ACX
Advanced Ceramic X

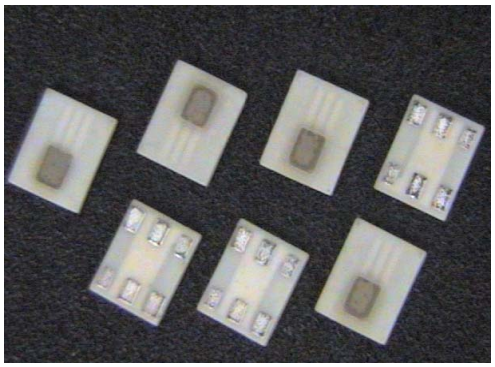
DP 2520 Series

Multilayer Chip Diplexers

Features

❖ Monolithic structure including two band-pass filters with loss pole at adjacent passband.

❖RoHS compliant



Applications

❖0.8 ~ 6 GHz wireless communication systems, including DECT/PACS/PHS/GSM/DCS phones, WLAN card, Bluetooth modules, etc.

Specifications

Part Number	Passband (MHz)	Insertion Loss (dB)	Passband VSWR	Attenuation (dB)
DP2520-N2455HA _	2400-2500	2.5 max.	2.0 max.	30 min. @ 824 ~ 915MHz
				30 min. @ 1545 ~ 1605MHz
				30 min. @ 1710 ~ 1910MHz
				25 min. @ 2170MHz
				35 min. @ 4800 ~ 5000MHz
				30 min. @ 7200 ~ 7500MHz
	5150-5850	1.0 max.	2.0 max.	25 min. @ 2400 ~ 2500MHz
				20 min. @ 10300 ~ 11700MHz

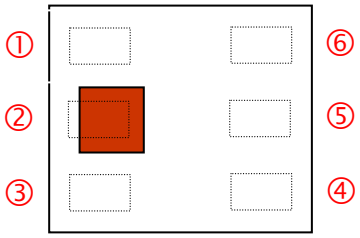
Q'ty/Reel (pcs) : 3,000
Operating Temperature Range : -40 ~ +85 °C
Storage Temperature Range : -40 ~ +85 °C
Storage Period : 12 months max.
Power Capacity : 500mW max.

Part Number

DP	2520	-	N	2455	HA	□	/LF
①	②		③	④	⑤	⑥	⑦

① Type	DP : Diplexer	② Dimensions (L × W)	2.5 × 2.0 mm
③ Material Code	N	④ Frequency Range	2455 = 2400MHz /5500MHz
⑤ Specification Code	HA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

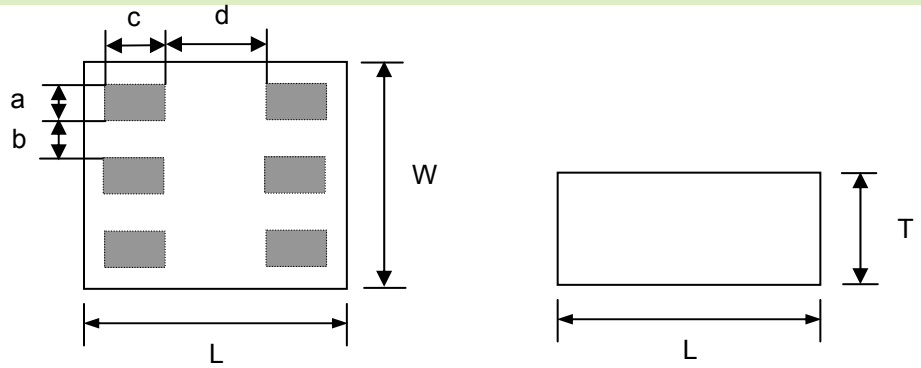
Terminal Configuration



No.	Terminal Name	No.	Terminal Name
①	Common Port	④	Lower Freq. Port
②	GND	⑤	GND
③	Higher Freq. Port	⑥	GND

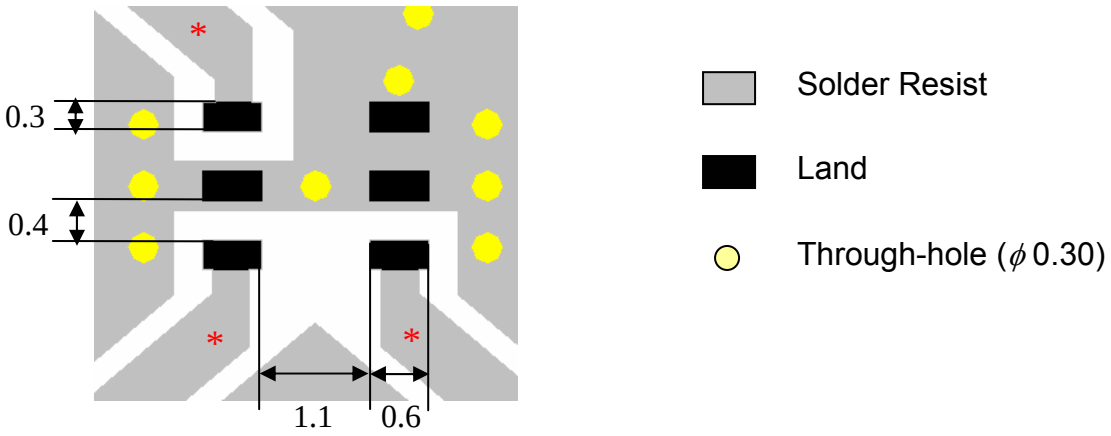
Dimensions

Unit : mm



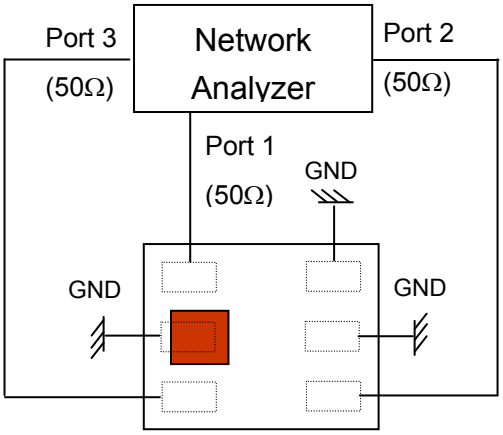
Bottom View　　Side View

Mark	L	W	T	a	b	c	d
Dimensions	2.5 ± 0.2	2.0 ± 0.2	0.45 max.	0.3 ± 0.1	0.4 ± 0.1	0.6 ± 0.1	1.1 ± 0.15



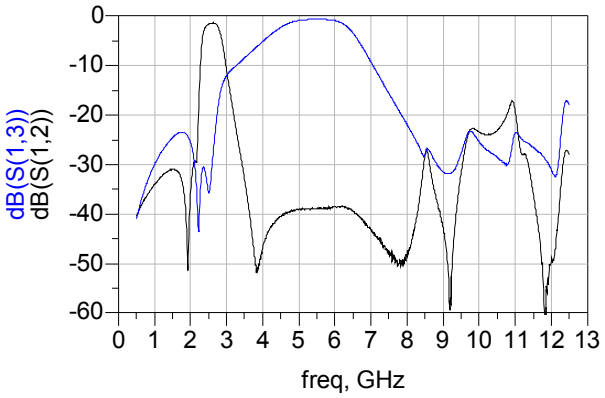
* Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram

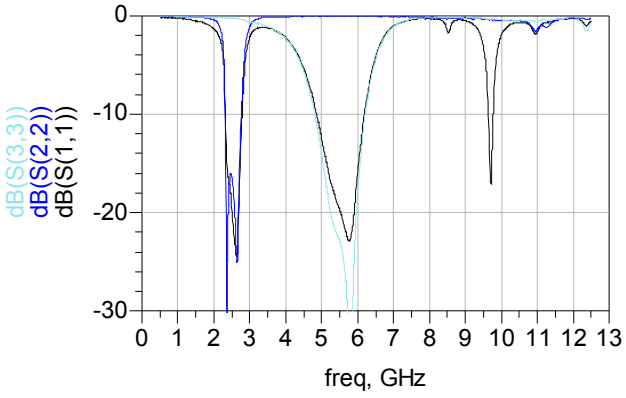


Typical Electrical Characteristics (T=25°C)

Attenuation



Return Loss



Notes

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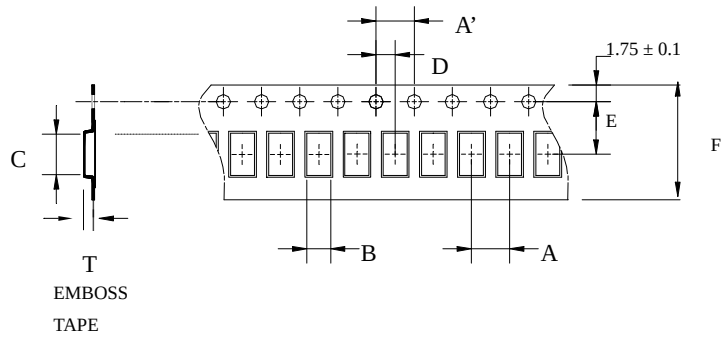
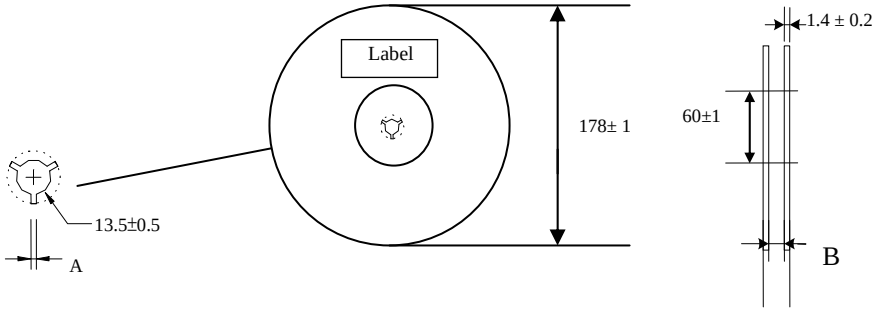
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
2520	4.0± 0.1	4.0± 0.1	2.35± 0.1	2.80± 0.1	2.0± 0.05	3.5± 0.1	8.0± 0.1	0.6± 0.10	3,000pcs	Plastic (Embossed)

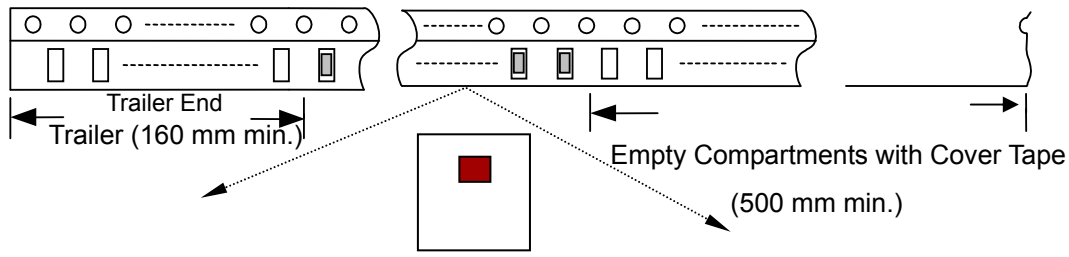
❖Reel Dimensions (Unit: mm)



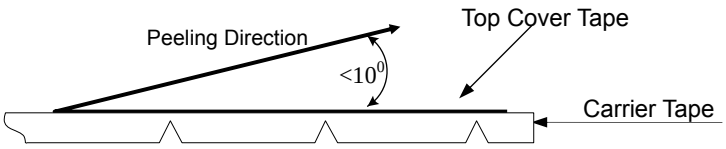
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
2520	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.

Notes

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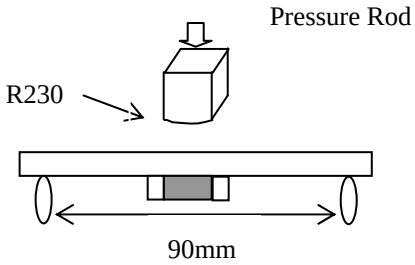
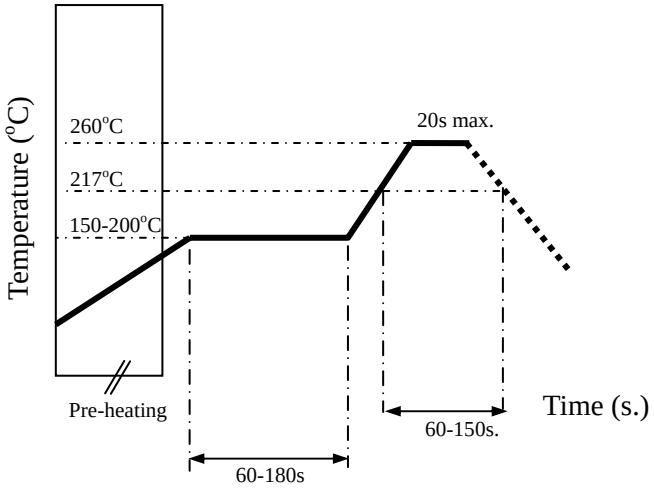
Mechanical & Environmental Characteristics

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. 1kg 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, 0.8mm) 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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