

Data Sheet

PD12000U03

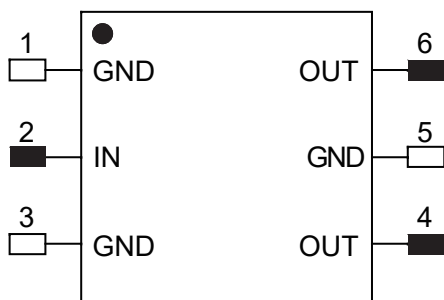
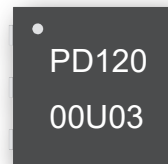
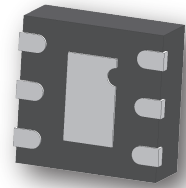
Power Divider/Combiner

2-Way 0° 50Ω 10-14.5 GHz



Features

- Small Size (2×2mm DFN 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~105°C
- Power handling
 - 2 Watts as a divider
 - 1 Watts as a combiner



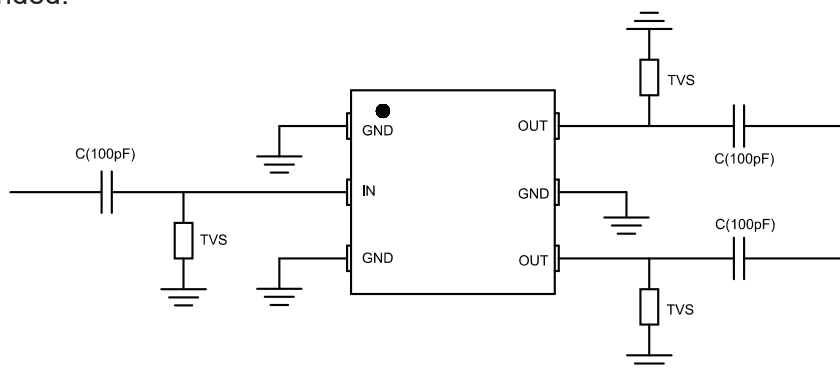
TOP VIEW

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): ≤ 800V in accordance with ANSI/ESD STM 5.1 - 2001

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

Yantel Corporation

Add: 3F, Building 3, Southern District 2 of Zhongguan Honghualing Industrial Park, Xili, Nanshan, Shenzhen, China

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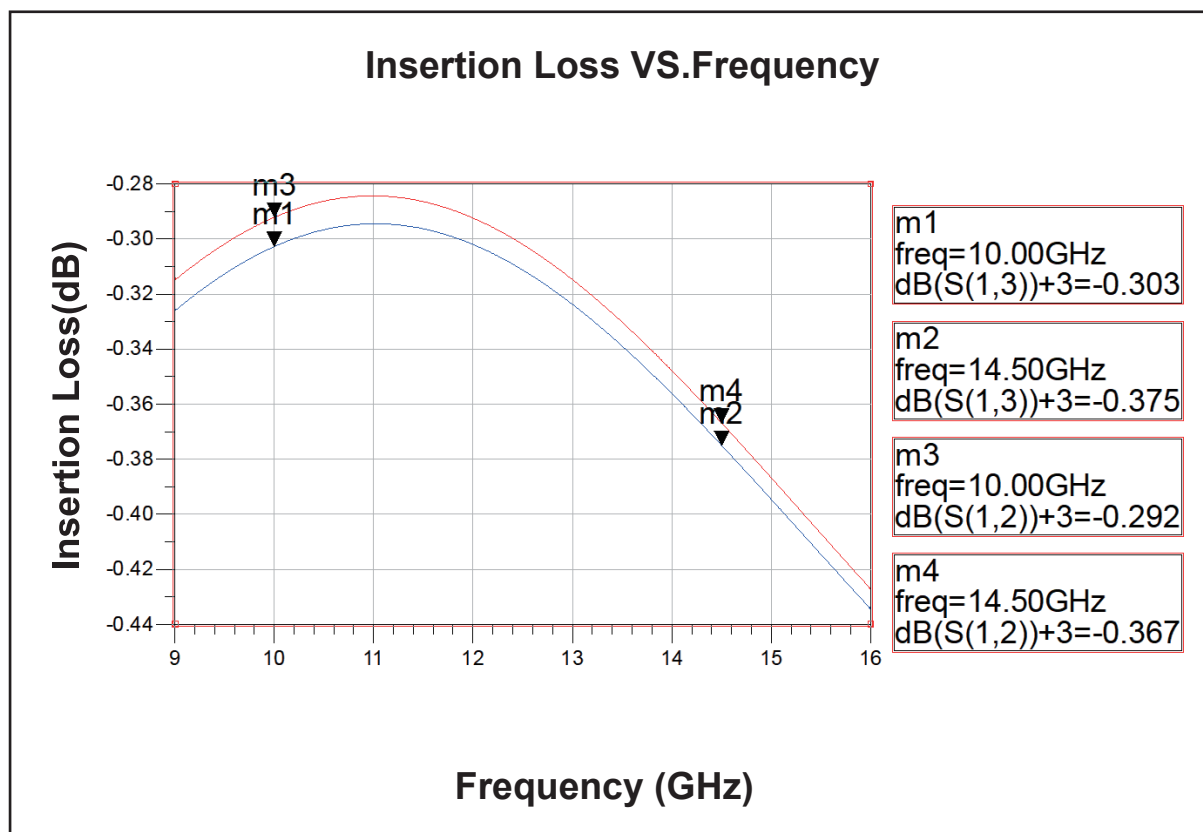
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Electrical Specifications at 25° C

Parameter	Symbol	Min	Typ	Max	Unit
Frequency Range	F	10		14.5	GHz
Insertion Loss (Above 3dB)	I_L		0.35	0.5	dB
Isolation	Isol	17	20		dB
Phase balance	ϕ_{bal}		1.0	2.0	deg
Amplitude balance	A_{bal}		± 0.1	± 0.2	dB
Input VSWR			1.25	1.30	
Output VSWR			1.22	1.25	

Typical Performance (25°C: 10-14.5 GHz)



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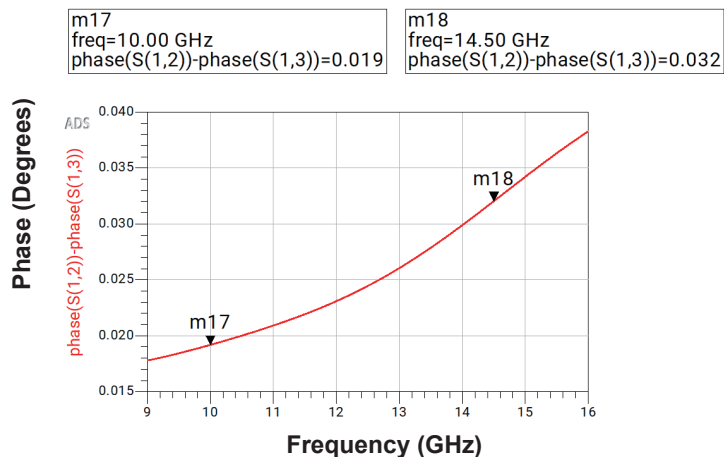
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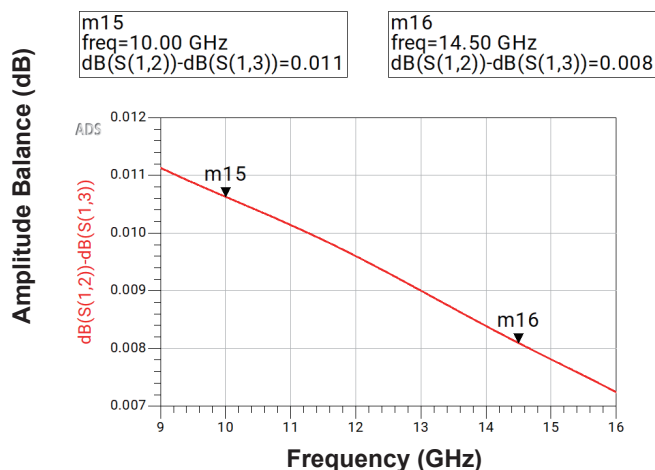
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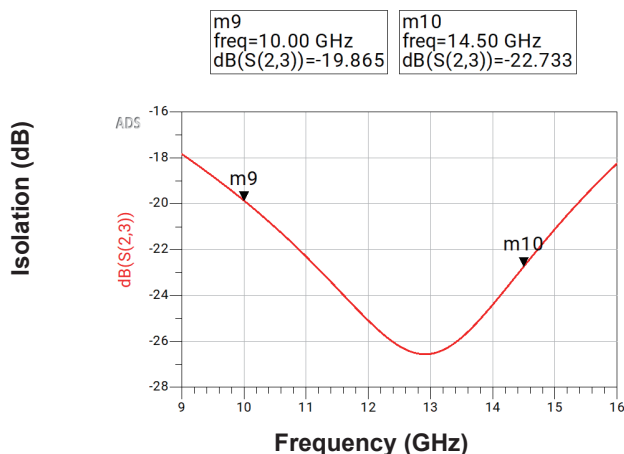
Phase Balance VS.Frequency



Amplitude Balance VS.Frequency



Isolation VS.Frequency



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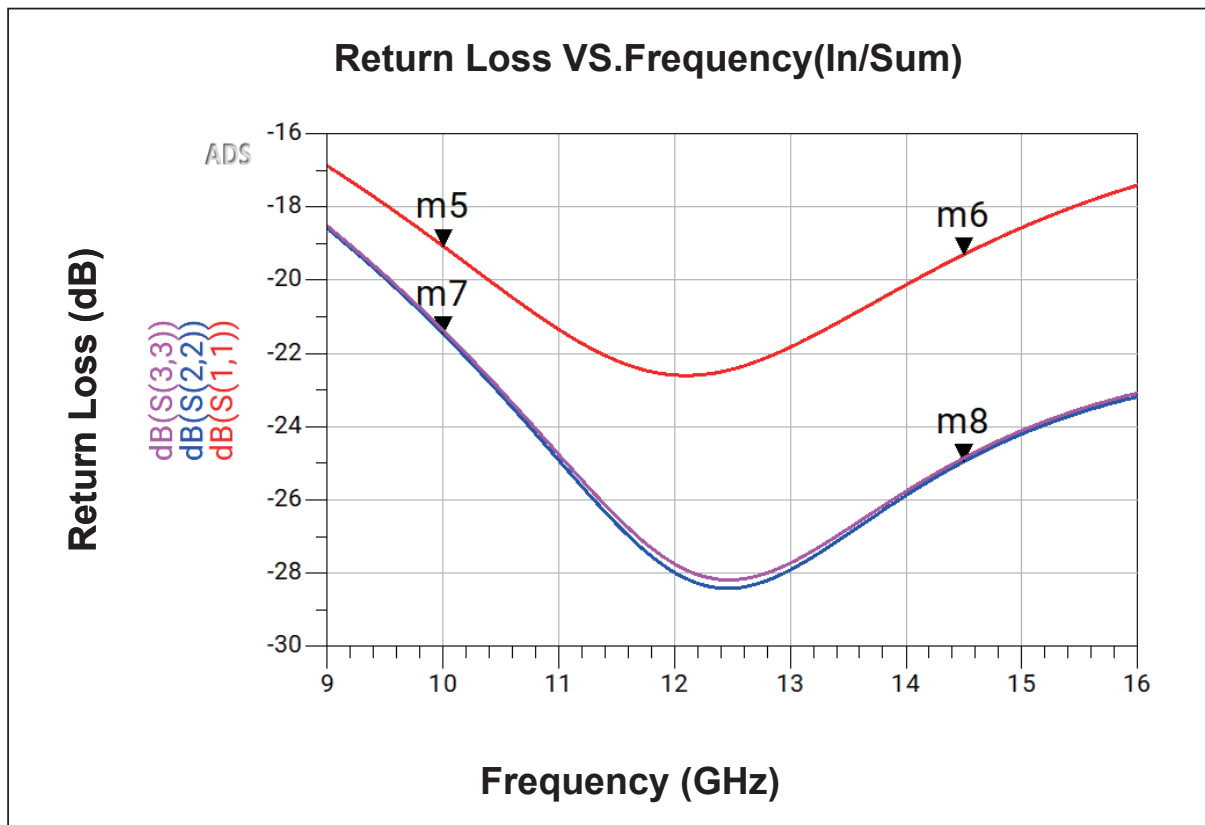
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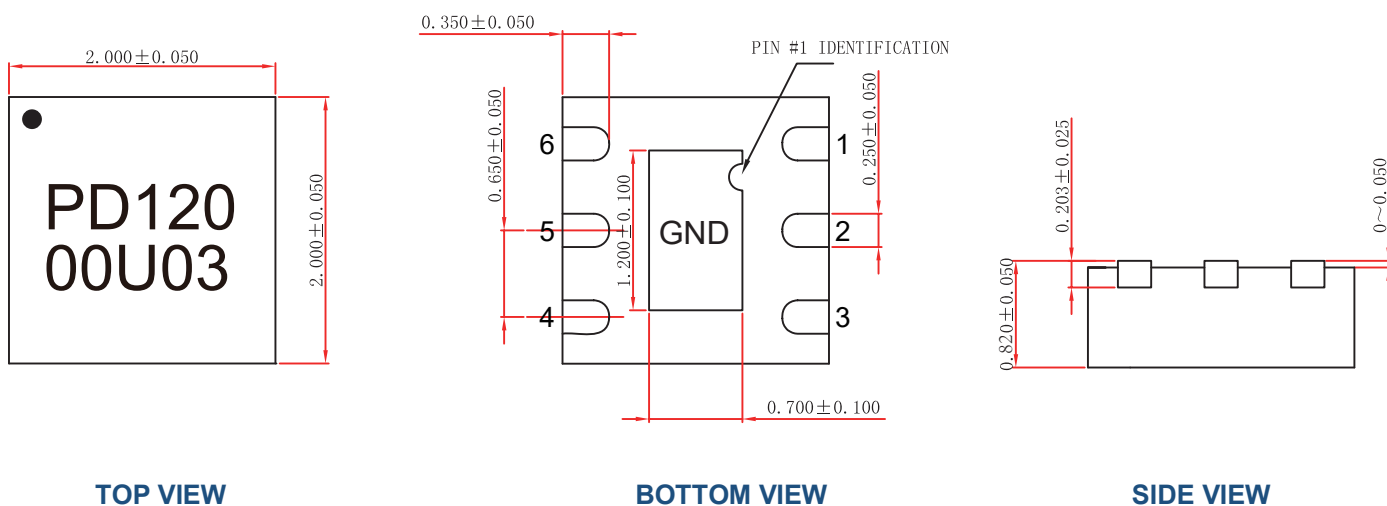
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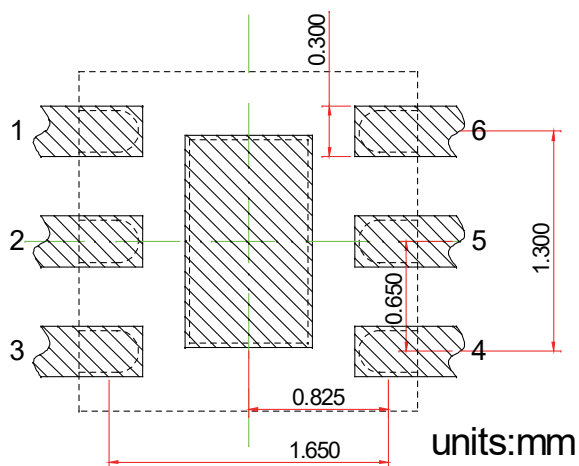
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Outline Drawing



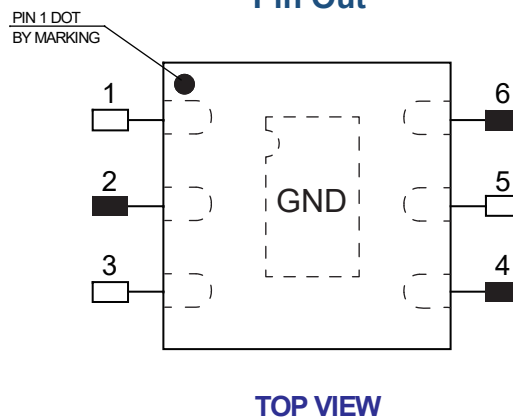
Land Pattern



Recommended Land Pattern Top View

Notes: All dimensions show in millimeters

Pin Out



Notes:

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

Pin #	Connection
1	GND
2	IN
3	GND
4	OUT
5	GND
6	OUT
Center Pad	GND

Yantel Corporation

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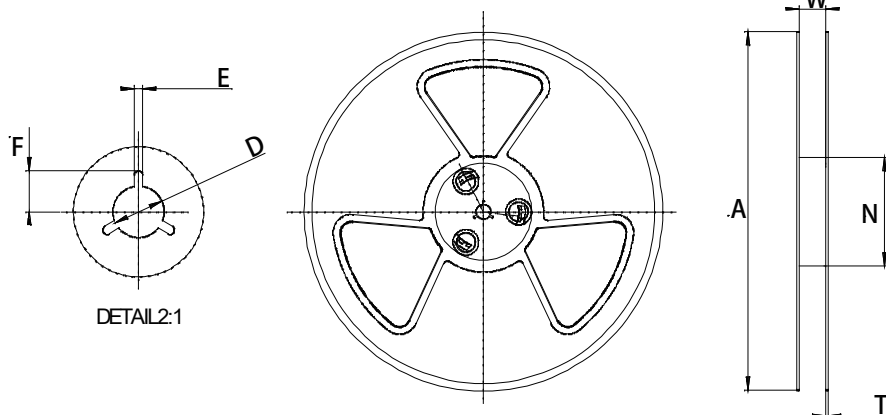
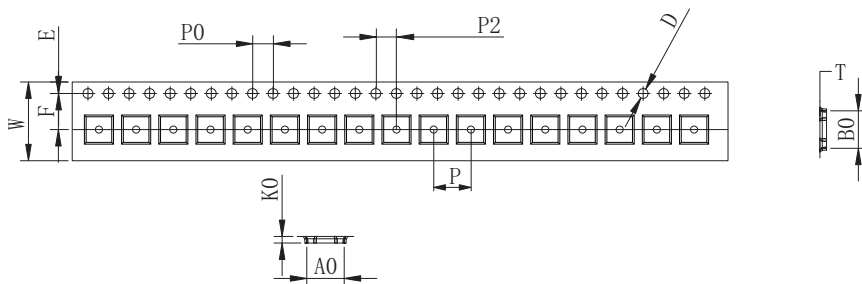


Tape and Reel Drawing

Feeding Direction



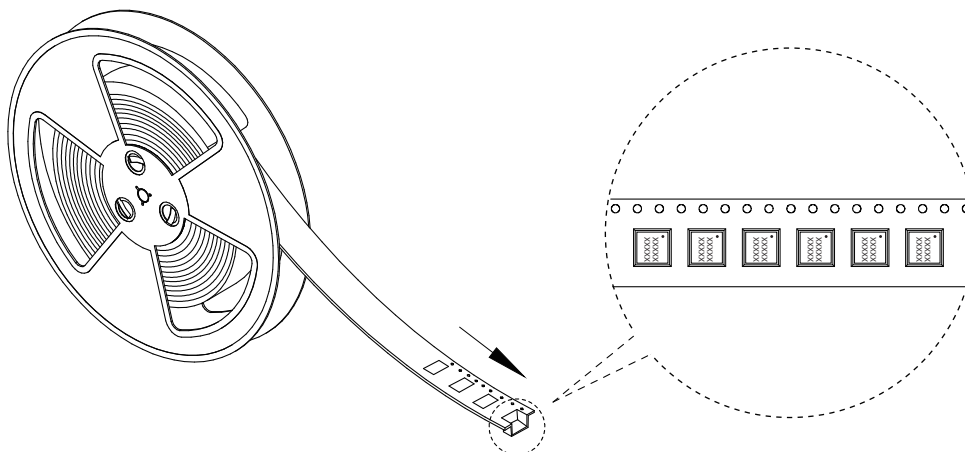
ITEM	W	A0	B0	K0	K1	P	F	E	D	P0	P2	t	13°
DIM	12.0	2.2	2.2	0.95		4	5.5	1.75	1.50	4.00	2.00	0.3	长度/盘 元件/盘
TOLE	+0.30 -0.30	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.00	+0.10 -0.10	+0.10 -0.10	+0.05 -0.05	M 15000 PCS



Notice:

- A. 10 Sprocket hole pitch cumulative tolerance is 0.2mm.
- B. Carrier camber shall be not more than 1mm per 100mm through a length of 250mm.
- C. All dimensions meet EIA-418-B requirements.
- D. A0 & B0 measured as indicated.
- E. K0 measured from a place on the inside bottom of the pocket to top surface of carrier.
- F. Material: PE 100
- G. Thickness: 0.20±0.05mm
- H. 15000 units (maximum) / T&R

Symbol	Dimensions(mm)
W	12.5±0.4
A	177±0.5
N	63±0.3
T	1.8±0.2
E	2.1±0.3
F	10.75±0.3
D	13.5+0.5/-0.2



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