

PD0605 Series

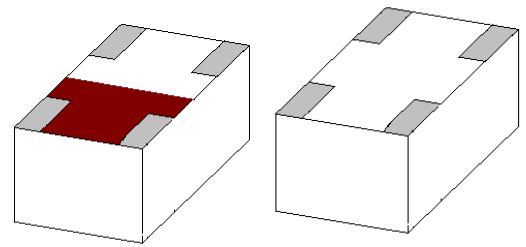
Multilayer Chip Power Divider

Features

- ❖ Monolithic SMD with small, low-profile and light-weight type.
- ❖ RoHS compliant

Applications

- ❖ 4.9~5.95 GHz wireless communication systems, including WLAN card, etc.



Specifications

Part Number	Freq. Range (MHz)	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Amplitude Balance (dB)	Phase Balance (Degrees)
PD0605-A5R5NAA_	4900 ~ 5950	3.3 typ. / 4.0 max	20 typ. / 15 min.	15 typ. / 10 min.	1.5 max	± 10

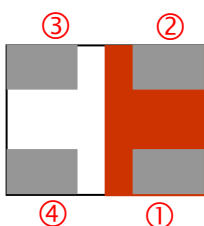
Q'ty/Reel (pcs) : 10,000
 Operating Temperature Range : -40 ~ +105 °C
 Storage Temperature Range : -40 ~ +105 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

Part Number

PD **0605** - **A** **5R5** **NAA** **□** **/LF**
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	PD : Power Divider	② Dimensions (L x W)	0.6 x 0.5 mm
③ Material Code	A	④ Frequency Range	5R5=5500MHz
⑤ Specification Code	NAA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

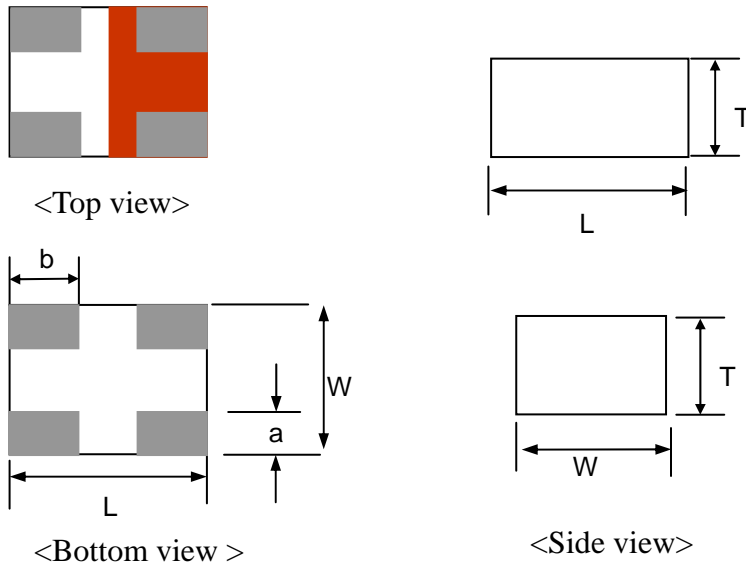
Terminal Configuration



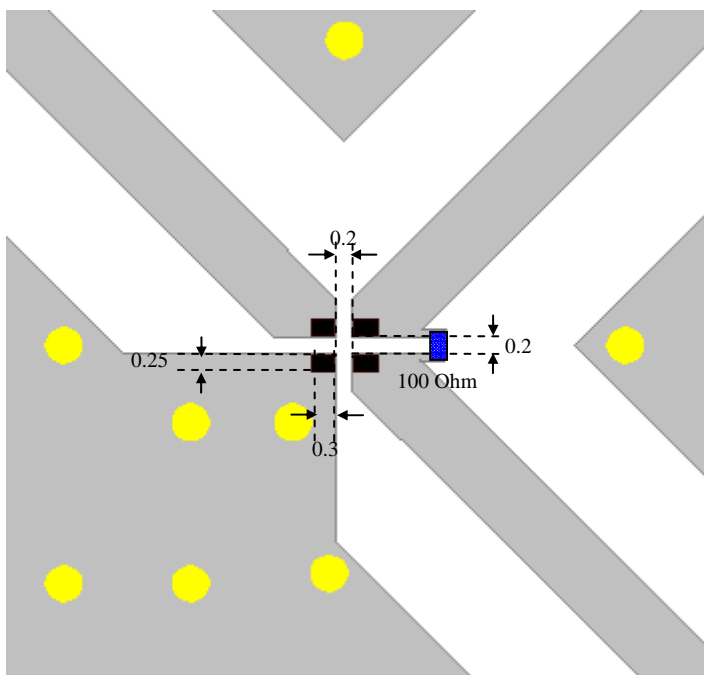
No.	Terminal Name	No.	Terminal Name
①	Out 1	③	IN
②	Out 2	④	GND





Dimensions and Recommended PC Board Pattern

Unit: mm



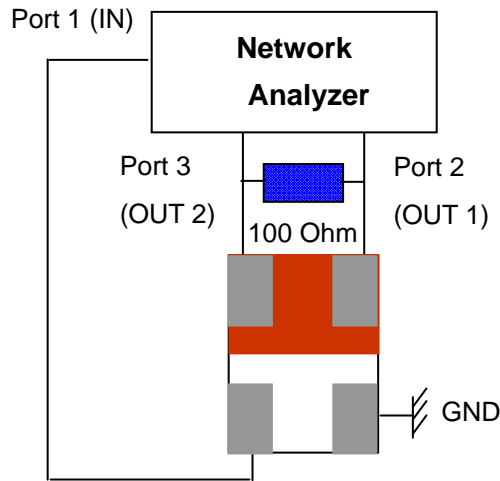
Mark	L	W	T	a	b
Dimensions	0.65 ± 0.05	0.5 ± 0.05	0.25 ± 0.05	0.125 +0.1/-0.05	0.225 +0.1/-0.05



-  Solder Resist
-  Land
-  Through-hole (ϕ 0.35)
-  100 ohm external resistor is required between OUT 1 and OUT 2

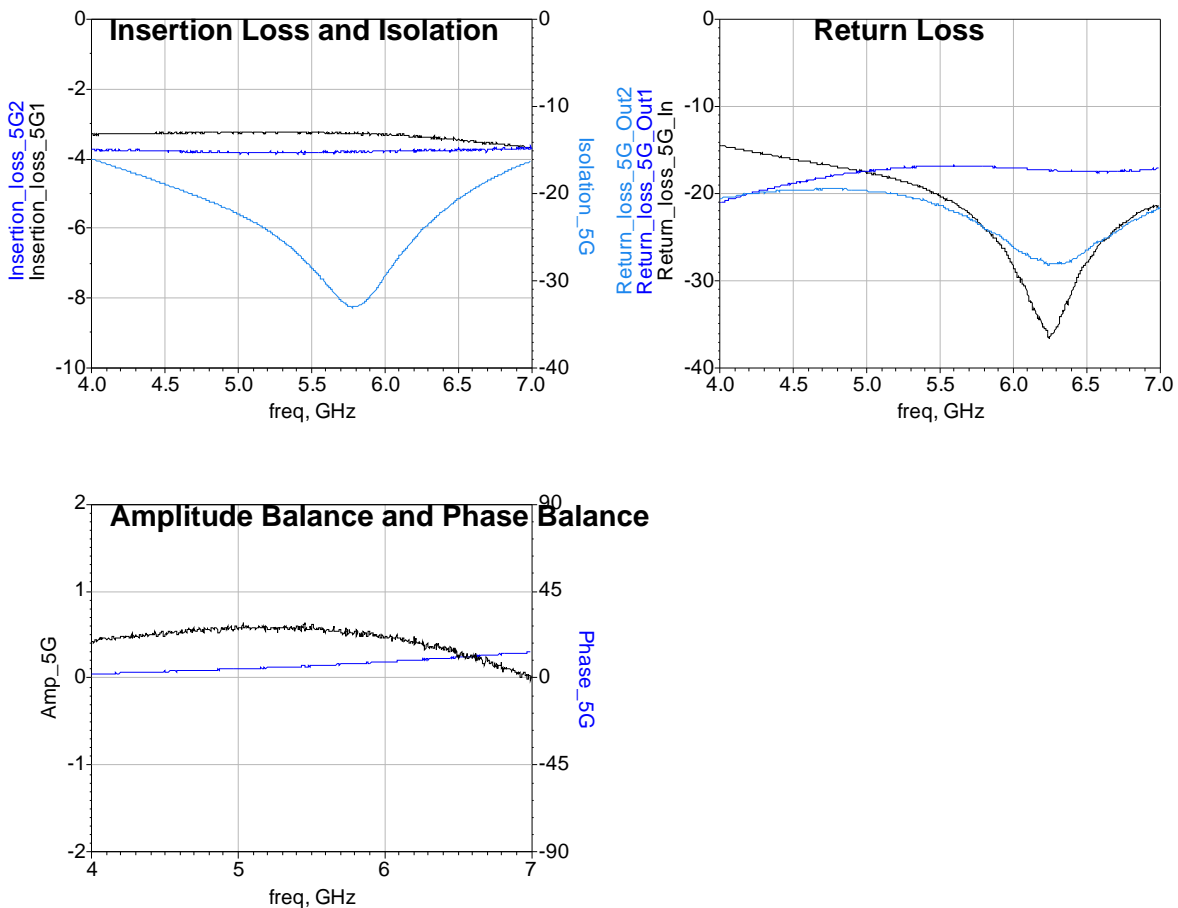
* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram



- * 100 ohm external resistor is required between OUT 1 and OUT 2
- * Insertion loss is defined as the S-parameter S21 and S31.

Electrical Characteristics (T=25°C)

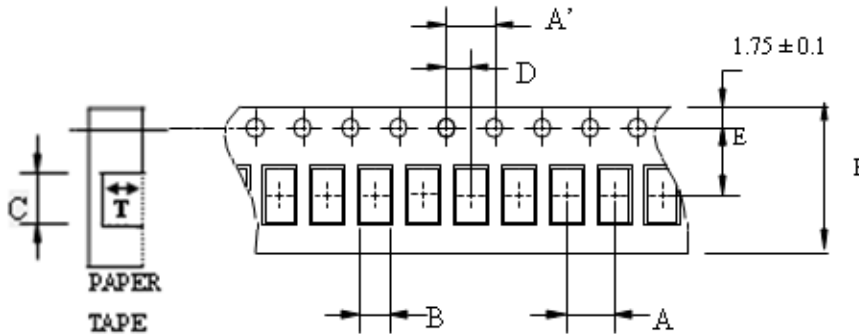


Notes

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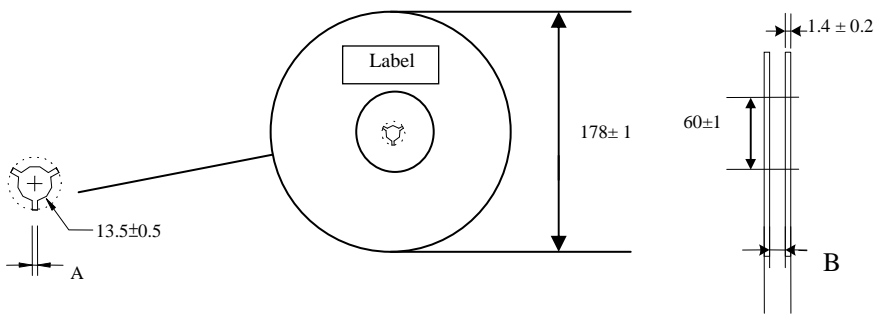
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
0605	2.0±	4.0±	0.58±	0.78±	2.0±	3.5±	8.0±	0.38±	10,000pcs	Paper
	0.05	0.1	0.03	0.03	0.05	0.05	0.2	0.03		

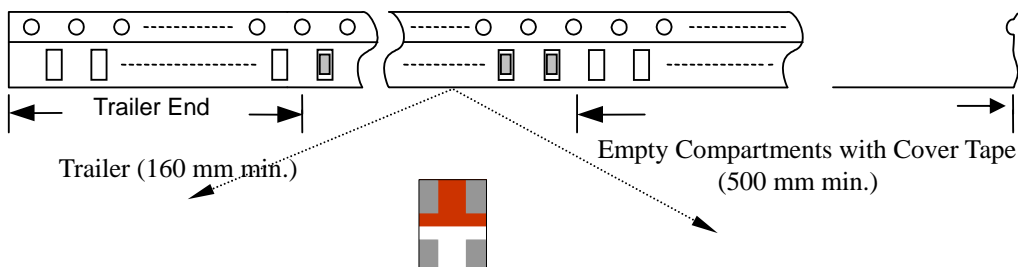
❖Reel Dimensions (Unit: mm)



Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
0605	2.3±0.5	9.0±0.3

❖Leader and Trailer Tape



❖ **Peel-off Force**



Peel-off force should be in the range of 0.1 – 0.6 N at a peel-off speed of 300 ± 10 mm/min .

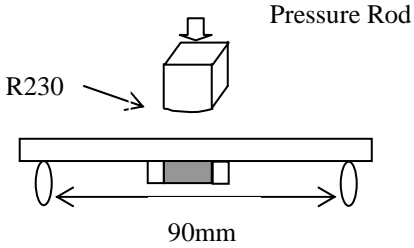
❖ **Storage Conditions**

- (1) Temperature: 5 ~35°C , relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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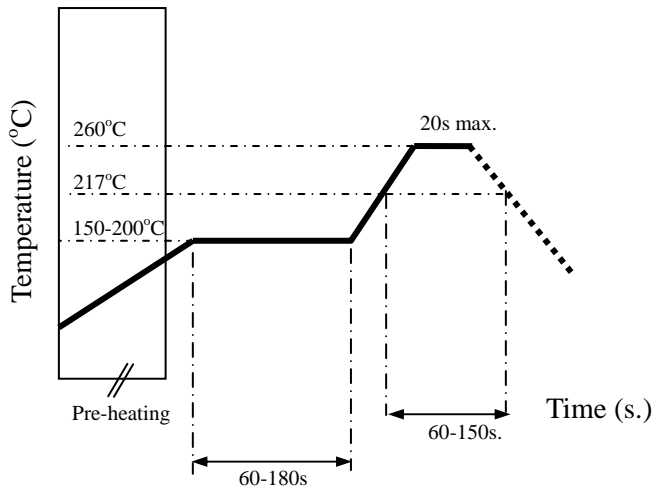
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> No apparent damage More than 95% of the terminal electrode shall be covered with new solder 	<ol style="list-style-type: none"> Preheat: $120 \pm 5^\circ\text{C}$ Solder: $245 \pm 5^\circ\text{C}$ for 5 ± 1 sec
Soldering strength (Termination Adhesion)	<ol style="list-style-type: none"> 2N minimum 	<ol style="list-style-type: none"> Solder specimen onto test jig. Apply push force at 0.5mm/s until electrode pads are peeled off or ceramic are broken. Pushing force is applied to longitude direction.
Deflection (Substrate Bending)	<ol style="list-style-type: none"> No apparent damage 	<ol style="list-style-type: none"> Solder specimen onto test jig (FR4, 0.8mm) using the recommend soldering profile. Apply a bending force of 2mm deflection. 
Heat/Humidity Resistance	<ol style="list-style-type: none"> No apparent damage Fulfill the electrical specification after test 	<ol style="list-style-type: none"> Temperature: $85 \pm 2^\circ\text{C}$ Humidity: 90% ~ 95% RH Duration: 1000 ± 48hrs Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	<ol style="list-style-type: none"> No apparent damage Fulfill the electrical specification after test 	<ol style="list-style-type: none"> One cycle/step 1 : $125 \pm 5^\circ\text{C}$ for 30 min step 2 : $-40 \pm 5^\circ\text{C}$ for 30 min No of cycles : 100 Recovery: 1-2 hrs
Low Temperature Resistance	<ol style="list-style-type: none"> No apparent damage Fulfill the electrical specification after test 	<ol style="list-style-type: none"> Temperature: $-40 \pm 5^\circ\text{C}$ Duration: 500 ± 24hrs Recovery: 1-2hrs

Soldering Conditions

❖ Typical Soldering Profile for Lead-free Process

Reflow Soldering :



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