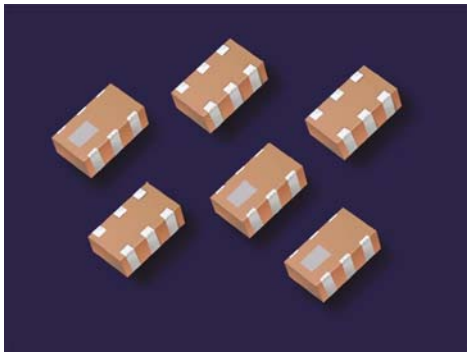
FD1608 Series

Multilayer Dual Filter



Features

❖Ultra-small, low-profile and light-weight low pass filter.

❖Two low pass filters are in one device.

Applications

❖0-6GHz wireless communication systems.

Specifications

Part Number	Frequency Range (MHz)	Insertion Loss @ BW (dB)	VSWR @ BW	Isolation In→In Out→Out (dB)	Isolation In→Out (dB)	Frequency	Attenuation (dB)
FD1608-L0918BB_	824~915	0.6 max.	1.5 max.	27 min.	30 min.	1648~1830MHz	25 min.
						2472~2745MHz	25 min.
	1710~1910	0.6 max.		30 min.	30 min.	3420~3820MHz	25 min.
						5130~5730MHz	25 min.

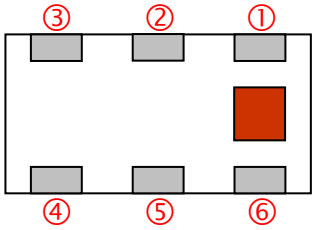
Q'ty/Reel (pcs) : 4,000
Operating Temperature Range : -40 ~ +85 °C
Storage Temperature Range : -40 ~ +85 °C
Storage Period : 12 months max.*
*12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags.
Solder Paste : SAC 305 type is recommended.
Power Capacity : 3W max.

Part Number

FD ① 1608 ② - L ③ 0918 ④ BB ⑤ □ ⑥ /LF ⑦

① Type	FD :Dual Filter	② Dimensions (L × W)	1.6 × 0.8 mm
③ Material Code	L	④ Frequency Range	0918=900MHz /1800MHz
⑤ Specification Code	BB	⑥ Packaging	T: Tape & Reel B: Bulk

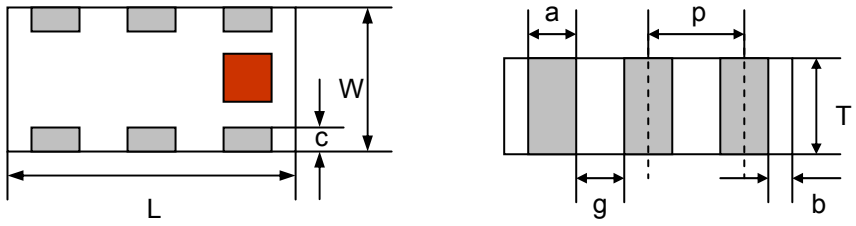
Terminal Configuration



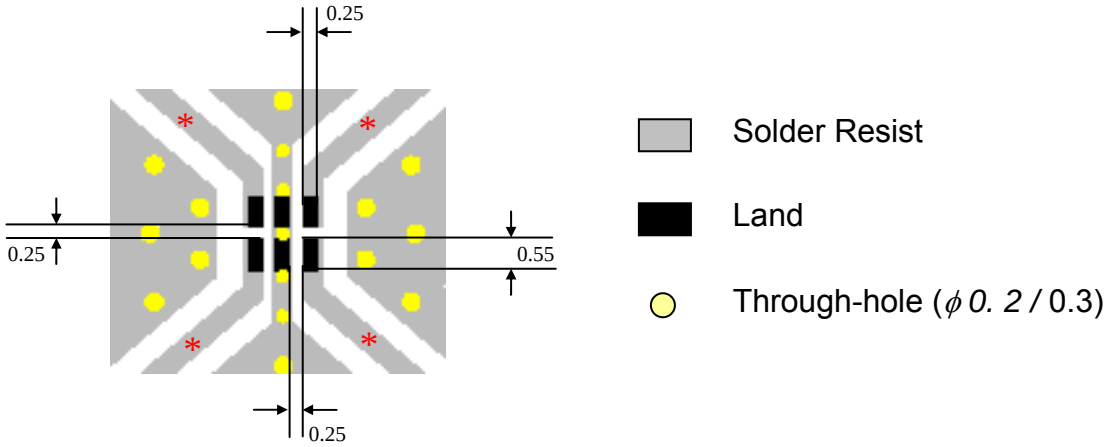
No.	Terminal Name	No.	Terminal Name
①	HB_IN	④	LB_OUT
②	GND	⑤	GND
③	LB_IN	⑥	HB_OUT

Dimensions and Recommended PC Board Pattern

Unit : mm

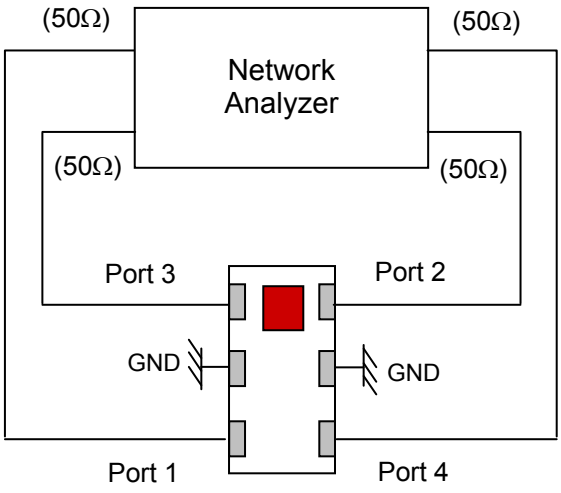


Mark	L	W	T	a	b	c	g	p
Dimensions	1.6 ± 0.1	0.8 ± 0.1	0.45max.	0.2 ± 0.1	0.2+0.1 /-0.15	0.15 ± 0.1	0.3 ± 0.1	0.50 ± 0.05



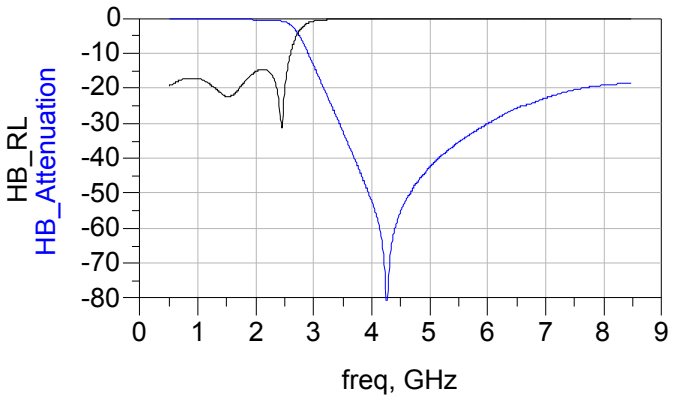
* Line width should be designed to match 50Ωcharacteristic impedance, depending on PCB material and thickness.

Measuring Diagram

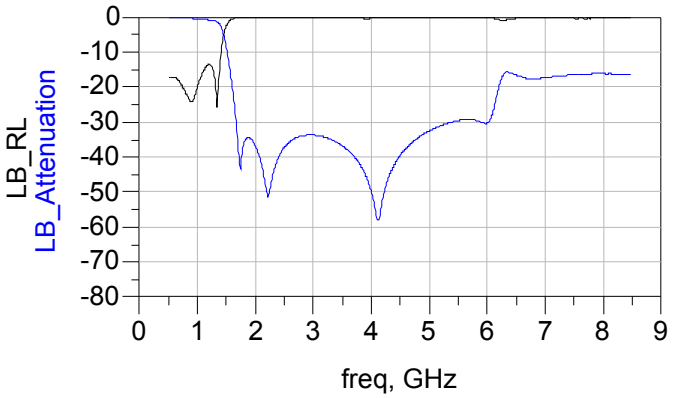


Electrical Characteristics (T=25°C)

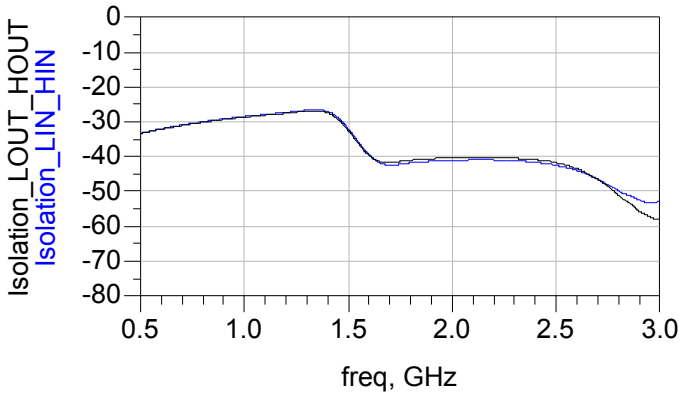
HB_In/Out (S23, S33)



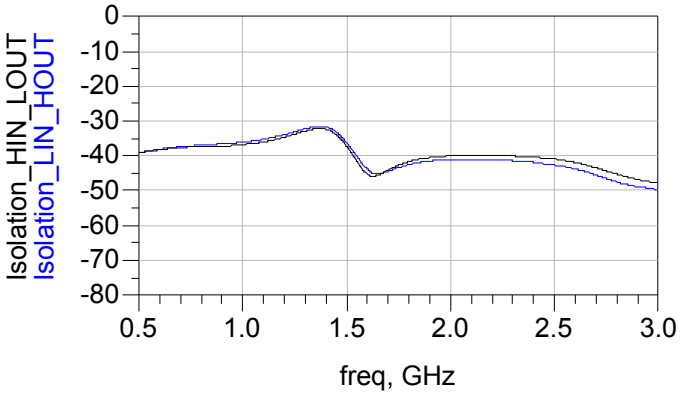
LB_In/Out (S41, S11)



Isolation_In-In/Out-Out (S31, S24)



Isolation_In-Out (S21, S43)



Notes

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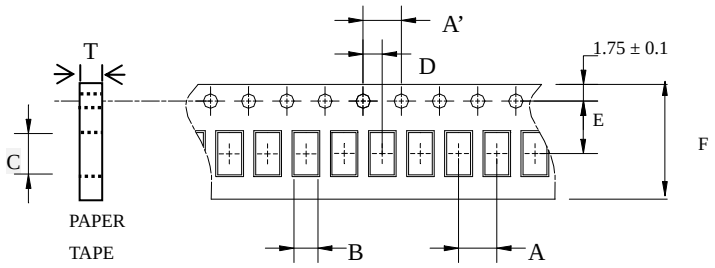
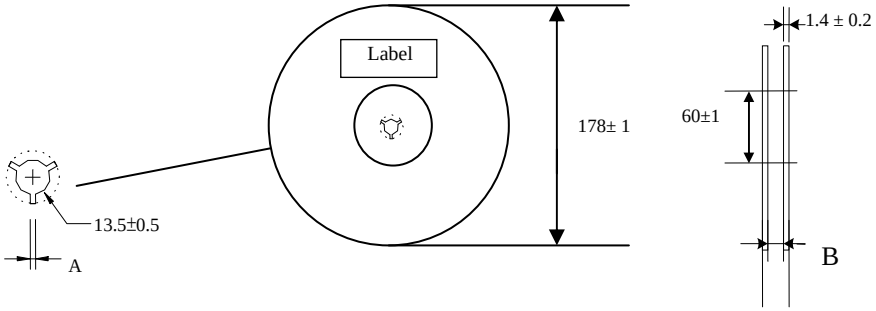
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
1608	4.0± 0.1	4.0± 0.1	0.95± 0.1	1.80± 0.1	2.0± 0.1	3.5± 0.1	8.0± 0.1	0.60± 0.03	4,000pcs	Paper

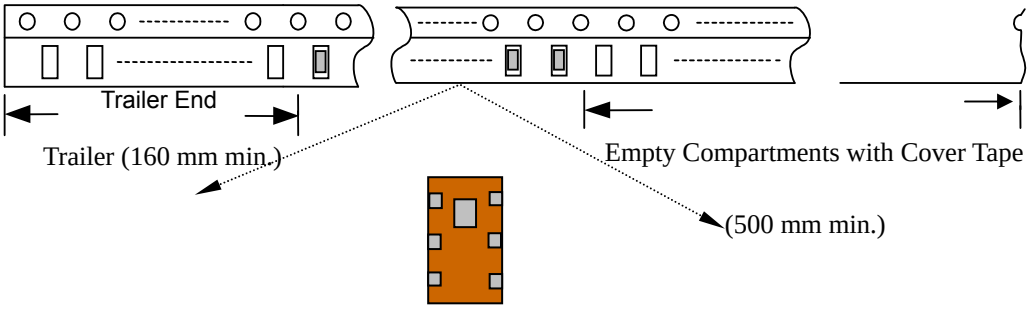
❖Reel Dimensions (Unit: mm)



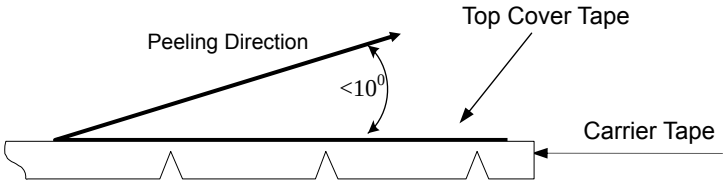
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
1608	2.3±0.5	9.0±0.3

❖Leader and Trailer Tape (Plastic material)



❖**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: 15 ~35℃, relative humidity (RH): 45~75%.
(2) Non-corrosive environment.

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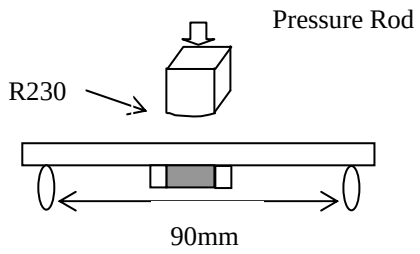
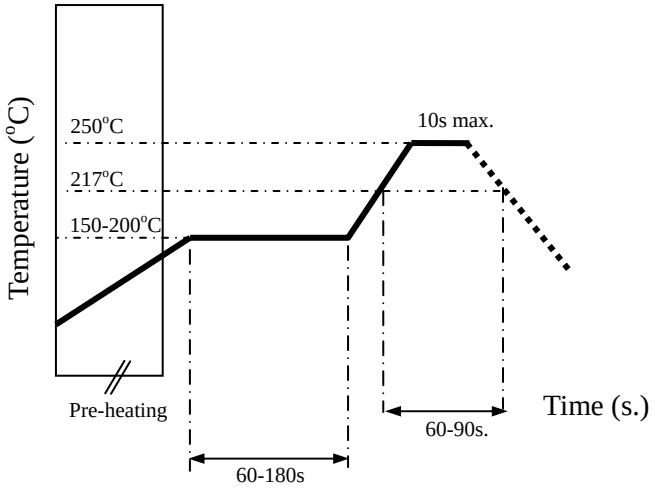
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	1. No apparent damage 2. More than 75% 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 2. Fulfill the electrical specification	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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Advanced Ceramic X Corp.
16 Tzu Chiang Road, Hsinchu Industrial District Hsinchu Hsien 303, Taiwan
TEL:886-3-5987008 FAX:886-3-5987001
E-mail: acx@acxc.com.tw http://www.acxc.com.tw