

LF 1608 Series

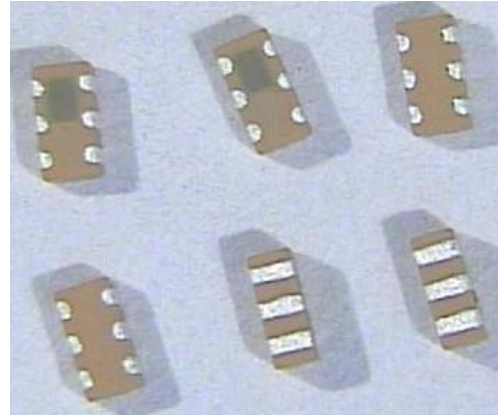
Multilayer Chip Low-Pass Filters

Features

- ❖ Monolithic structure replacing one inductor and three capacitors.
- ❖ RoHS compliant

Applications

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



Specifications

Part Number	Freq. Range (MHz)	Insertion Loss @ BW (dB)	Return Loss @ BW(dB)	Frequency (MHz)	Attenuation (dB)
LF1608-LR83KAA_	699 ~ 787	0.6 max. @25°C 0.8 max. @-40~85°C	10 min.	1427~1920	30 min.
	787 ~ 960	0.7 max. @25°C 0.9 max. @-40~85°C		2097~2880	30 min.

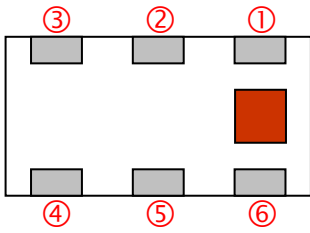
Q'ty/Reel (pcs) : 4,000
 Operating Temperature Range : -40 ~ +85 °C
 Storage Temperature Range : -40 ~ +85 °C
 Storage Period : 12 months max.*
 *12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags.
 Solder Paste : SAC 305 type is recommended.
 Power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

Part Number

LF 1608 - L R83 KAA □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

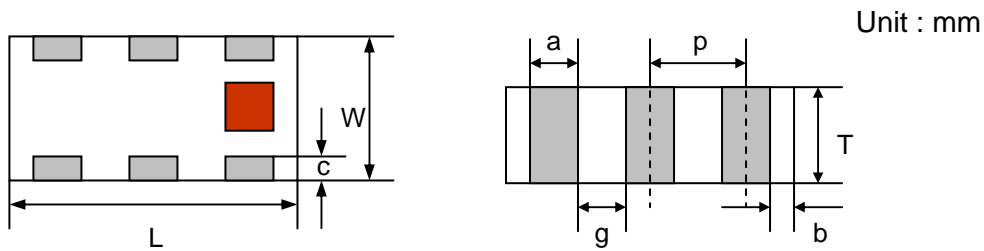
① Type	LF : Low Pass Filter	② Dimensions (L x W)	1.6 x 0.8 mm
③ Material Code	L	④ Frequency Range	R83=830MHz
⑤ Specification Code	KAA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

Terminal Configuration

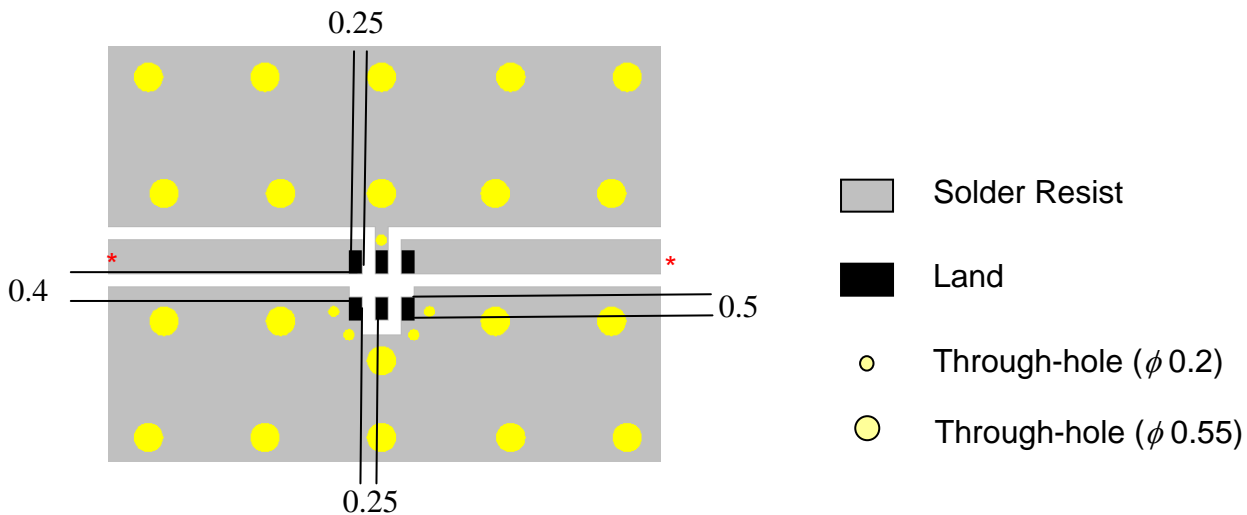


No.	Terminal Name	No.	Terminal Name
①	GND	④	OUT
②	NC	⑤	GND
③	GND	⑥	IN

Dimensions and Recommended PC Board Pattern

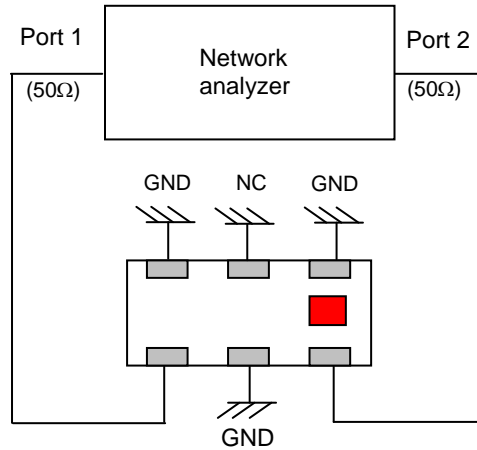


Mark	L	W	T	a	b	c	g	p
Dimensions	1.6 ±	0.8 ±	0.6 ±	0.2 ±	0.2+0.1	0.15 ±	0.3 ±	0.50 ±
	0.1	0.1	0.1	0.1	-0.15	0.1	0.1	0.05

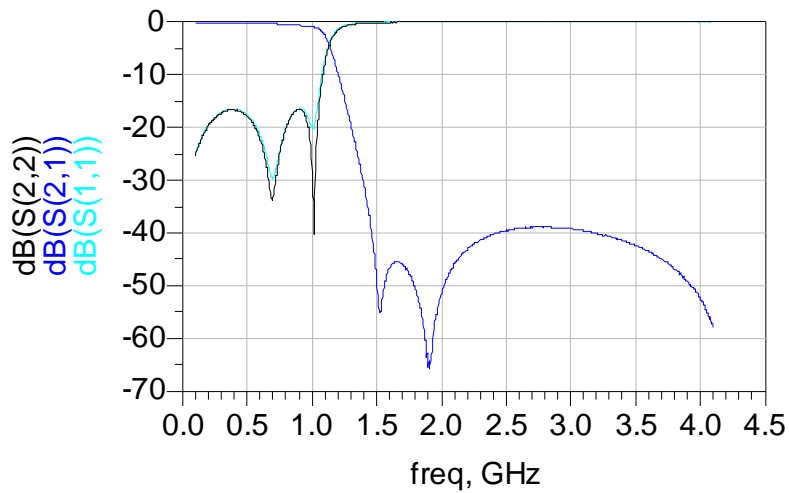


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram



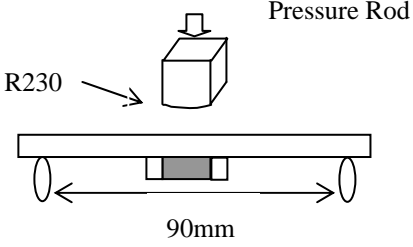
Typical Electrical Characteristics (T=25°C)



Notes

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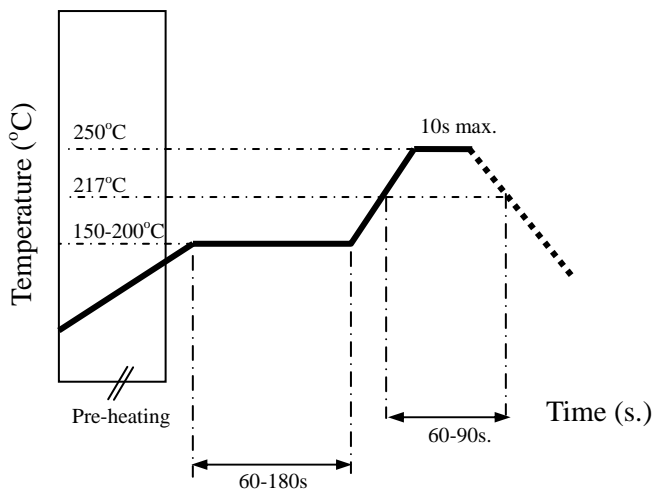
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> No apparent damage More than 75% of the terminal electrode shall be covered with new solder. 	<ol style="list-style-type: none"> Preheat: $120 \pm 5^\circ\text{C}$ Solder: $245 \pm 5^\circ\text{C}$ for 5 ± 1 sec
Soldering strength (Termination Adhesion)	<ol style="list-style-type: none"> 1kg minimum 	<ol style="list-style-type: none"> Solder specimen onto test jig. 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"> No apparent damage Fulfill the electrical specification 	<ol style="list-style-type: none"> Solder specimen onto test jig (FR4, 0.8mm) using the recommend soldering profile. Apply a bending force of 2mm deflection 
Heat/Humidity Resistance	<ol style="list-style-type: none"> No apparent damage Fulfill the electrical specification after test 	<ol style="list-style-type: none"> Temperature: $85 \pm 2^\circ\text{C}$ Humidity: 90% ~ 95% RH Duration: 1000 ± 48hrs Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	<ol style="list-style-type: none"> No apparent damage Fulfill the electrical specification after test 	<ol style="list-style-type: none"> One cycle/step 1 : $125 \pm 5^\circ\text{C}$ for 30 min step 2 : $-40 \pm 5^\circ\text{C}$ for 30 min No of cycles : 100 Recovery: 1-2 hrs
Low Temperature Resistance	<ol style="list-style-type: none"> No apparent damage Fulfill the electrical specification after test 	<ol style="list-style-type: none"> Temperature: $-40 \pm 5^\circ\text{C}$ Duration: 500 ± 24hrs Recovery: 1-2hrs

Soldering Conditions

❖ Typical Soldering Profile for Lead-free Process

Reflow Soldering :



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