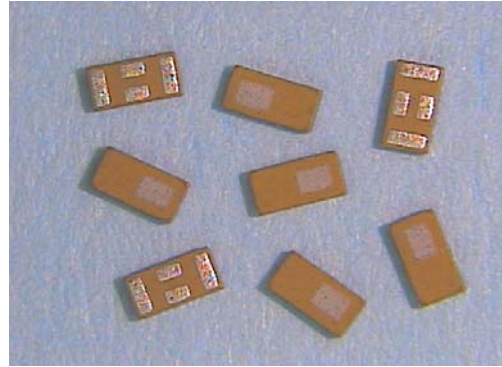


LF 1608 Series

Multilayer Chip Low-Pass Filters



Features

- ❖ Ultra small SMD type with low loss at pass-band and high attenuation at stop-band.
- ❖ RoHS compliant

Applications

- ❖ 2.4 GHz wireless communication systems, including, WLAN card, Bluetooth modules, etc.

Specifications

Part Number	Frequency Range (MHz)	Insertion Loss @ BW (dB)	Return Loss @ BW(dB)	Frequency	Attenuation (dB)
LF1608-L2R4NDA_	2400 ~ 2500	0.45 max. @25°C	12 min.	4800 ~ 5000MHz	35 min.
		0.55 max. @-40~105°C		7200 ~ 7500MHz	35 min.

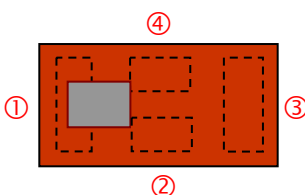
Q'ty/Reel (pcs) : 4,000
 Operating Temperature Range : -40 ~ +105 °C
 Storage Temperature Range : -40 ~ +105 °C
 Storage Period : 12 months max.*
 *12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags
 Solder Paste : SAC 305 type is recommended.
 Power Capacity : 3W max.

Part Number

LF **1608** - **L** **2R4** **NDA** **□** **/LF**
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	LF : Low-Pass Filter	② Dimensions (L x W)	1.6 x 0.8 mm
③ Material Code	L	④ Frequency Range	2R4=2400MHz
⑤ Specification Code	NDA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

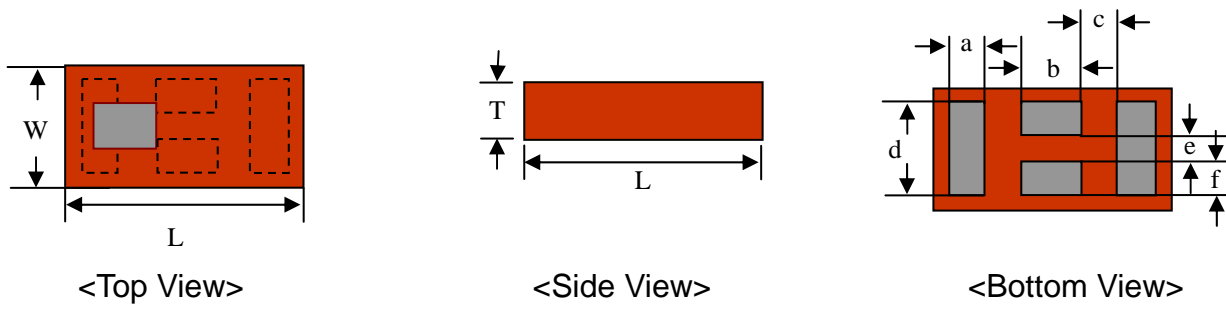
Terminal Configuration



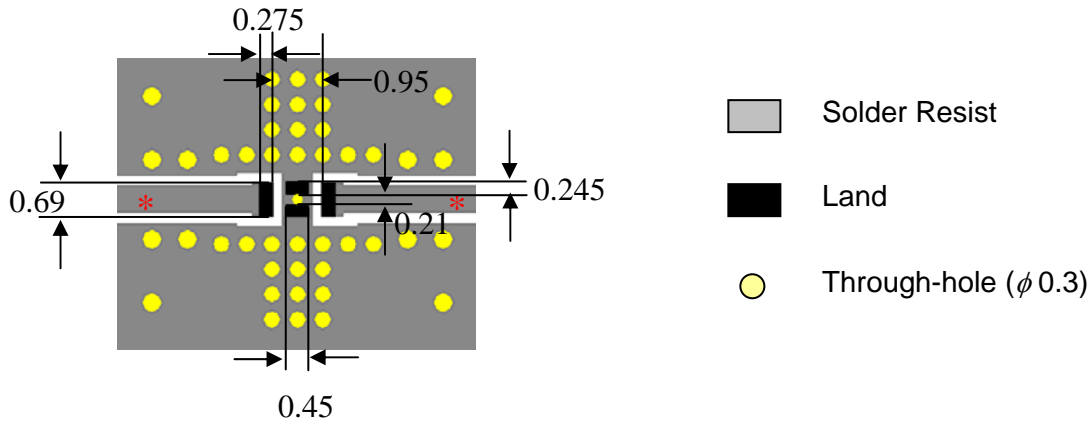
No.	Terminal Name	No.	Terminal Name
①	IN	③	OUT
②	GND	④	GND

Dimensions and Recommended PC Board Pattern

Unit : mm

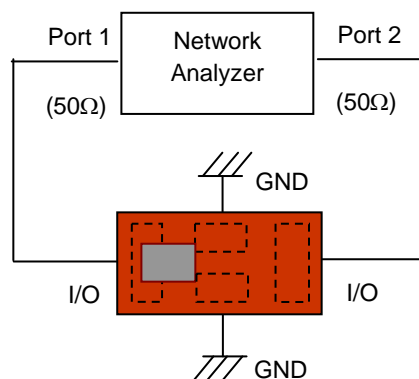


Mark	L	W	T	a	b	c	d	e	f
Dimensions	1.6 ± 0.15	0.8 ± 0.15	0.4 max.	0.23 ± 0.05	0.40 ± 0.1	0.30 ± 0.1	0.65 ± 0.1	0.2 ± 0.05	0.23 ± 0.05

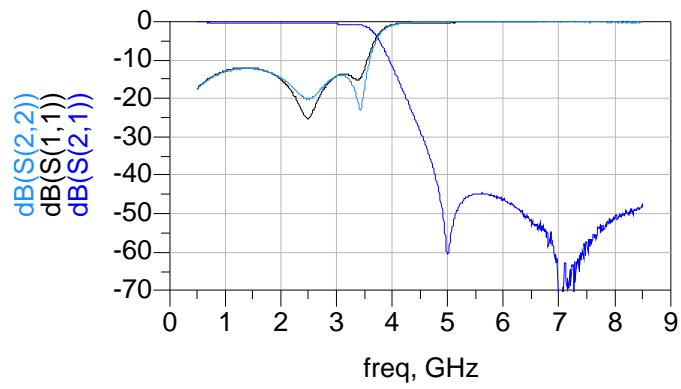


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram



Electrical Characteristics (T=25°C)

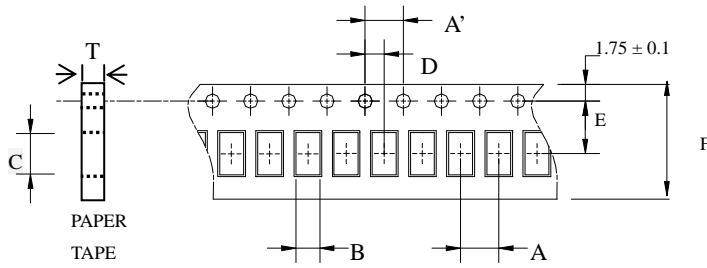


Notes

- ❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

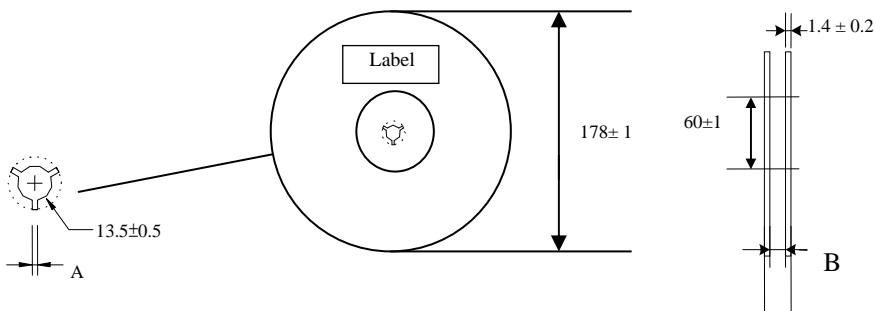
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



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

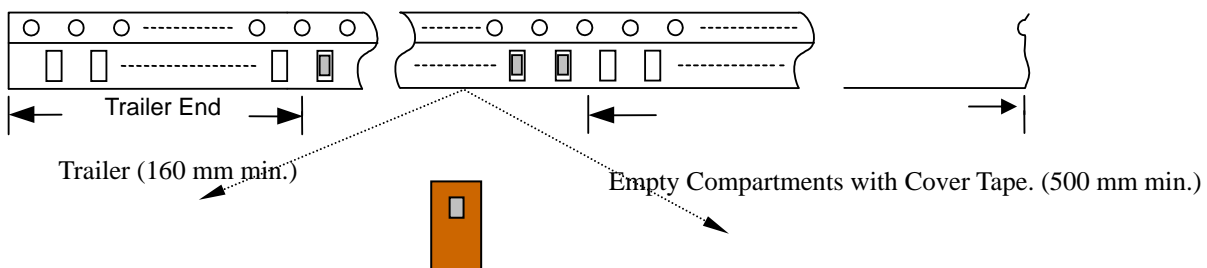
❖Reel Dimensions (Unit: mm)



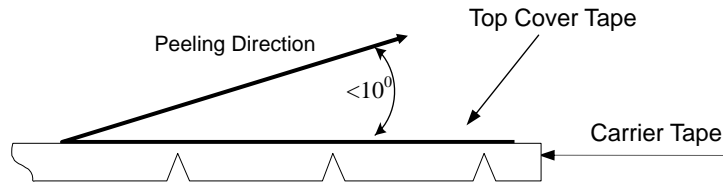
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

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 .

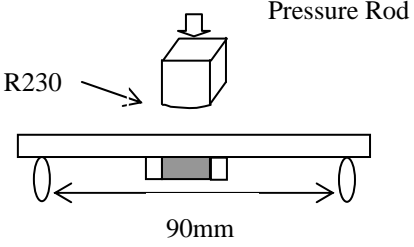
❖ **Storage Conditions**

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

Notes

- ❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

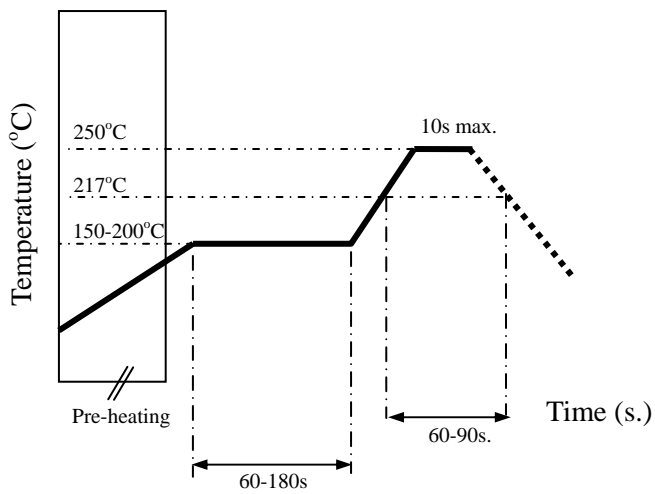
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> 1. No apparent damage 2. More than 75% of the terminal electrode shall be covered with new solder 	<ol style="list-style-type: none"> 1. Preheat: $120 \pm 5^\circ\text{C}$ 2. Solder: $245 \pm 5^\circ\text{C}$ for 5 ± 1 sec
Soldering strength (Termination Adhesion)	<ol style="list-style-type: none"> 1. 10N minimum 	<ol style="list-style-type: none"> 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)	<ol style="list-style-type: none"> 1. No apparent damage 2. Fulfill the electrical specification 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. No apparent damage 2. Fulfill the electrical specification after test 	<ol style="list-style-type: none"> 1. Temperature: $85 \pm 2^\circ\text{C}$ 2. Humidity: 90% ~ 95% RH 3. Duration: 1000 ± 48hrs 4. Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	<ol style="list-style-type: none"> 1. No apparent damage 2. Fulfill the electrical specification after test 	<ol style="list-style-type: none"> 1. One cycle/step 1 : $125 \pm 5^\circ\text{C}$ for 30 min step 2 : $-40 \pm 5^\circ\text{C}$ for 30 min 2. No of cycles : 100 3. Recovery: 1-2 hrs
Low Temperature Resistance	<ol style="list-style-type: none"> 1. No apparent damage 2. Fulfill the electrical specification after test 	<ol style="list-style-type: none"> 1. Temperature: $-40 \pm 5^\circ\text{C}$ 2. Duration: 500 ± 24hrs 3. Recovery: 1-2hrs

Soldering Conditions

❖ Typical Soldering Profile for Lead-free Process

Reflow Soldering :



Notes

❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

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>