

CP 2012 Series(Preliminary)

Multilayer Chip Couplers

Features

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

Applications

- ❖ 5.15~7.125 GHz wireless communication systems

Specifications

Part Number	Pass band (MHz)	Insertion Loss (dB)	Return Loss (dB)	Coupling (dB)	Directivity (dB)	Sensitivity (dB)
CP2012-10A1950_	1700 ~ 2200	0.5 max.	15.6 min.	10.55 +/- 0.65	13.1 min.	0.25 max.
	1805 ~ 1880	0.5 max.	15.9 min.	10.4 +/- 0.6	18.2 min.	0.1 max.
	1930 ~ 1990	0.5 max.	16.1 min.	10.45 +/- 0.65	16.4 min.	0.1 max.
	2110 ~ 2170	0.5 max.	16.5 min.	10.7 +/- 0.7	13.6 min.	0.1 max.

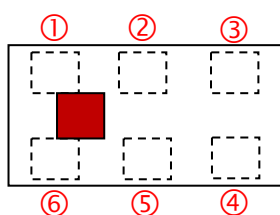
Q'ty/Reel (pcs) : 4000
 Operating Temperature Range : -40 ~ +85 °C
 Storage Temperature Range : -40 ~ +85 °C
 Storage Period : 12 months max.
 Power Capacity : 2W max.

Part Number

CP 2012 - 10 A 1950 □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	CP : Coupler	② Dimensions (L x W)	2.0 x 1.25 mm
③ Coupling	10 : 10dB	④ Specification Code	A
⑤ Central Frequency	1950 : 1950MHz	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

Terminal Configuration

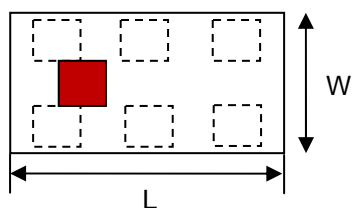


<Top View>

No.	Terminal Name	No.	Terminal Name
①	IN	④	GND
②	Coupled Out	⑤	Termination
③	GND	⑥	Main Out

Dimensions

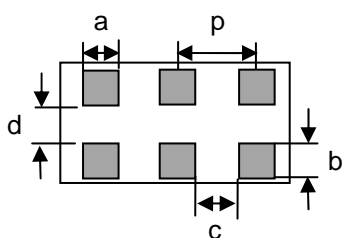
Unit : mm



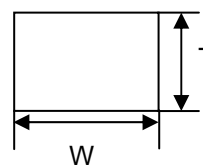
<Top View>



<Side View>



<Bottom View>



<Side View>

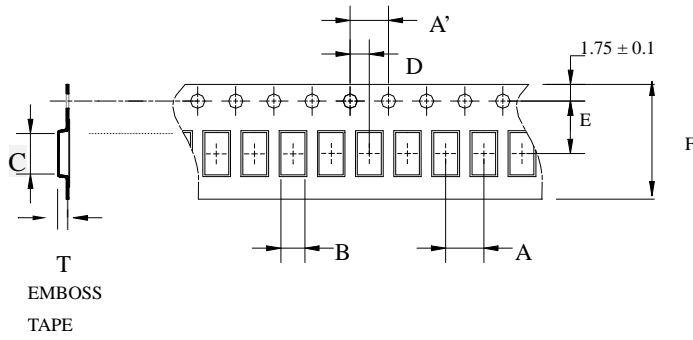
Mark	L	W	T	a	b	c	g	p
Dimensions	2.04	1.28	0.7	0.3	0.22	0.35	0.76	0.65
	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1	±0.1	±0.05

Notes

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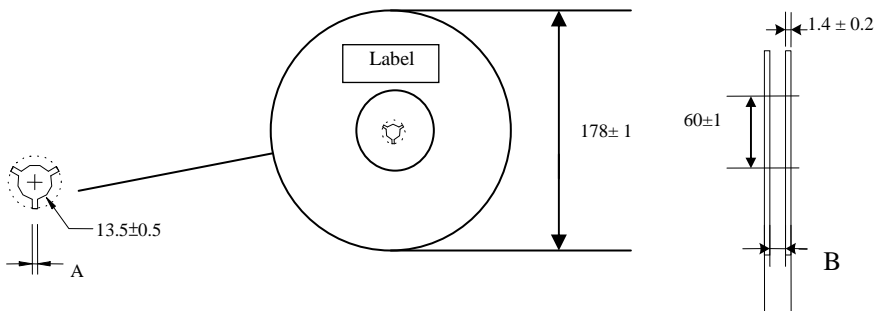
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



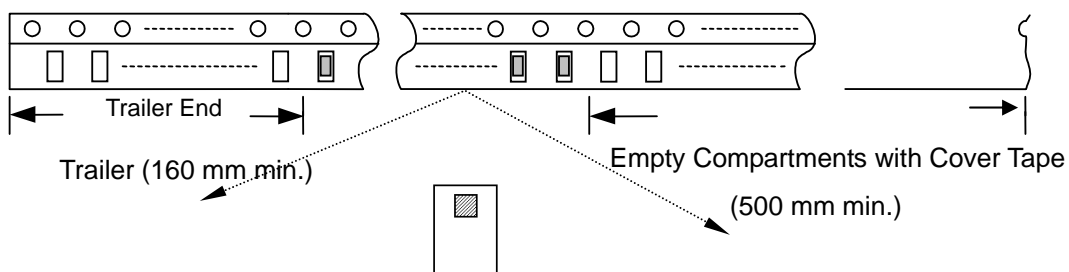
Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material	Tape Material No.
2012	4.0±	4.0±	1.35±	2.15±	2.0±	3.5±	8.0±	1.00±	4,000pcs	Plastic (Embossed)	1220145
	0.1	0.1	0.05	0.05	0.05	0.1	0.1	0.05			

❖Reel Dimensions (Unit: mm)

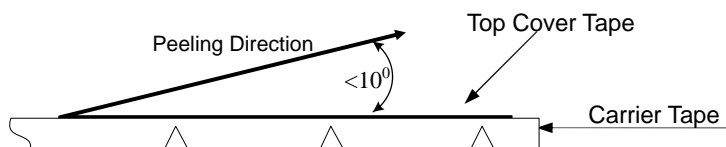


Type	A	B	Material No.
2012	2.3±0.5	9.0±0.3	1220300

❖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 .

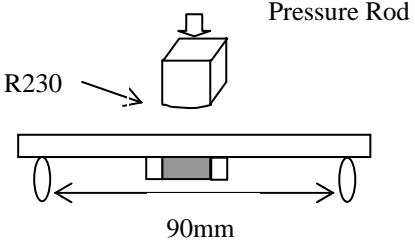
❖ **Storage Conditions**

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

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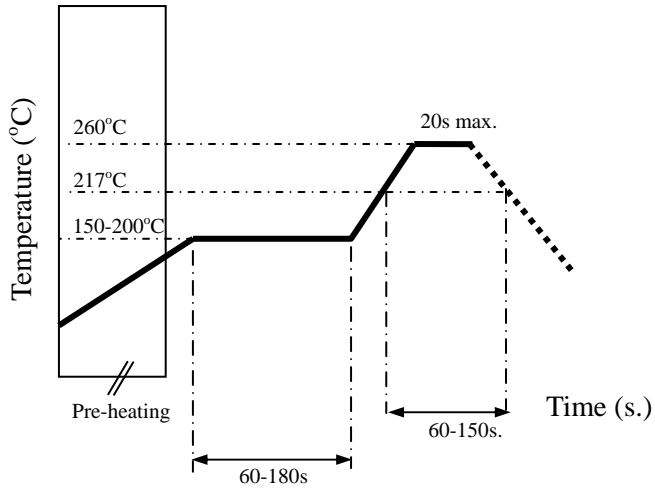
Mechanical & Environmental Characteristics

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"> 10N 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, 1.6mm) 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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