

Datasheet of LTCC Device

RoHS & Halogen Free & REACH Compliance

Laminated Ceramic Filter

Band Pass Filter for 5150-5925 MHz

P/N: FLT18B5159L-1192A

**Contents in this sheet are subject to change without prior notice.*

LTCC Band Pass Filter 1608 (BS 0603) Size,

5150-5925 MHz Working Frequency

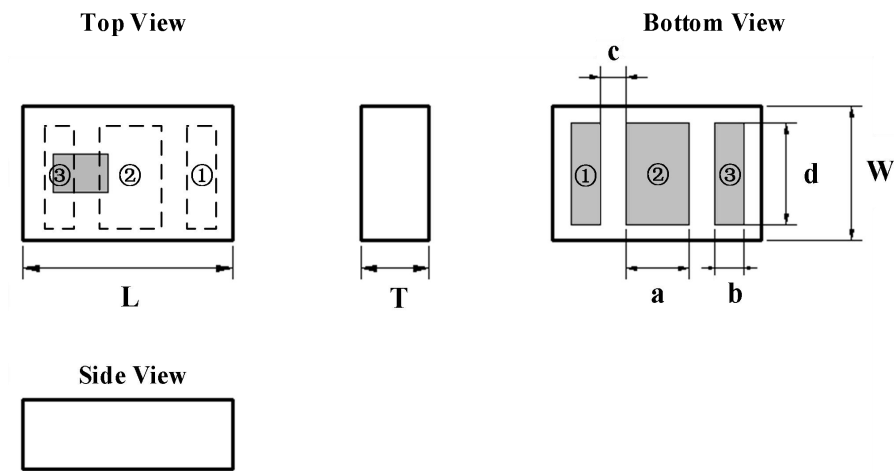
1. Features

High Rejection & Low Insertion Loss.

2. Applications

Band Pass Filter for 5150-5925 MHz working frequency.

3. Shapes & Dimensions



Mark	L	W	T	a	b	c	d
Dimensions (mm)	1.6±0.1	0.8±0.1	0.6±0.1	0.4±0.1	0.25±0.1	0.23±0.1	0.60±0.1

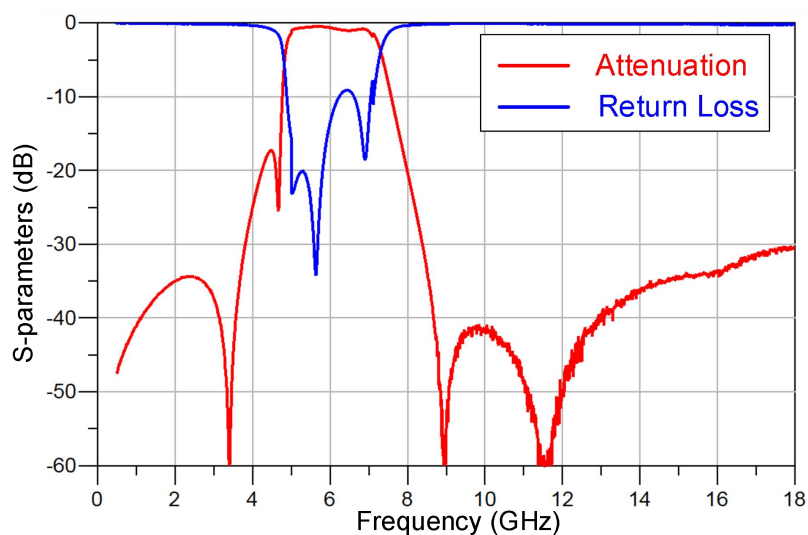
4. Terminal Pin Definition

①	IN	②	GND	③	OUT
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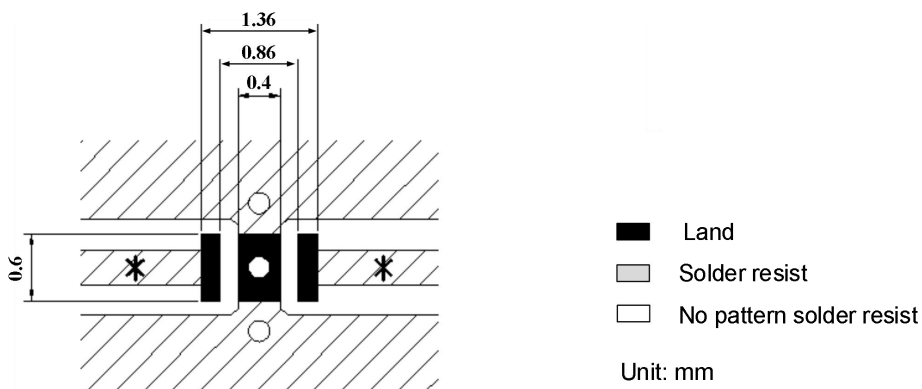
5. Electrical Characteristics

Pass Band (MHz)	Insertion Loss (dB)		Return Loss (dB)	Attenuation (dB)
	(@ +25°C)	(@ -40~+85°C)		
5150-5925	1.00 max. (0.75 typ.)	1.30 max.	12 min.	30 min. (34 typ.) @ 2400 MHz 30 min. (34 typ.) @ 2500 MHz 13 min. (22 typ.) @ 4110 MHz 10 min. (25 typ.) @ 4660 MHz 15 min. (27 typ.) @ 8280 MHz 30 min. (43 typ.) @ 9320 MHz 35 min. (42 typ.) @ 10300-11700 MHz 20 min. (30 typ.) @ 15400-17850 MHz
Impedance		50 Ω		
Power Capacity		3W max.		
MSL		LEVEL 1		
Operating and Storage Condition Operation Temperature Range: -40 ~ +85°C Storage Temperature Range: -40 ~ +85°C			Storage Condition before Soldering Storage Temperature Range: +10 ~ +30°C Humidity: 30 to 70% relative humidity	

6. Typical Electrical Performance at T= 25±5°C

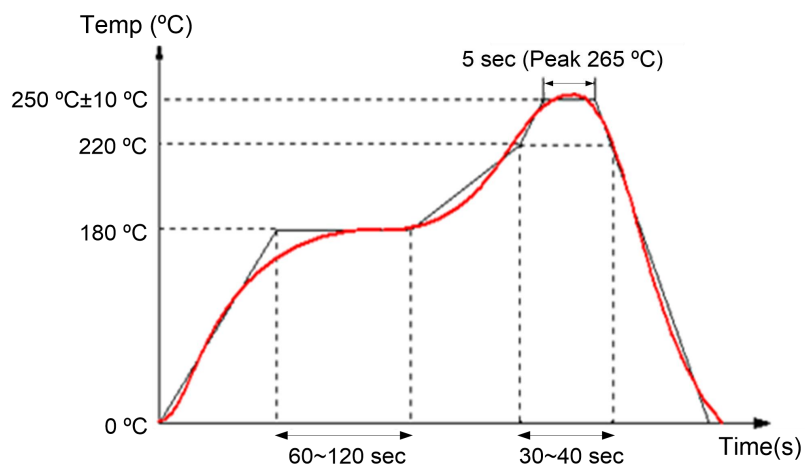


7. Soldering Land Pattern



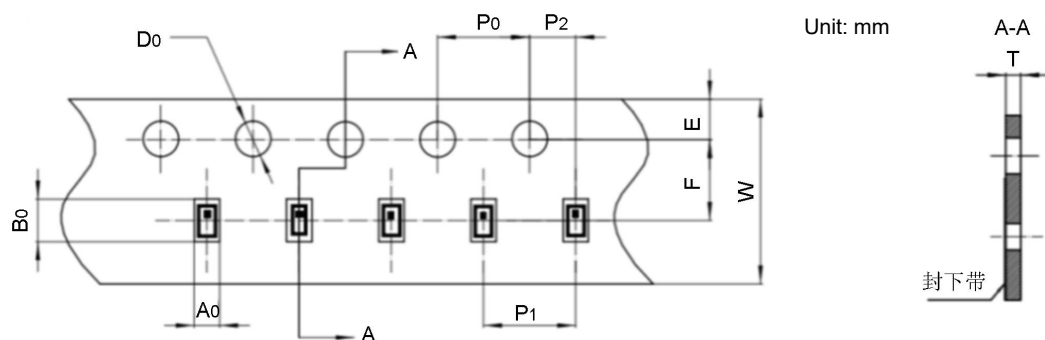
* Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

8. Reflow Soldering Standard Condition



9. Packaging and Dimensions 1608 (BS 0603)

◆ Paper Tape



A ₀	B ₀	W	F	E	P ₀	P ₁	P ₂	D ₀	T	10 P ₀
1.05 ±0.05	1.80 ±0.05	8.00 ±0.10	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	4.00 ±0.10	2.00 ±0.05	1.55 ±0.05	0.75 ±0.05	40.00 ±0.20

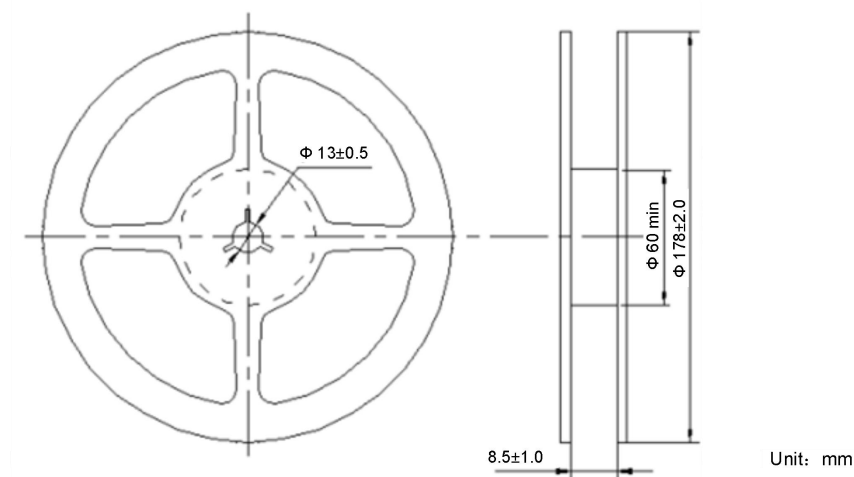
◆ Ordering Code

F	LT	18	B	5159	L	1192A
FTR device	LTCC Technology	Size: 1608	BPF	Working Frequency: 5150-5925 MHz	Terminal electrode	Design code

◆ Remarks for Package

Reserve a length of $\geq 150\text{mm}$ for the trailer of the carrier and $\geq 150\text{mm}$ for the leader of the carrier and further $\geq 150\text{mm}$ of cover tape at the leading part of the carrier.

◆ Reel (5000 pcs/Reel)



◆ Storage Period

Product should be used within 12 months from the day of FTR outgoing inspection.

Storage Temperature Range : +10~+30 degree C, Humidity : 30~70% RH.

10. Reliability Test

Test item	Test condition / Test method	Specification
Solderability IEC 60068-2-58 GB/T2423.28	*Solder bath temperature: 240±5°C *Immersion time: 2±0.5 sec Solder: Sn96.5 Ag3.0 Cu0.5 for lead-free.	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) JIS C5101	*Solder bath temperature: 260±5°C *Leaching immersion time: 10±1 sec Solder : Sn96.5 Ag3.0 Cu0.5 for lead-free.	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat IEC 60068-2-58 GB/T2423.28	*Preheating temperature: 120~150°C, 1 minute. *Solder temperature: 260±5°C *Immersion time: 10±1 sec Solder: Sn96.5 Ag3.0 Cu0.5 for lead-free Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature. Loss of metallization on the edges of each electrode shall not exceed 25%.
Drop Test IEC 60068-2-32 GB/T2423.8 Customer's specification.	*Height: 50 cm *Test Surface: Rigid surface of concrete or steel. *Times: 6 surfaces for each units; 2 times for each side.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Vibration IEC 60068-2-6 GB/T 2423.10	*Frequency: 10Hz~55Hz~10Hz(1min) *Total amplitude: 1.5mm *Test times: 6hrs.(Two hrs each in three mutually perpendicular directions)	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Adhesive Strength of Termination IEC60068-2-21 GB/T 2423.60	*Pressurizing force: LGA terminal series : 3N(1005); 5N(≥1608) DIP terminal series : 3N(1005); 5N(1608); 10N(≥2012) *Test time:10±1 sec	No remarkable damage or removal of the termination.

Bending test IEC 60068-2-21 GB/T 2423.60	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 2mm and then pressure shall be maintained for 10±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Temperature cycle IEC60068-2-14 GB/T 2423.22	30 minutes at -40°C±2°C. 10~15 minutes at room temperature. 30 minutes at +85°C±2°C. 10~15 minutes at room temperature. Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
High temperature IEC 60068-2-2 GB/T2423.2	*Temperature: 85±2°C. *Test duration: 500+24/-0 hours. Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics.
Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3	*Humidity: 85±5%R.H. *Temperature: 85±2°C. *Time: 500+24/-0 hrs. Measurement to be made after keeping at room temperature for 24±2 hrs	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Low temperature IEC 60068-2-1 GB/T2423.1	*Temperature: -40±2°C. *Test duration: 500+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.