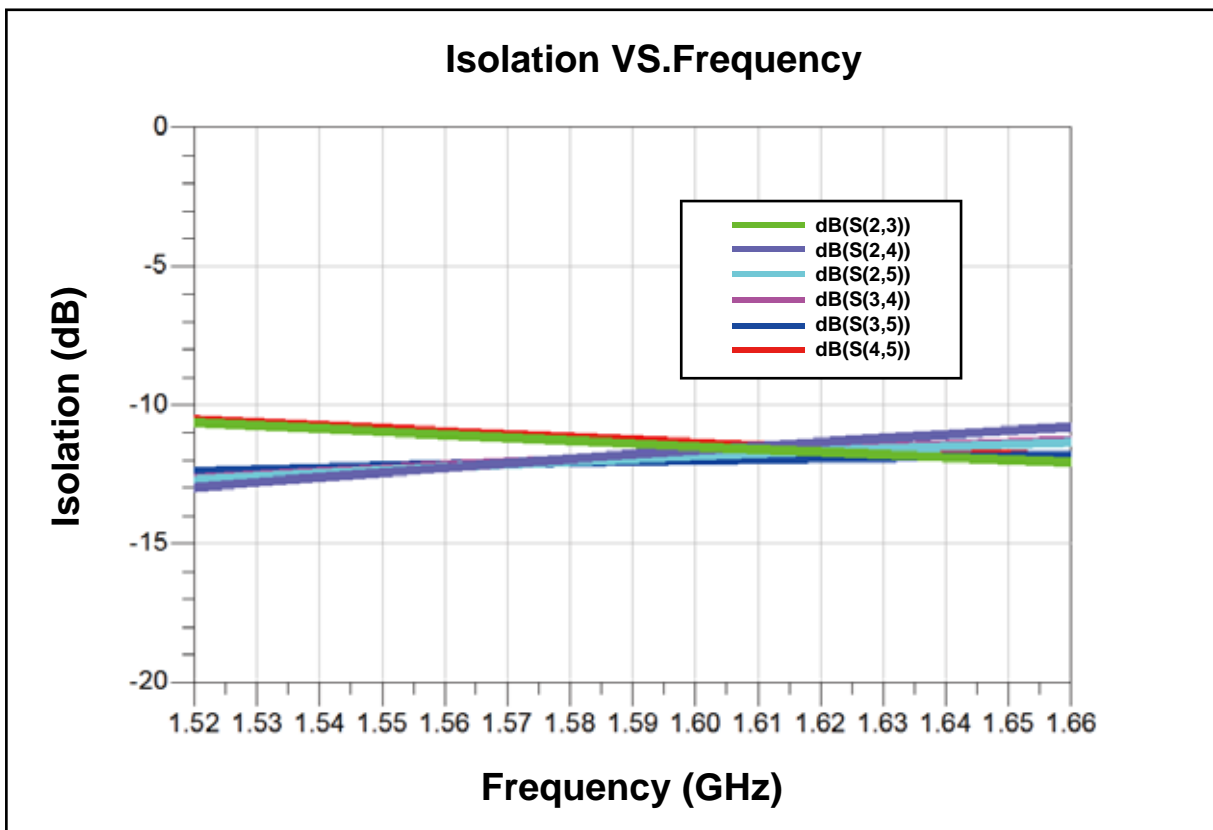
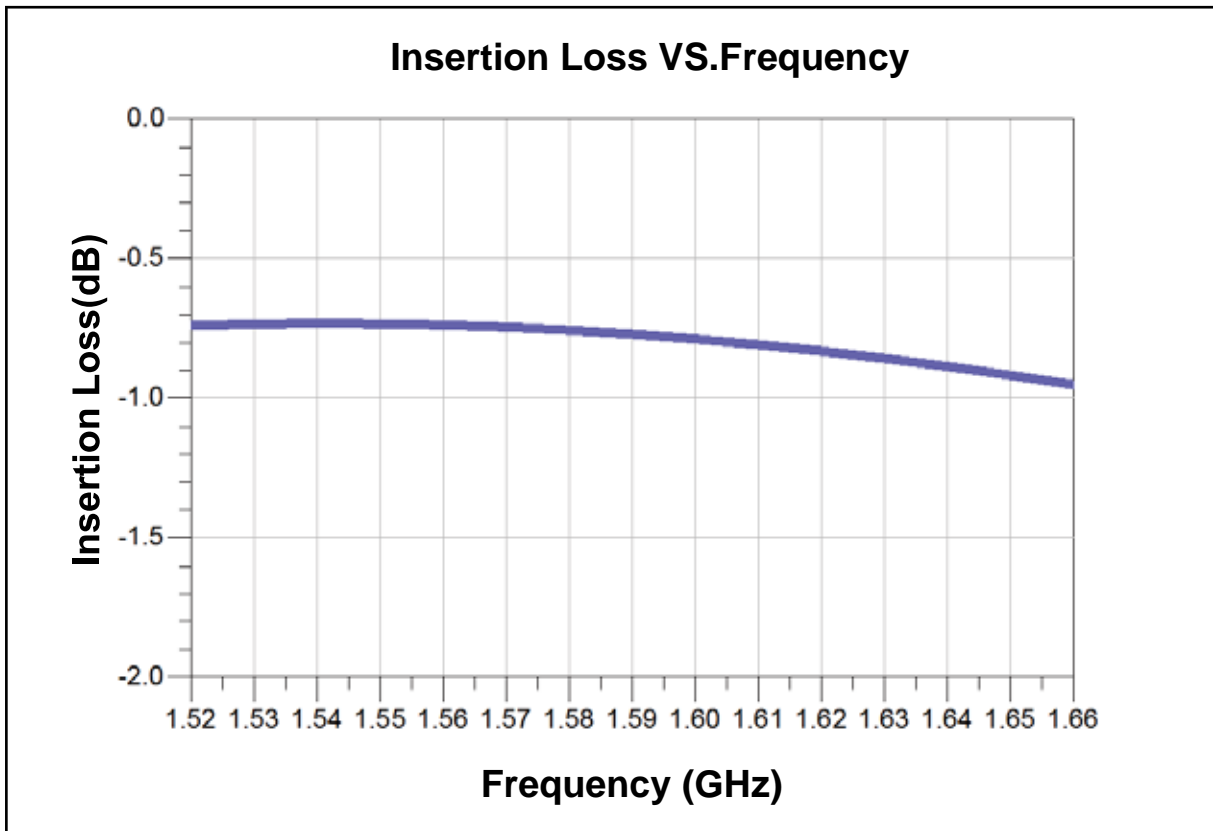
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Key Patents Lead Microwave Tech



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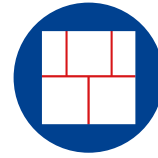
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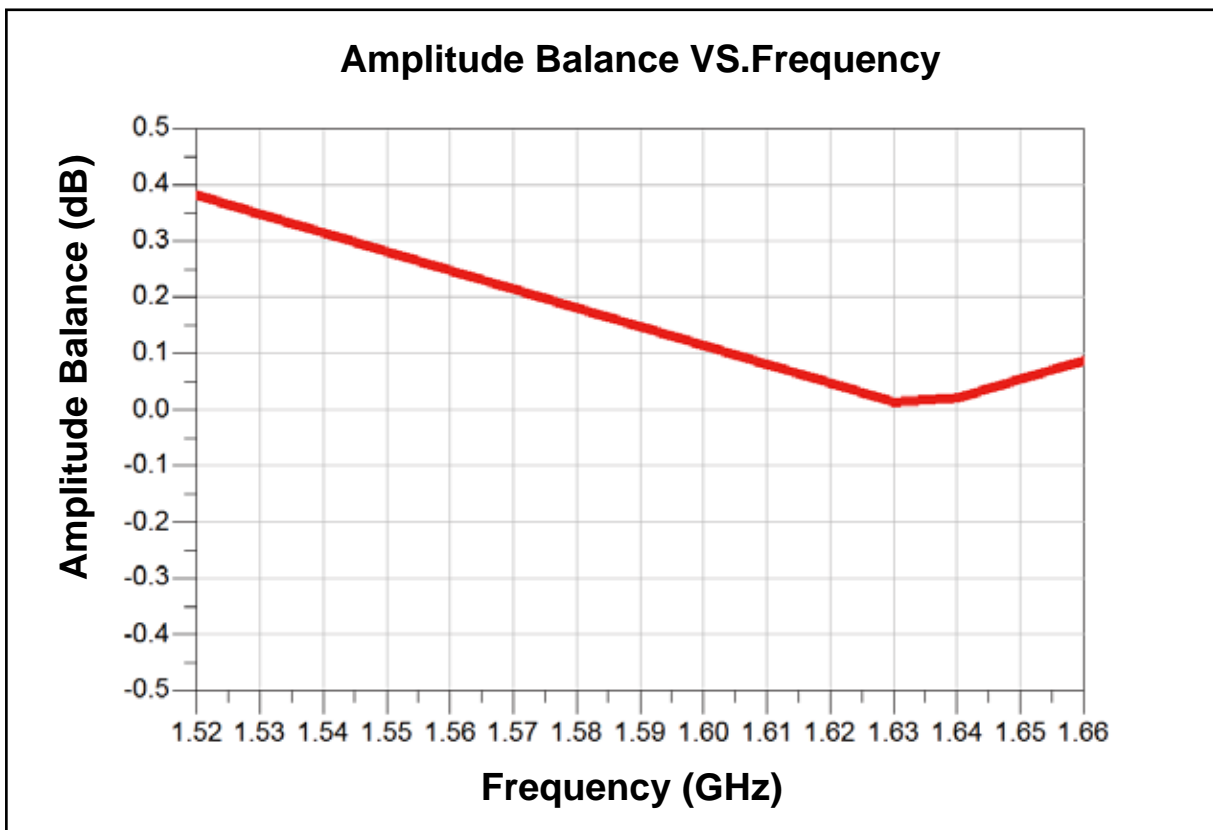
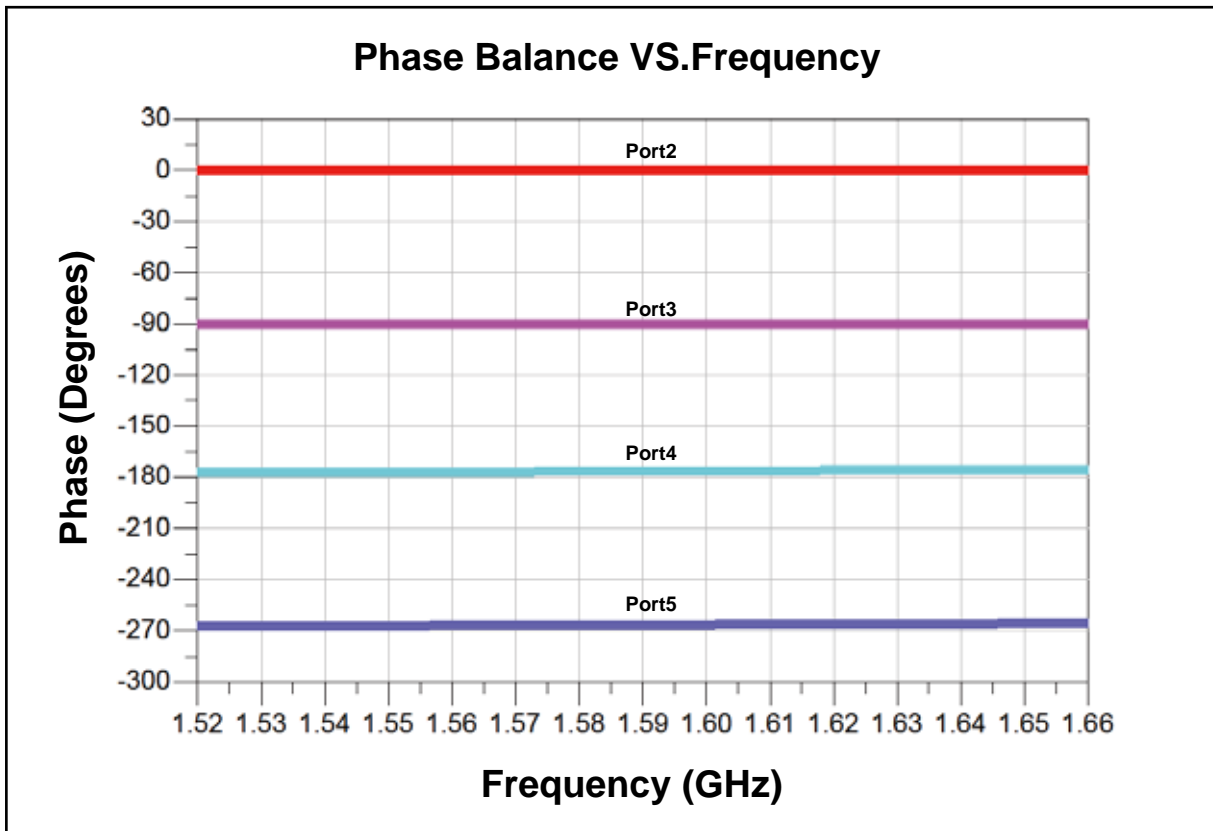
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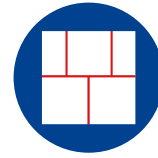
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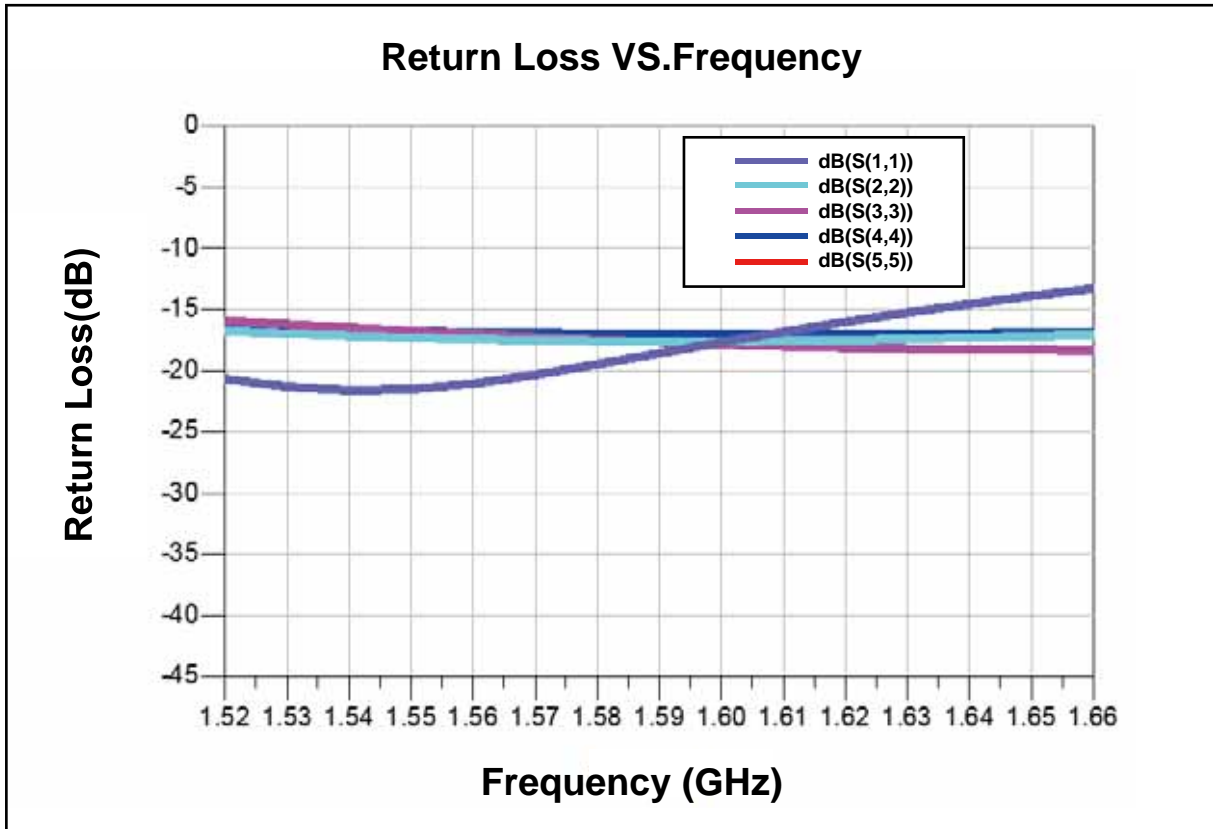
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Test Method

	S-Parameter[dB]	Power Method[dB]
Output1	S21	$10 \cdot \log \left(\frac{P_{Out\ 1}}{P_{in}} \right)$
Output2	S31	$10 \cdot \log \left(\frac{P_{Out\ 2}}{P_{in}} \right)$
Output3	S41	$10 \cdot \log \left(\frac{P_{Out\ 3}}{P_{in}} \right)$
Output4	S51	$10 \cdot \log \left(\frac{P_{Out\ 4}}{P_{in}} \right)$
Insertion Loss		$10 \cdot \log \left(\frac{P_{in}}{P_{Out\ 1} + P_{Out\ 2} + P_{Out\ 3} + P_{Out\ 4}} \right)$
Amplitude Balance		$10 \cdot \log \left(\frac{P_{(Out1 \sim Out4)}}{\frac{P_{Out\ 1} + P_{Out\ 2} + P_{Out\ 3} + P_{Out\ 4}}{4}} \right)$
Isolation1	S23	$10 \cdot \log \left(\frac{P_{Out\ 3}}{P_{Out\ 2}} \right)$
Isolation2	S24	$10 \cdot \log \left(\frac{P_{Out\ 4}}{P_{Out\ 2}} \right)$
Isolation3	S25	$10 \cdot \log \left(\frac{P_{Out\ 5}}{P_{Out\ 2}} \right)$
Isolation4	S34	$10 \cdot \log \left(\frac{P_{Out\ 4}}{P_{Out\ 3}} \right)$
Isolation5	S35	$10 \cdot \log \left(\frac{P_{Out\ 5}}{P_{Out\ 3}} \right)$
Isolation6	S45	$10 \cdot \log \left(\frac{P_{Out\ 5}}{P_{Out\ 4}} \right)$
Phase Balance1(0°)	Phase _(S21)	
Phase Balance2(-90°)	Phase _(S31) -Phase _(S21)	
Phase Balance3(-180°)	Phase _(S41) -Phase _(S21)	
Phase Balance4(-270°)	Phase _(S51) -Phase _(S21)	

P_{in} : Power of Input Port1 $P_{Out\ 1}$: Power of Output Port2
 $P_{Out\ 2}$: Power of Output Port3 $P_{Out\ 3}$: Power of Output Port4
 $P_{Out\ 4}$: Power of Output Port5

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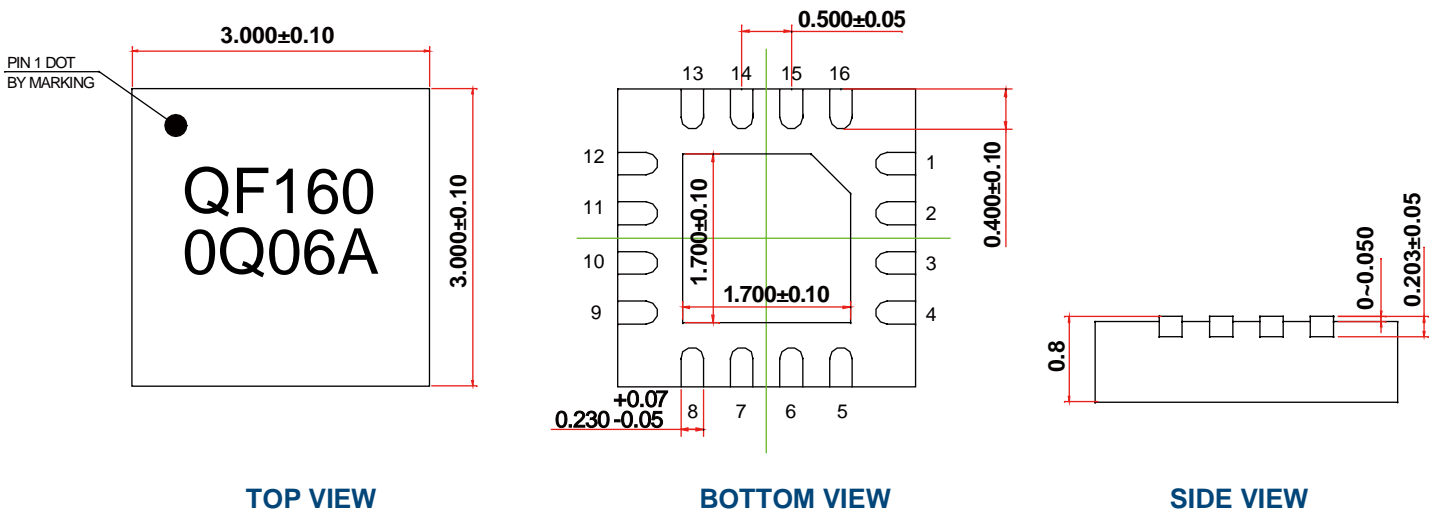
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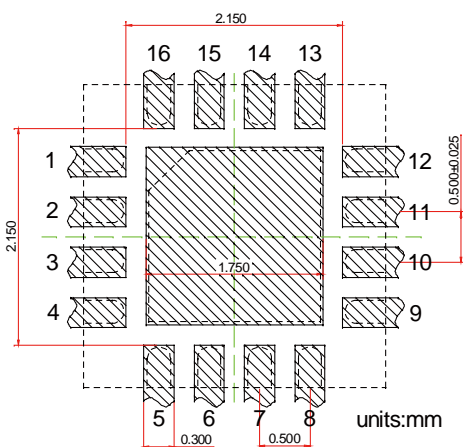
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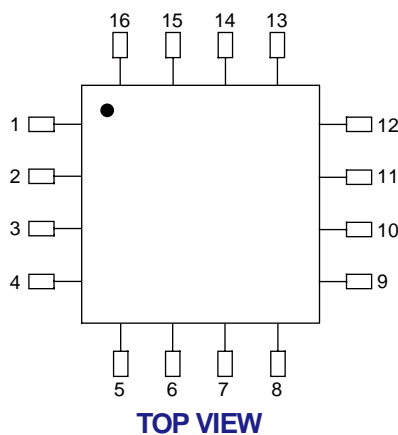
Outline Drawing



Land Pattern



Pin Out



Pin #	Connection
1	GND
2	GND
3	GND
4	PORT 2(-6dB, 0°)
5	GND
6	PORT 3(-6dB, -90°)
7	PORT 4(-6dB, -180°)
8	GND
9	PORT 5(-6dB, -270°)
10	GND
11	GND
12	GND
13	GND
14	GND
15	PORT 1(Input)
16	GND
Center Pad	GND

Notes: All dimensions show in millimeters

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