

CP0605 Series

Multilayer Chip Couplers

Features

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



Applications

- ❖ 2.4 ~ 2.5、4.9~5.85 GHz wireless communication systems

Specifications

Part Number	Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Coupling (dB)	Directivity (dB)
CP0605-21F2455AB_	2400 ~ 2500	0.22 max.@-40~85°C 0.27 max.@105°C	17.5 min.	21.5 ± 1.0	14 min.
	4900 ~ 5850	0.32 max.@-40~85°C 0.37 max.@105°C		15 ± 1.2	14 min.

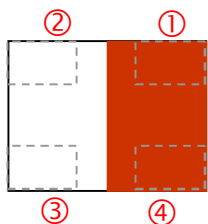
Q'ty/Reel (pcs) : 10,000
 Operating Temperature Range : -40 ~ +105 °C
 Storage Temperature Range : -40 ~ +105 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

Part Number

CP 0605 - 21 F 2455 AB □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Type	CP : Coupler	② Dimensions (L × W)	0.65 × 0.5 mm
③ LB Coupling	21 : 21 dB	④ HB Coupling	F: 15dB
⑤ Central Frequency	2455=2450MHz/ 5500MHz	⑥ Specification code	AB
⑦ Packaging	T: Tape & Reel B: Bulk	⑧ Soldering	/LF=lead-free

Terminal Configuration



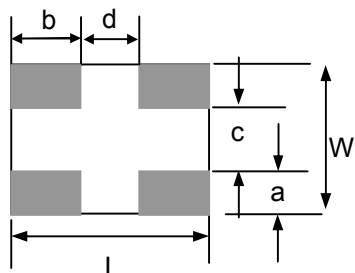
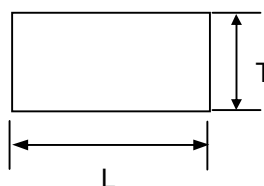
No.	Terminal Name	No.	Terminal Name
①	Coupling	③	Out
②	Termination	④	IN

Dimensions and Recommended PC Board Pattern

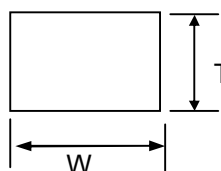
Unit: mm



<Top view>



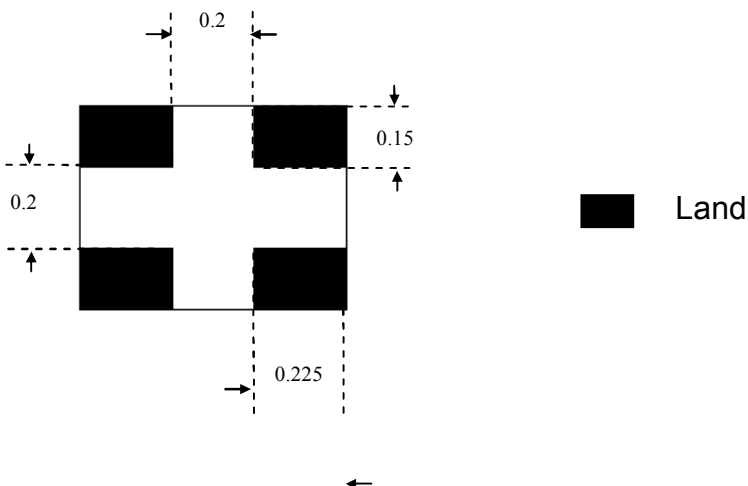
<Bottom view >



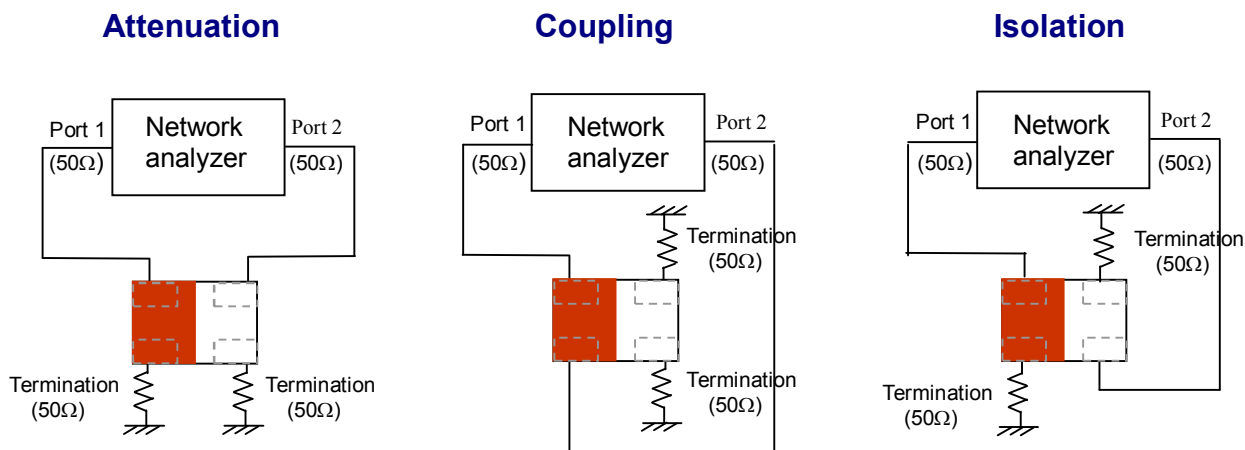
<Side view>

Mark	L	W	T	a	b	c	d
Dimensions	0.65 ±	0.5 ±	0.37 ±	0.15	0.225	0.2	0.2
	0.05	0.05	0.05	+0.1/-0.05	+0.1/-0.05	+0.1/-0.05	+0.1/-0.05

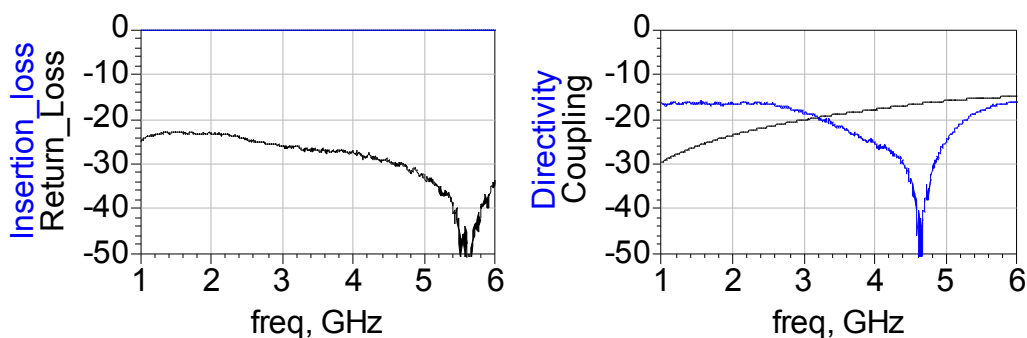
❖Recommended Land Pattern



Measuring Diagram



Electrical Characteristics (T=25oC)

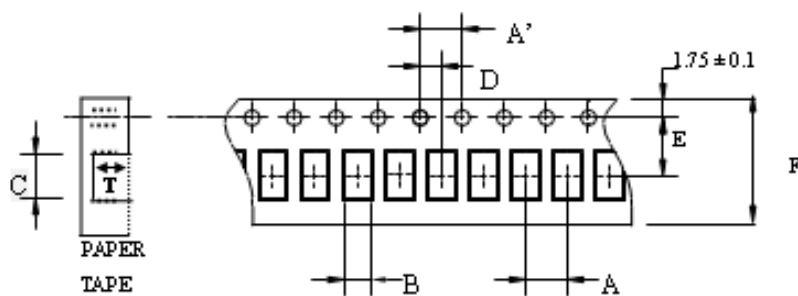


Notes

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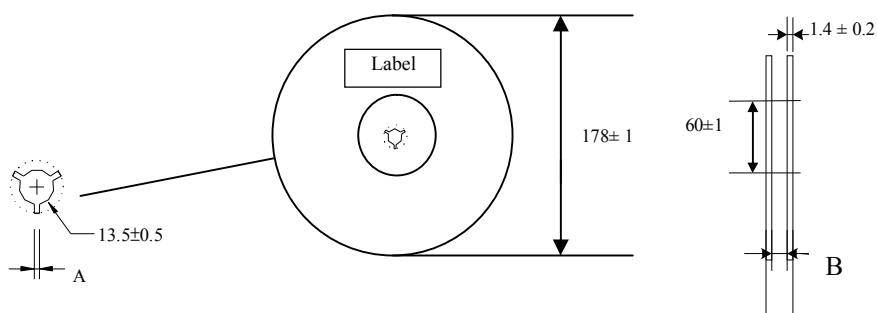
Taping Specifications

❖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±	0.45±	10,000pcs	Paper
	0.05	0.1	0.03	0.03	0.05	0.05	0.2	0.03		

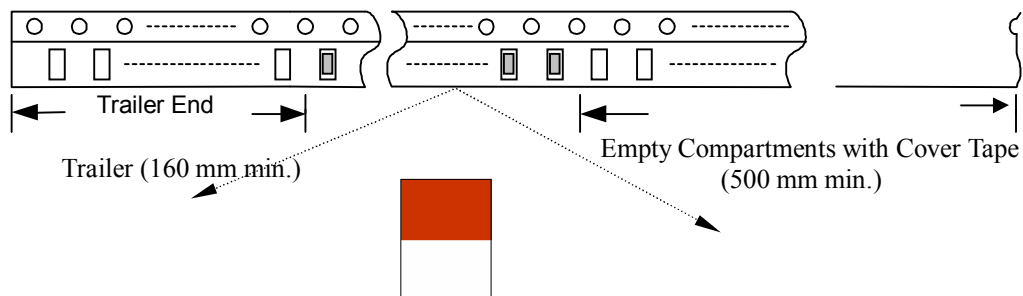
❖Reel Dimensions (Unit: mm)



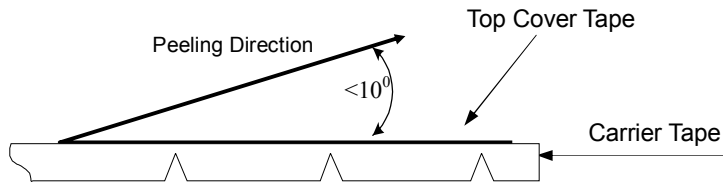
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

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 .

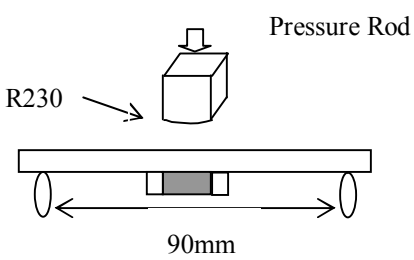
❖ **Storage Conditions**

- (1) Temperature: $5 \sim 35^\circ\text{C}$, relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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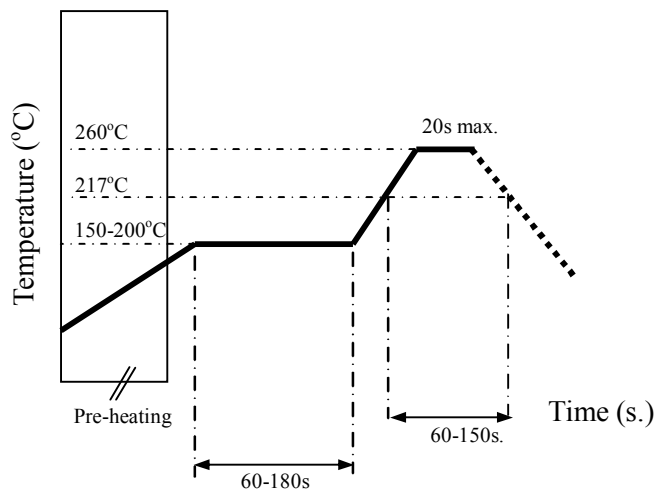
Mechanical & Environmental Characteristics

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 Fulfill the electrical specification 	<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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