

# Data Sheet

## PD185U06-160

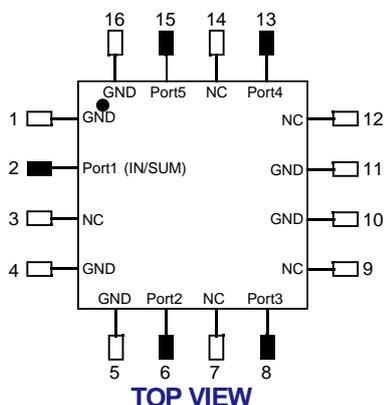
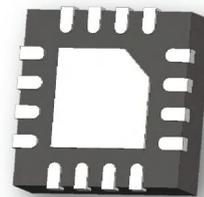
Power Divider/Combiner

4-Way 0° 50Ω 1.70-2.00 GHz



### Features

- Small Size (3x3mm QFN package)
- Passive RF IC, no need external DC power supply
- No need external 100 Ω resistor
- Very Low Loss
- Tight Amplitude Balance
- High Isolation
- Low VSWR
- Good Repeatability
- Tape & Reel
- Operating Temperature -40°C~85°C
- Power handling
  - 2 Watts as a divider
  - 0.5 Watts as a combiner

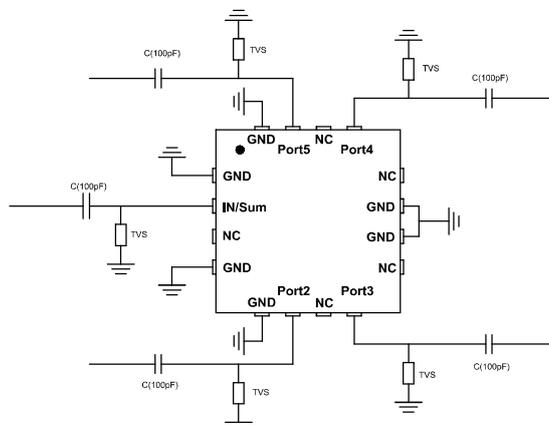


### Applications

- Wireless communications
- WLAN / WiMax
- SAT Radio
- ISM band instrument
- Information System for Automotive Safety

#### Notes:

1. This part has passed through 100% RF test.
2. Suggest to add Capacitors of DC Blocker between Pins (with black color) and external circuit to prevent DC signal entry to guarantee parts normal work.
3. Suggest to add a TVS Diode in parallel between Electrode (with black color) and Capacitor of DC Blocker to provide ESD protection for the product. TVS Diode use ON Semiconductor's ESD9101 is recommended.



#### ESD Rating

Human Body Model (HBM): ≤ 450V in accordance with ANSI/ESD STM 5.1 - 2001

Machine Model (MM): ≤ 100V in accordance with ANSI/ESD STM 5.2 - 1999

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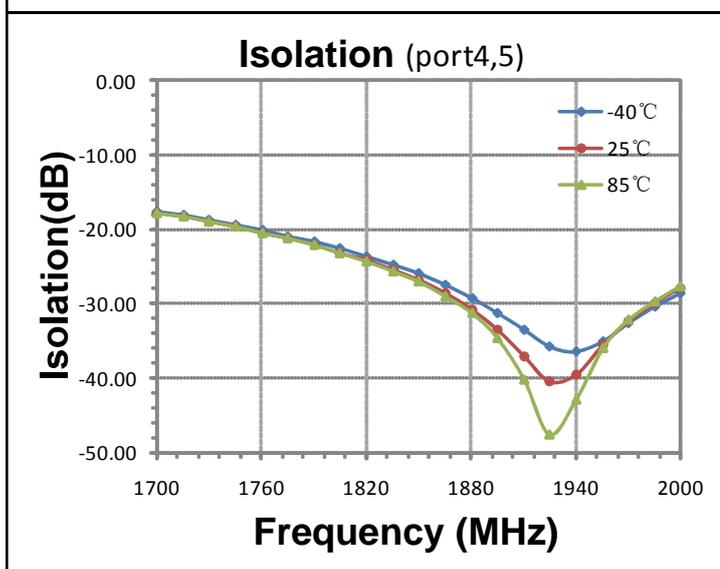
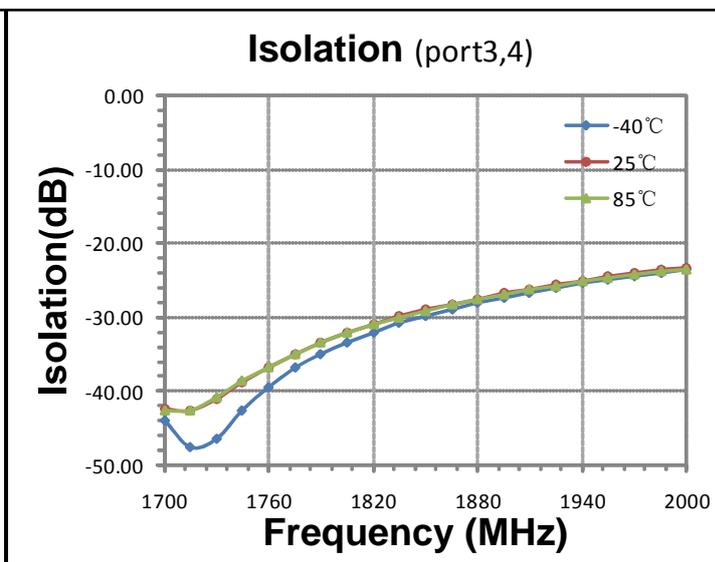
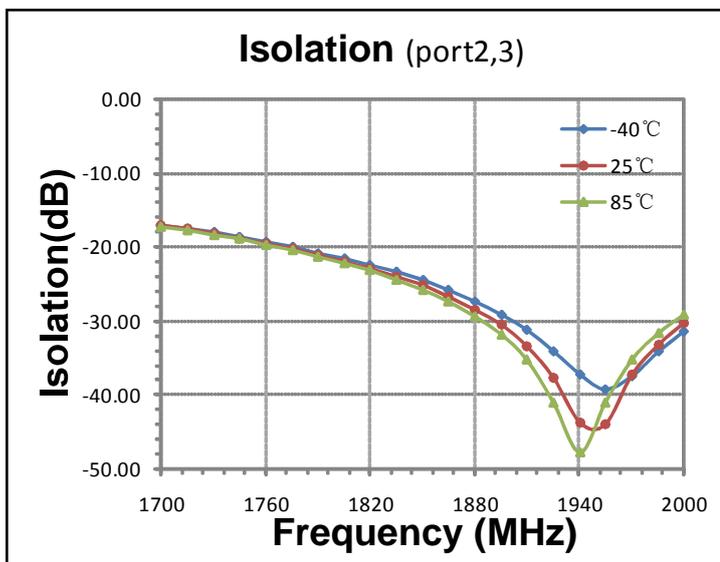
#### 4-Way 0° 50Ω 1.70-2.00 GHz



#### Electrical Specifications at 25° C

Parameter	Symbol	Min	Typ	Max	Unit
Frequency Range	F	1700		2000	MHz
Insertion Loss (Above 6dB)	$I_L$		0.45	0.60	dB
Isolation	Isol	16	22		dB
Phase balance	$\phi_{bal}$		2		deg
Amplitude balance	$A_{bal}$		0.30	0.35	dB
Input VSWR			1.20~1.4		:1
Output VSWR			1.20~1.5		:1

#### Typical Performance (-40°C, 25°C, 85°C: 1.7-2.0 GHz)



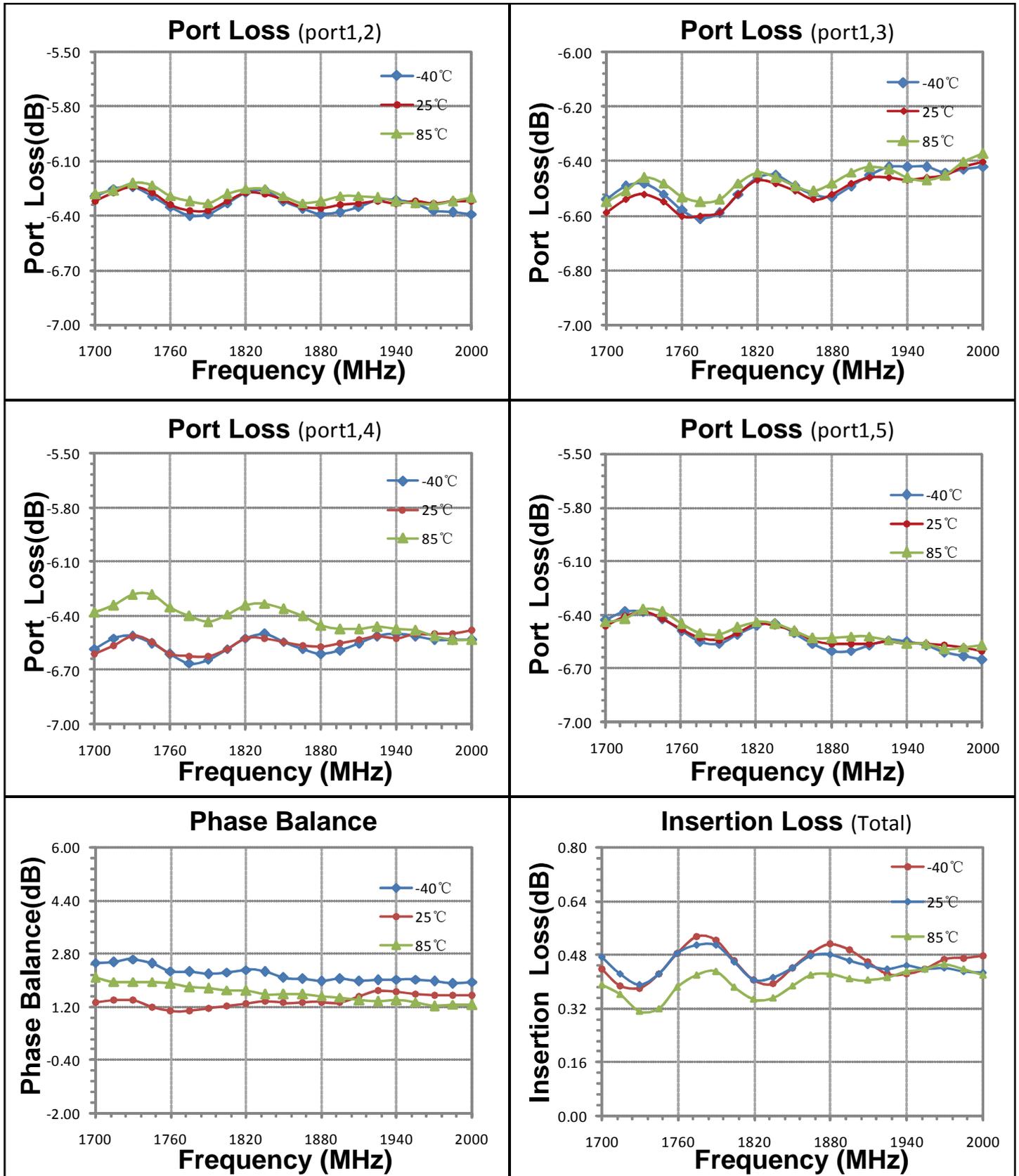
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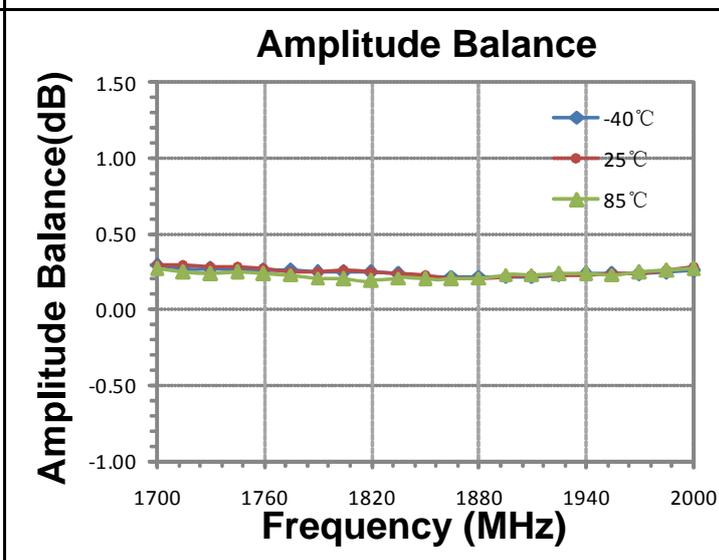
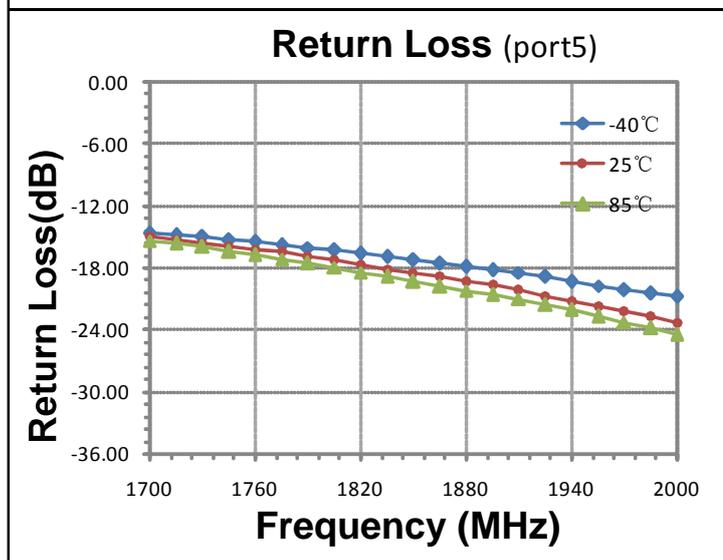
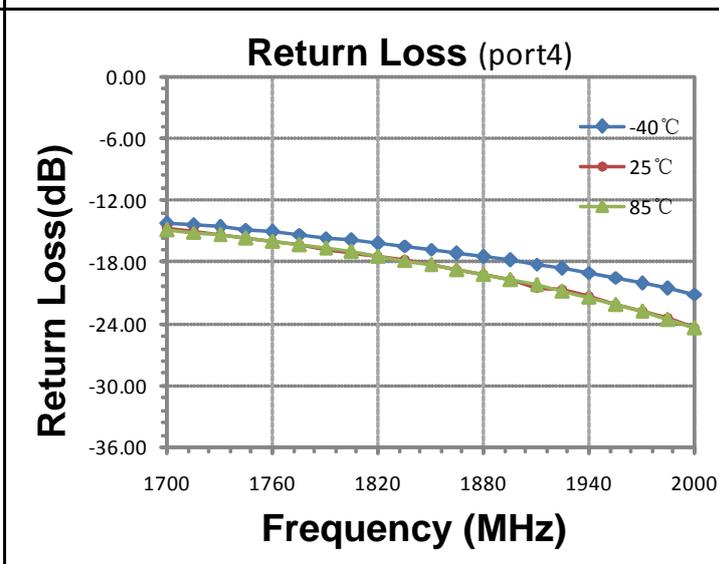
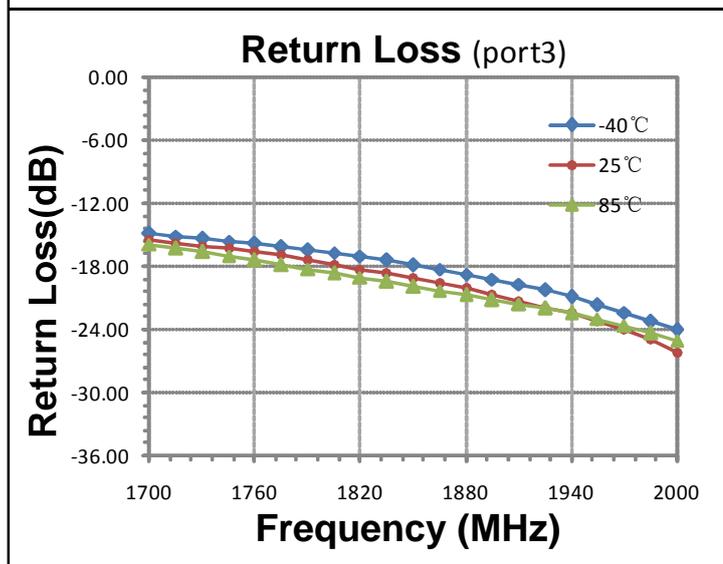
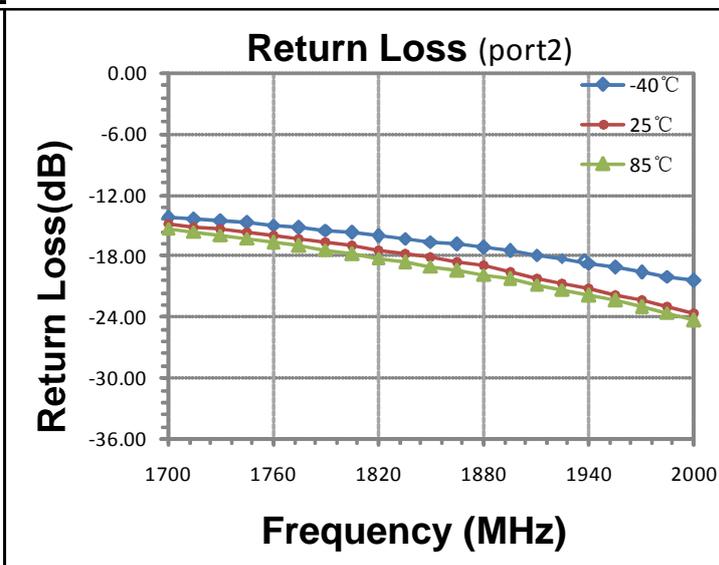
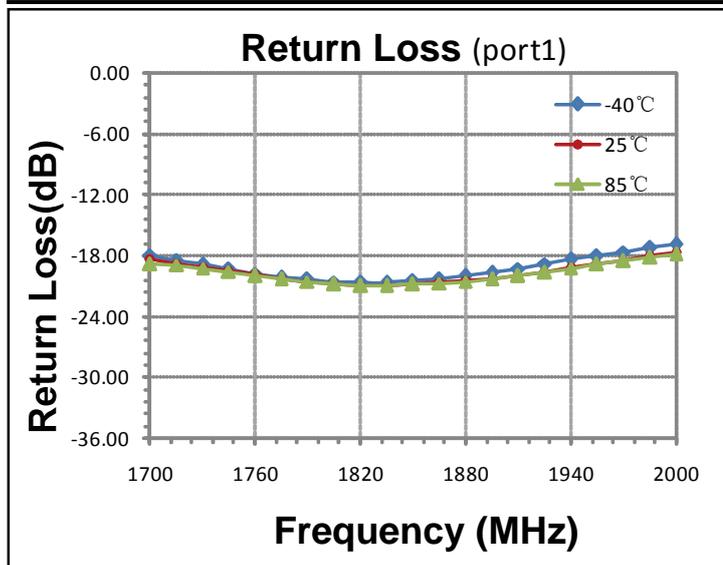
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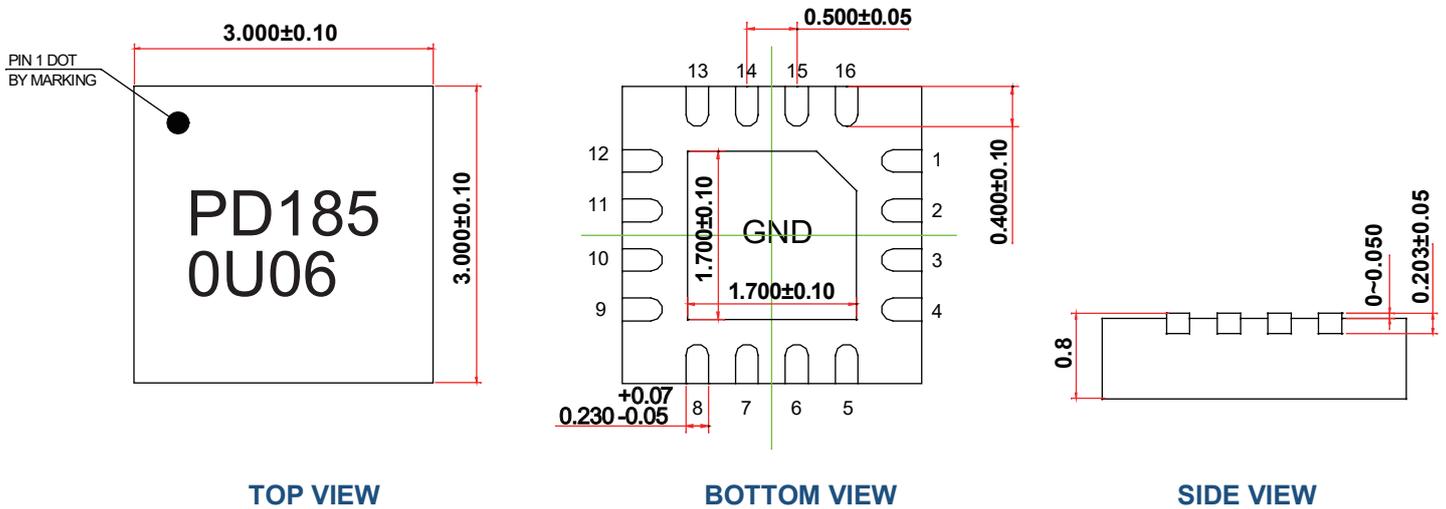
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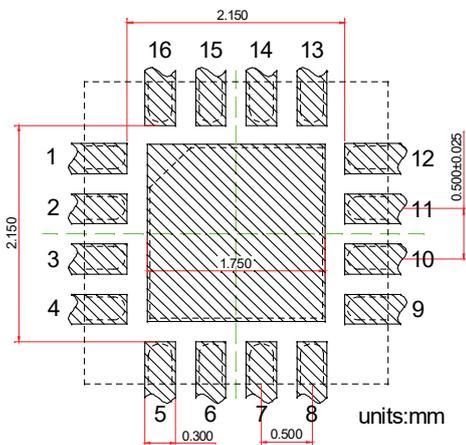
#### 4-Way 0° 50Ω 1.70-2.00 GHz



### Outline Drawing



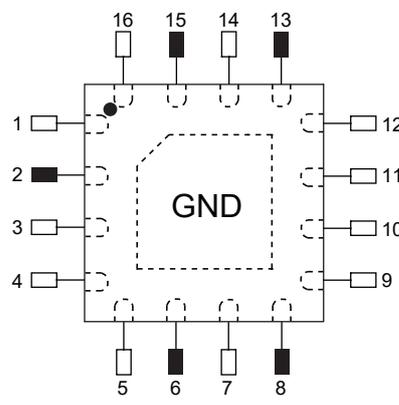
### Land Pattern



Recommended Land Pattern  
Top View

Notes: All dimensions show in millimeters

### Pin Out



TOP VIEW

Notes:

1. Require to add Capacitors of DC Blocker between Pins (with black color) and external circuit to prevent DC signal entry to guarantee normal work.
2. This part has passed through 100% RF test.

Pin #	Connection
1	GND
2	PORT 1 (IN/SUM)
3	NC
4	GND
5	GND
6	PORT 2
7	NC
8	PORT 3
9	NC
10	GND
11	GND
12	NC
13	PORT 4
14	NC
15	PORT 5
16	GND
Center Pad	GND