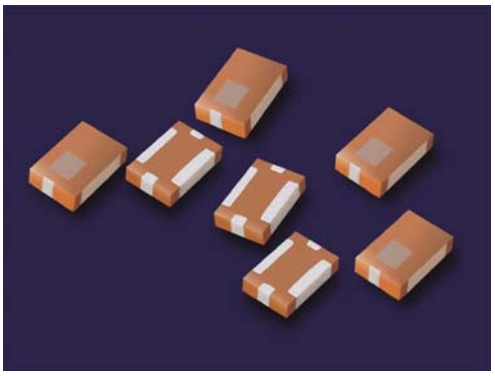
ACX
Advanced Ceramic X

LF 1608 Series (Preliminary)

Multilayer Chip Low-Pass Filters



Features

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

Applications

❖0.5 ~ 6 GHz wireless communication systems, including DECT/PACS/PHS/GSM/DCS phones, WLAN card, Bluetooth modules, etc.

Specifications

Part Number	Impedance (ohm)	Frequency Range (MHz)	Insertion Loss @ BW (dB)	VSWR @ BW	Frequency	Attenuation (dB)
LF1608-LR50DAA_	75	250 ~ 760	2.0 max.	2.0 max.	1040 ~ 2000MHz	45 min.
					2000 ~ 3000MHz	50 min.

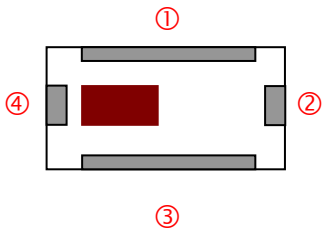
Q'ty/Reel (pcs) : 4,000
Operating Temperature Range : -40 ~ +85 °C
Storage Temperature Range : +0 ~ +45 °C, Humidity 45~75%RH
Storage Period : 12 months max.*
*12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags.
Solder Paste : SAC 305 type is recommended.
Power Capacity : 500mW max.

Part Number

LF	1608	-	L	R50	DAA	□	/LF
①	②		③	④	⑤	⑥	⑦

① Type	LF : Low-Pass Filter	② Dimensions (L × W)	1.6 × 0.8 mm
③ Material Code	L	④ Frequency Range	R50=500MHz
⑤ Specification Code	DAA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	=lead-containing /LF=lead-free		

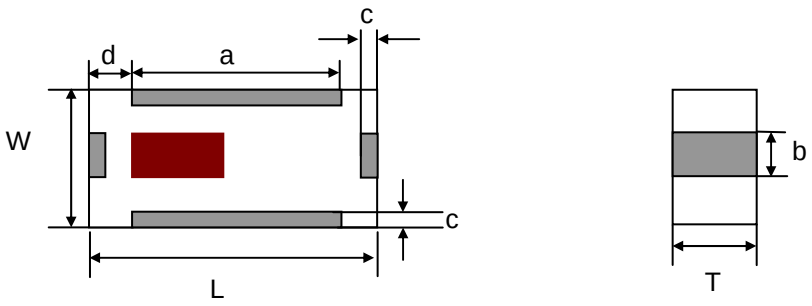
Terminal Configuration



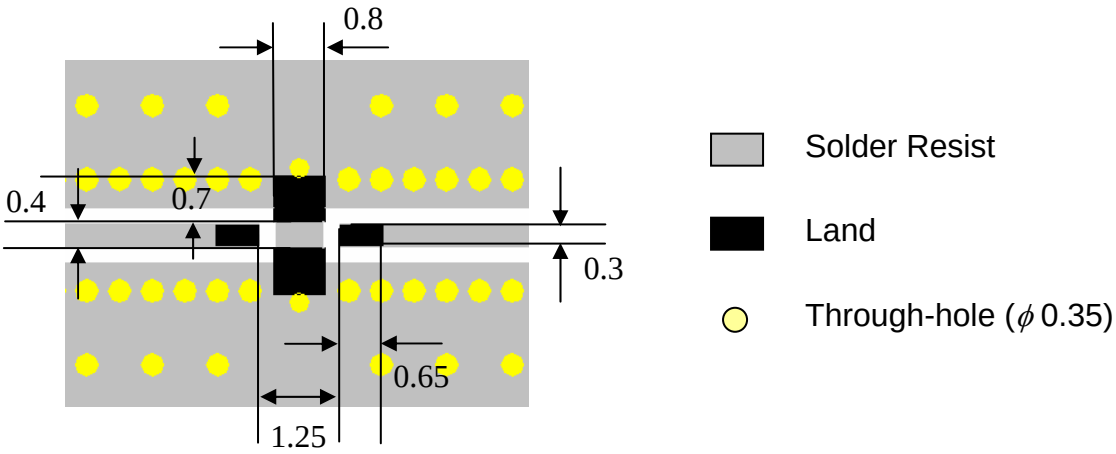
No.	Terminal Name	No.	Terminal Name
①	GND	③	GND
②	I/O	④	I/O

Dimensions and Recommended PC Board Pattern

Unit : mm

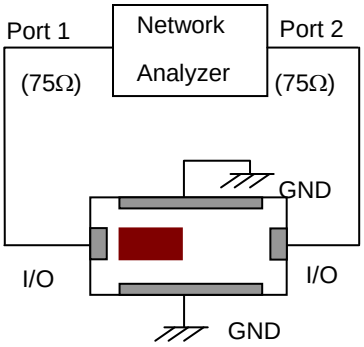


Mark	L	W	T	a	b	c	d
Dimensions	1.6 ± 0.10	0.8 ± 0.10	0.6± 0.10	0.7± 0.15	0.3 ± 0.10	0.15 ± 0.10	0.45± 0.15

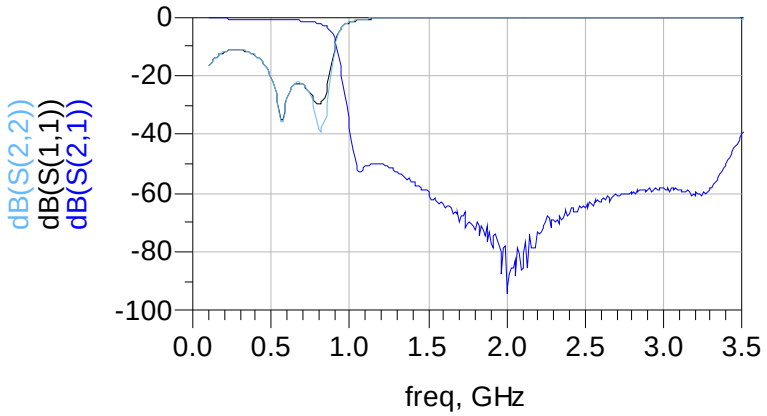


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram



Electrical Characteristics (T=25°C)



Notes

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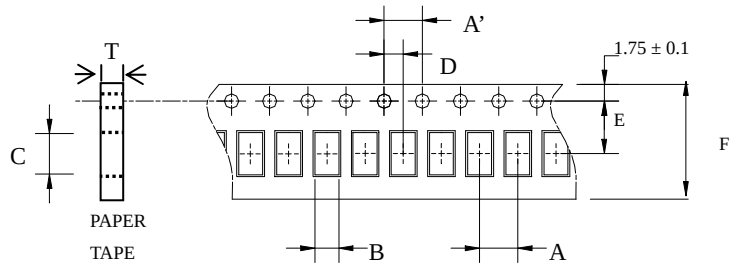
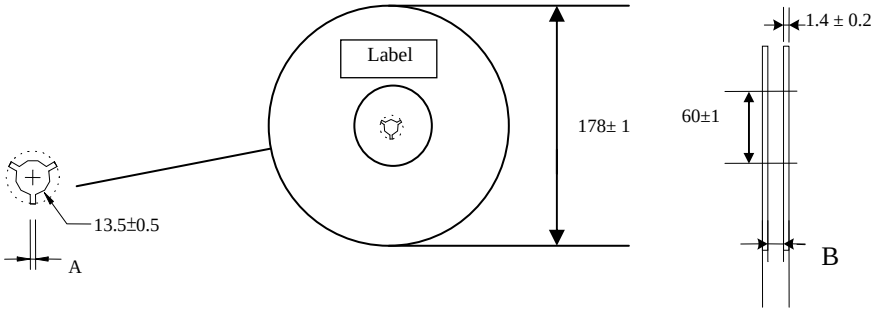
Taping Specifications

❖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	1.10± 0.1	1.92± 0.1	2.0± 0.1	3.5± 0.1	8.0± 0.1	0.75± 0.05	4,000pcs	Paper

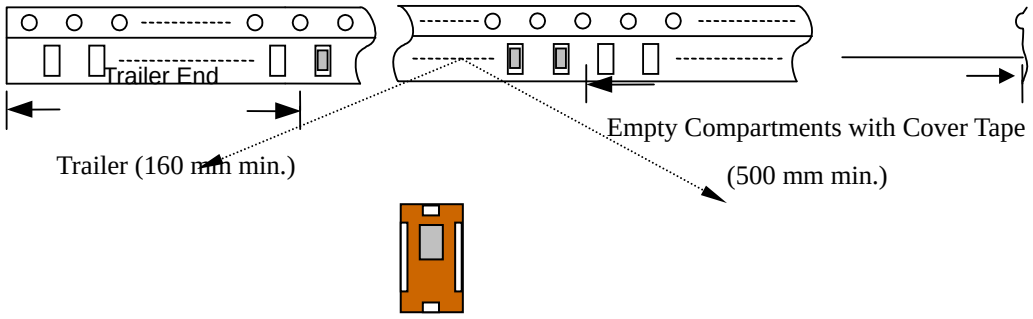
❖Reel Dimensions (Unit: mm)



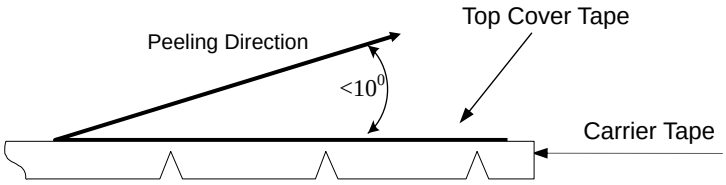
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
1608	2.3±0.5	9.0±0.3

❖Leader and Trailer Tape



❖**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 .

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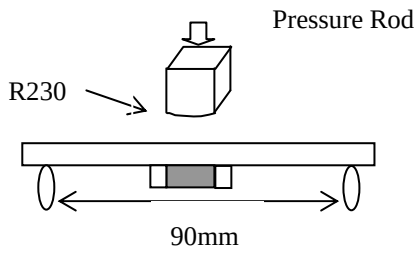
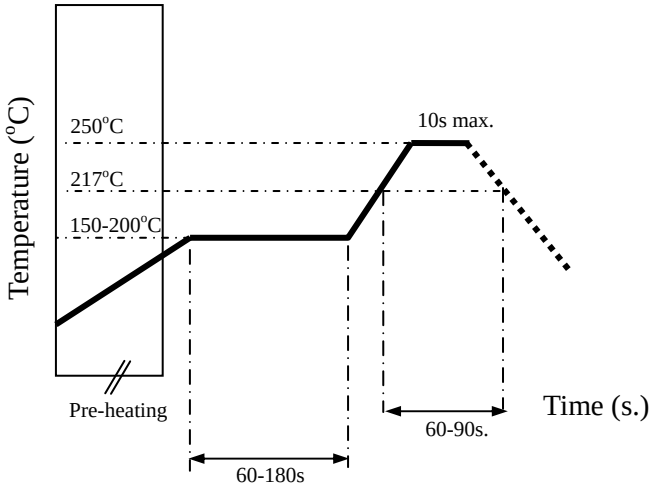
Mechanical & Environmental Characteristics

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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