

Datasheet of LTCC Device

RoHS & Halogen Free & REACH Compliance

Laminated Ceramic Filter

Band Pass Filter for 1880-2700 MHz

P/N: FLT15B1827L-1131A

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

LTCC Band Pass Filter 1005 (BS 0402) Size,

1880-2700 MHz Working Frequency

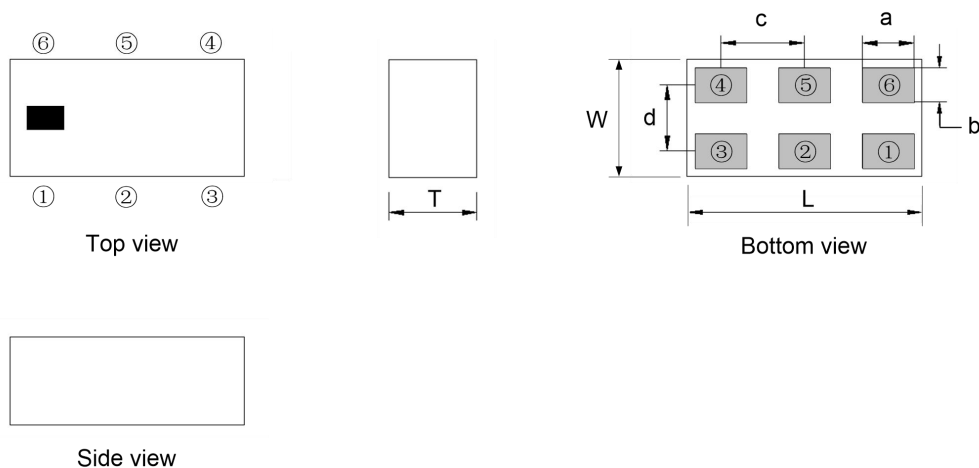
1. Features

High Rejection & Low Insertion Loss.

2. Applications

Band Pass Filter for 1880-2700 MHz working frequency.

3. Shapes & Dimensions



Mark	L	W	T	a	b	c	d
Dimensions (mm)	1.0 max	0.5 max	0.35 max	0.18±0.05	0.125±0.05	0.36±0.05	0.275±0.05

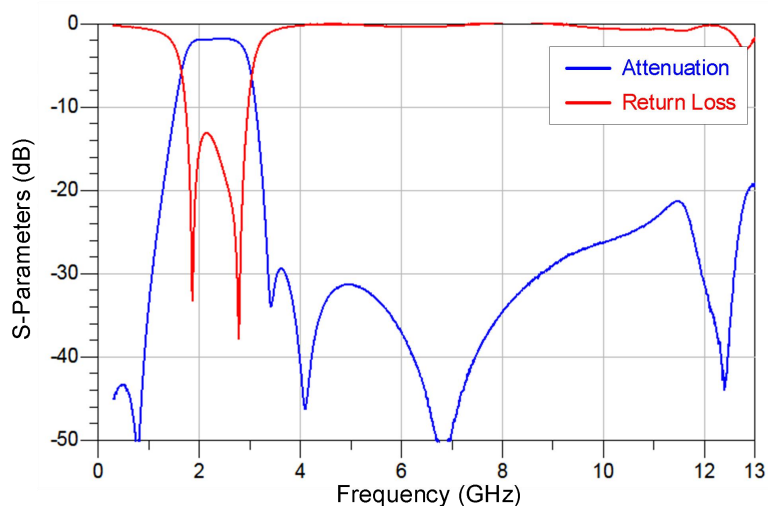
4. Terminal Pin Definition

①	NC	②	GND	③	NC
④	Output	⑤	GND	⑥	Input

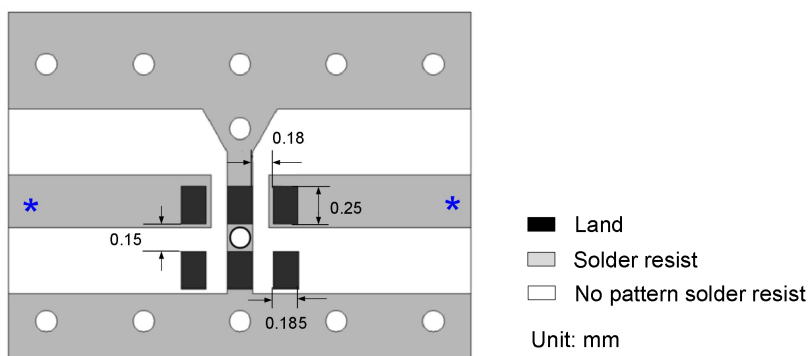
5. Electrical Characteristics

FLT15B1827L-1131A	Specification
Frequency range	1880-2700 MHz
Insertion Loss (@+25℃)	2.2 dB max. (1.8 dB typ.)
Insertion Loss (@-40~+85℃)	2.4 dB max.
Attenuation	20 dB min. (34 dB typ.) @ 400-1000 MHz 20 dB min. (32 dB typ.) @ 3600-5000 MHz 25 dB min. (32 dB typ.) @ 5000-8000 MHz 25 dB min. (26 dB typ.) @ 8000-12750 MHz
Return Loss	10 dB min.
Impedance	Match to LNA module
Power Capacity	2W max.
MSL	LEVEL 1
HBM ESD	Pass 1KV on all pins (Base on AEC-Q200-002)
Operating and Storage Condition Operation Temperature Range: -40 ~ +85℃ Storage Temperature Range: -40 ~ +85℃ Storage Condition before Soldering Storage Temperature Range: +10 ~ +30℃ Humidity: 30 to 70% relative humidity	

6. Typical Electrical Performance at T= 25±5℃

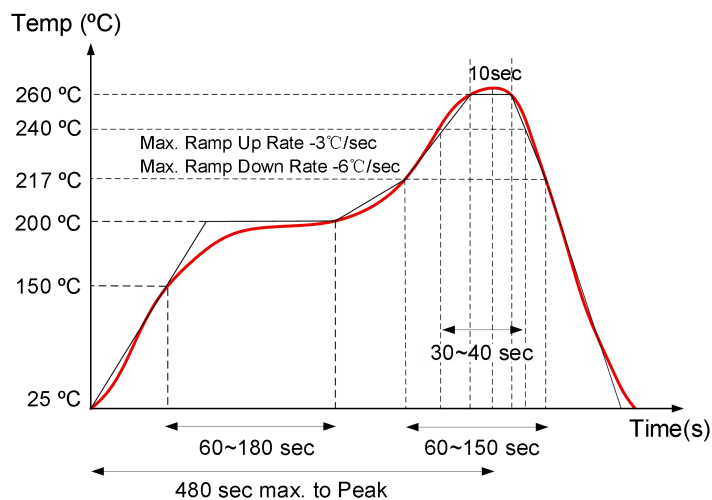


7. Soldering Land Pattern



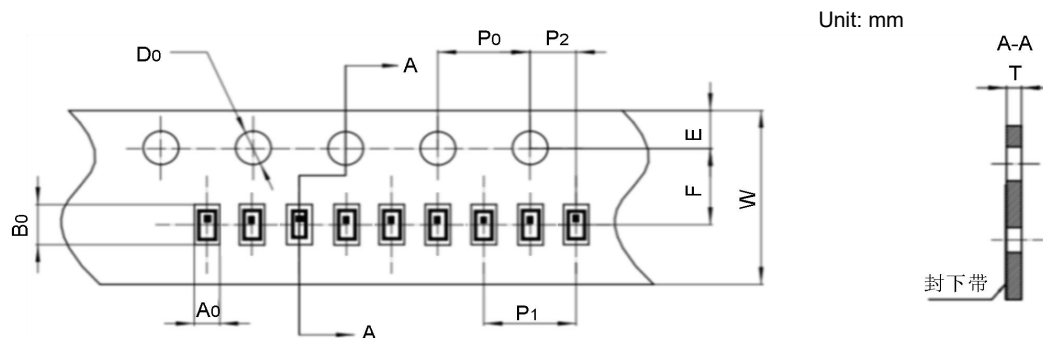
* Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

8. Reflow Soldering Standard Condition (For SnAgCu series solder paste)



9. Packaging and Dimensions 1005 (BS 0402)

◆ Paper Tape



A ₀	B ₀	W	F	E	P ₀	P ₁	P ₂	D ₀	T	10 P ₀
0.65 ±0.03	1.15 ±0.03	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	0.42 ±0.03	40.00 ±0.20

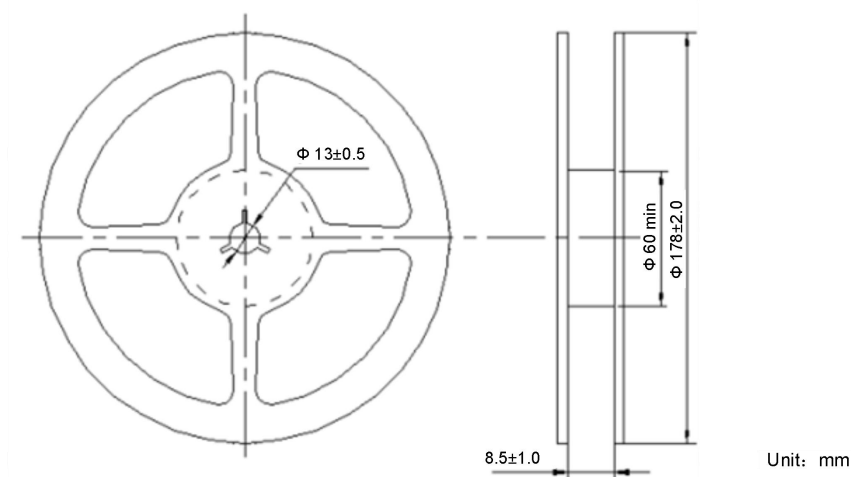
◆ Ordering Code

F	LT	15	B	1827	L	1131A
FTR device	LTCC Technology	Size: 1005	BPF	Working Frequency: 1880-2700 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 (10000 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.