ACX
Advanced Ceramic X

CP 2012 Series(Preliminary)

Multilayer Chip Couplers

Features

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

❖ HF & RoHS compliant.

Applications

❖ 5~6.3 GHz wireless communication systems.

Specifications

Part Number	Passband (MHz)	Insertion Loss (dB)	Return Loss (dB)	Coupling (dB)	**Isolation** (dB)	Phase deviation (dB)
CP2012-05V5650QA_	5000~6300	0.5 max..	20 min.	5 ± 0.5	25 min.	90+/-4

Q'ty/Reel (pcs) : 4000
Operating Temperature Range : -40 ~ +85 ℃
Storage Temperature Range : -40 ~ +85 ℃
Storage Period : 12 months max.
Power Capacity : 1W max.

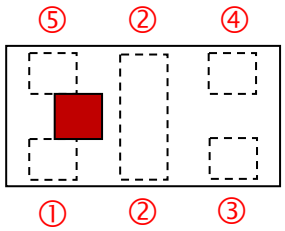
Part Number

CP 2012 - 05 V 5650 QA □ /LF

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Type	CP : Coupler	② Dimensions (L × W)	2.0 × 1.29 mm
③ Coupling	05 : 5dB	④ Specification Code Ⅰ	V
⑤ Central Frequency	5650 : 5650MHz	⑥ Specification Code Ⅱ	QA
⑦ Packaging	T: Tape & Reel B: Bulk	⑧ Soldering	/LF=lead-free

Terminal Configuration

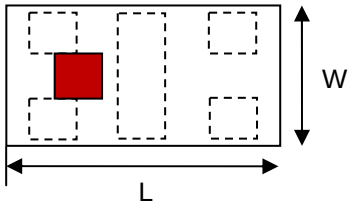


<Top View>

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

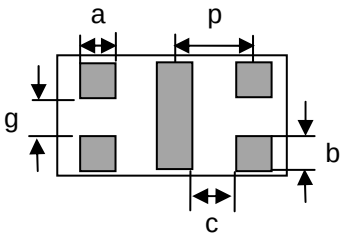
Dimensions

Unit : mm

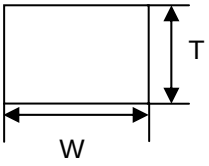


<Top View>

<Side View>



<Bottom View>

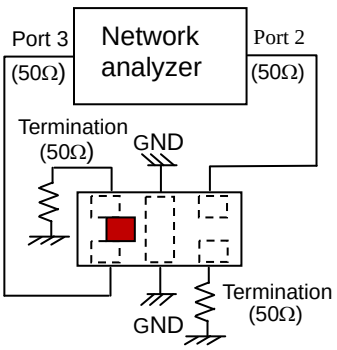


<Side View>

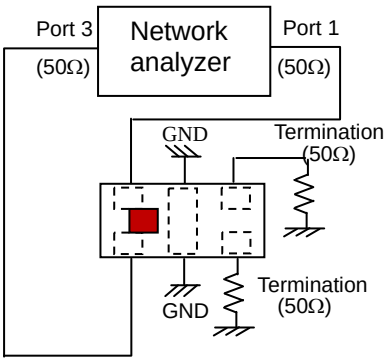
Mark	L	W	T	a	b	c	g	p
Dimensions	2.04 ±0.1	1.29 ±0.1	0.55 ±0.1	0.3 ±0.05	0.22 ±0.05	0.35 ±0.1	0.76 ±0.1	0.65 ±0.05

Measuring Diagram

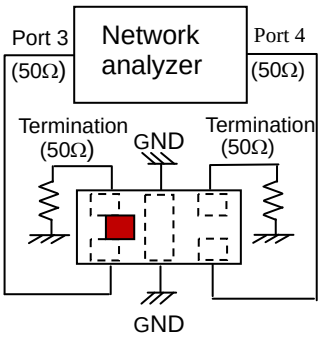
Path Loss 1(S32)
Main out



Path Loss 2(S31)
Coupled out



Isolation (S34)



Notes

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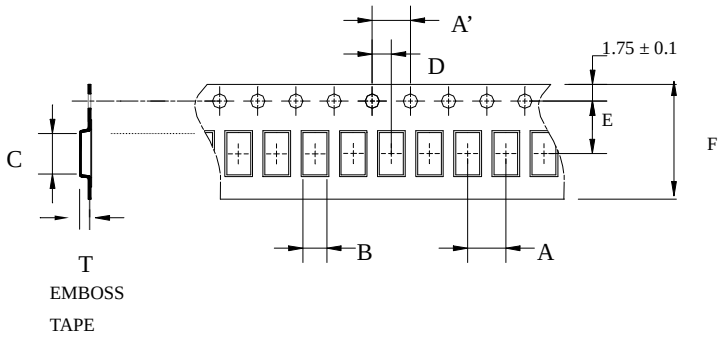
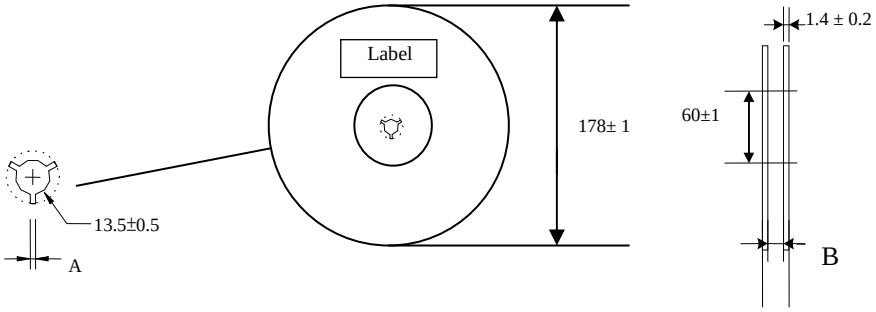
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
2012	4.0± 0.1	4.0± 0.1	1.35± 0.05	2.15± 0.05	2.0± 0.05	3.5± 0.1	8.0± 0.1	0.65± 0.05	4,000pcs	Plastic (Embossed)

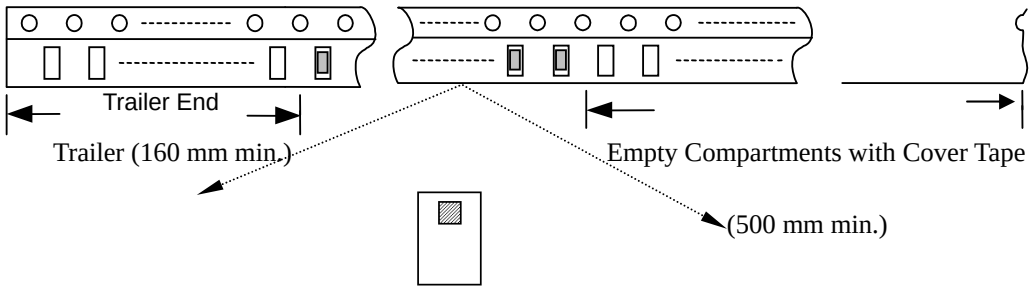
❖Reel Dimensions (Unit: mm)



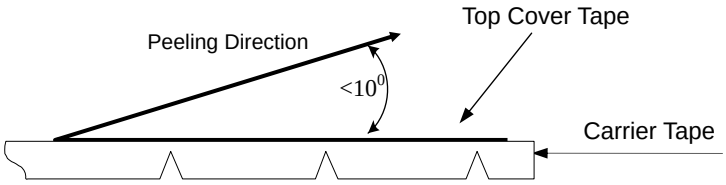
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
2012	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℃, relative humidity (RH): 45~75%.
(2) Non-corrosive environment

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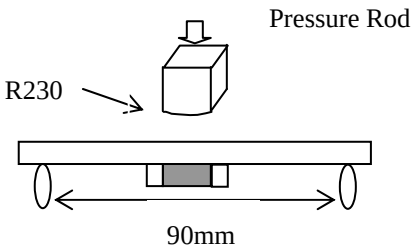
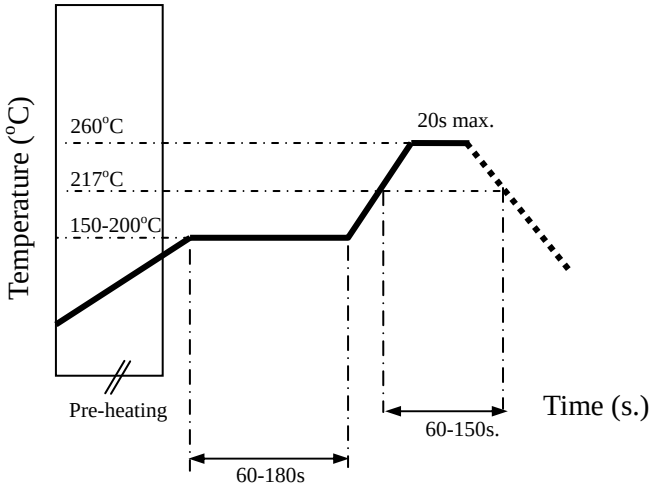
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	1. No apparent damage 2. More than 95% of the terminal electrode shall be covered with new solder	1. Preheat: 120± 5 °C 2. Solder: 245± 5°C for 5± 1 sec
Soldering strength (Termination Adhesion)	1. 10N minimum	1. Solder specimen onto test jig. 2. 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)	1. No apparent damage	1. Solder specimen onto test jig (FR4, 1.6mm) using the recommend soldering profile. 2. Apply a bending force of 2mm deflection 
Heat/Humidity Resistance	1. No apparent damage 2. Fulfill the electrical specification after test	1. Temperature: 85± 2°C 2. Humidity: 90% ~ 95% RH 3. Duration: 1000±48hrs 4. Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	1. No apparent damage 2. Fulfill the electrical specification after test	1. One cycle/step 1：125 ± 5°C for 30 min step 2：- 40 ± 5°C for 30 min 2. No of cycles：100 3. Recovery:1-2 hrs
Low Temperature Resistance	1. No apparent damage 2. Fulfill the electrical specification after test	1. Temperature: -40± 5 °C 2. Duration: 500 ±24hrs 3. Recovery: 1-2hrs

Soldering Conditions

❖**Typical Soldering Profile for Lead-free Process**

Reflow Soldering :



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