

Datasheet of LTCC Device

RoHS & Halogen Free & REACH Compliance

Laminated Ceramic Triplexer

500-960MHz/1427-2690MHz/3300-5925MHz

P/N: FLT25T0914263359L-4300A

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

LTCC Triplexer 2520 (BS 1008) Size,

For 500-960 MHz / 1427-2690 MHz / 3300-5925 MHz Working Frequency

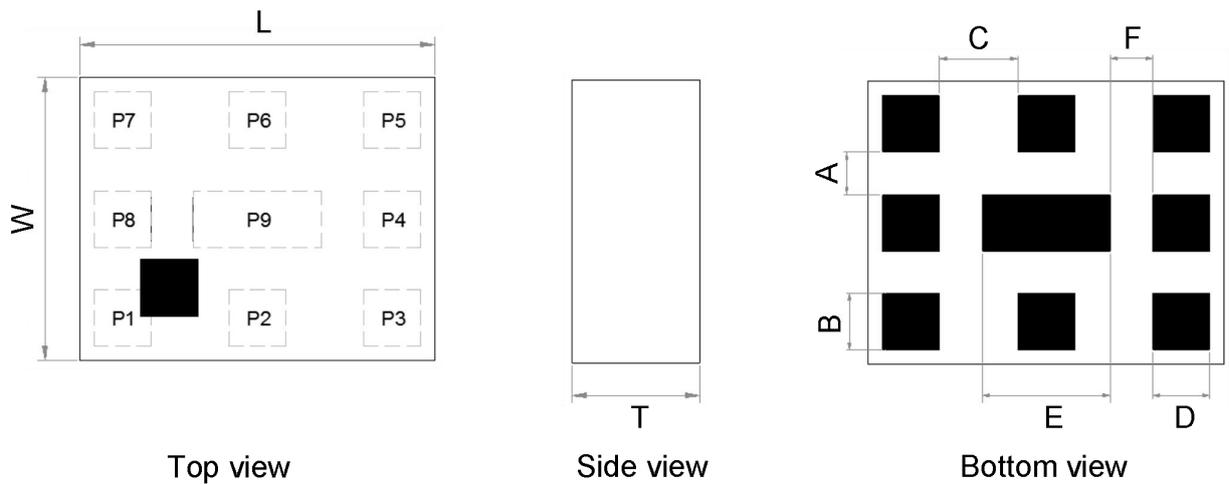
1. Features

High Isolation and Low Insertion Loss.

2. Applications

LB 500-960MHz, MB 1427-2690MHz and HB 3300-5925MHz band separation.

3. Shapes & Dimensions



Mark	L	W	T	A	B	C	D	E	F
Dimensions (mm)	2.5±0.1	2.0±0.1	0.90 max.	0.3±0.1	0.4±0.1	0.55±0.1	0.4±0.1	0.9±0.1	0.3±0.1

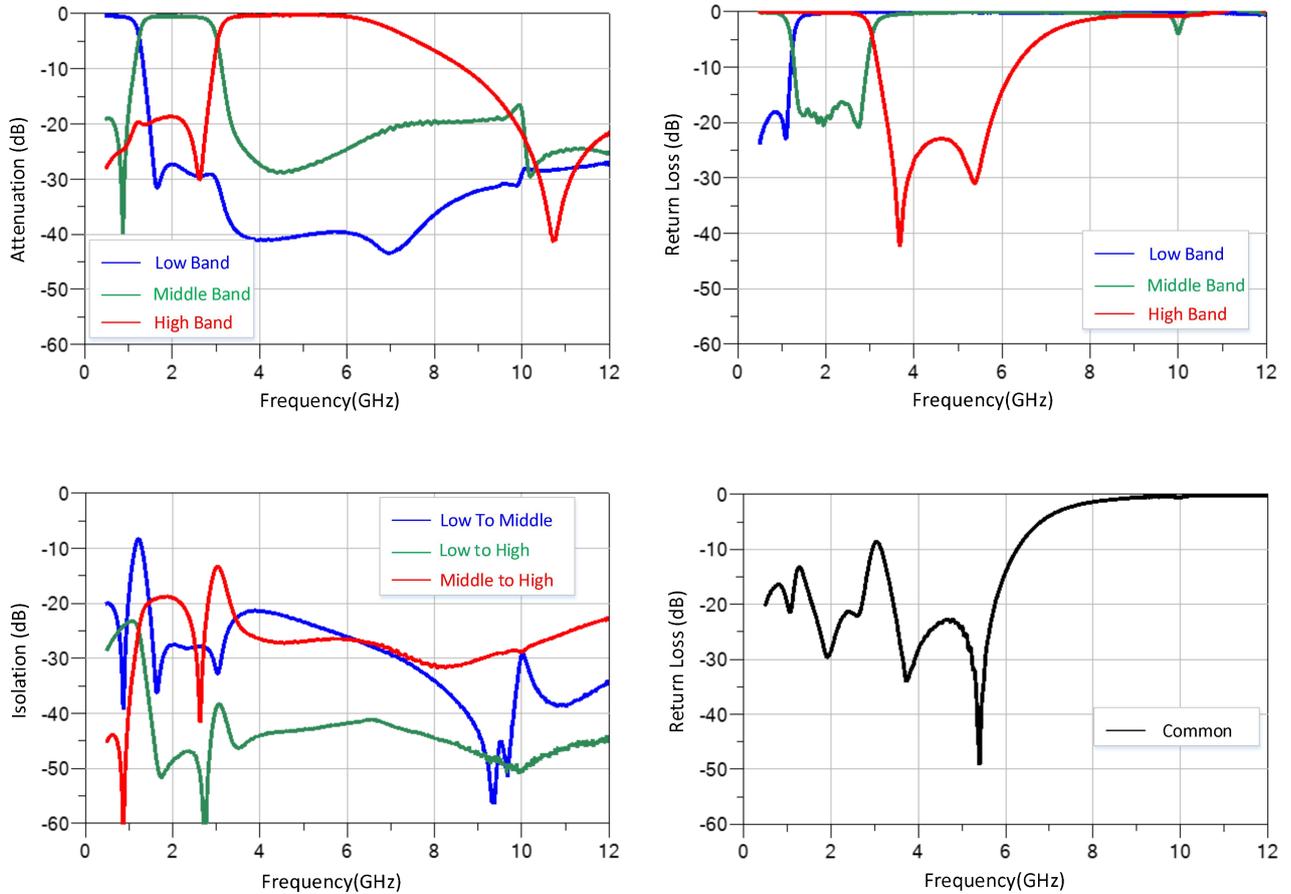
4. Terminal Pin Definition

①	High-Band	②	GND	③	Middle-Band
④	GND	⑤	Low-Band	⑥	GND
⑦	Common	⑧	GND	⑨	GND

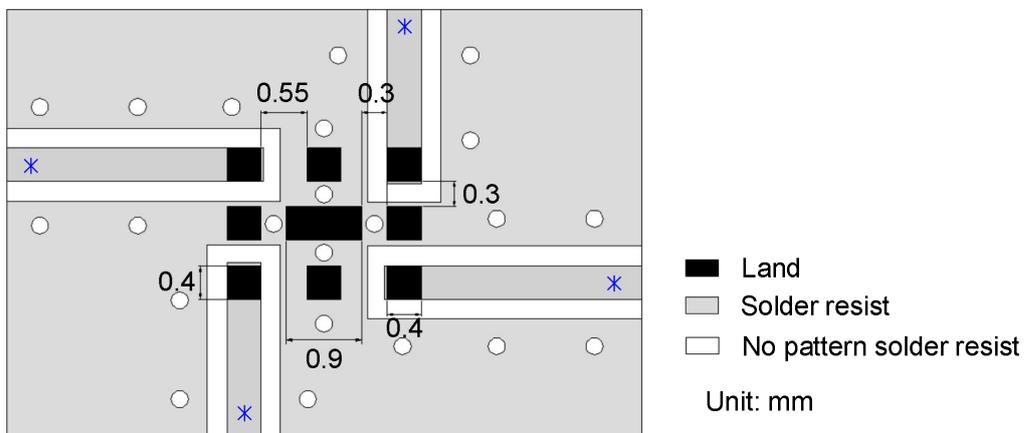
5. Electrical Characteristics

Pass Band (MHz)	Insertion Loss (dB)(@ +25°C)	Insertion Loss (dB)(@ -40~+85°C)	Return Loss (dB)	Attenuation (dB)
500-798 815-894 880-915 915-960	0.60 max. (0.55 typ.) 0.70 max. (0.65 typ.) 0.75 max. (0.70 typ.) 0.85 max. (0.77 typ.)	0.80 max. 0.90 max. 0.90 max. 1.10 max.	10 min.	12 min. @ 1427-2690 MHz 27 min. @ 3300-3400 MHz 27 min. @ 3400-3800 MHz 33 min. @ 3800-4200 MHz 33 min. @ 4400-5000 MHz 33 min. @ 5150-5925 MHz
1427-1511 1710-1880 1880-1920 1930-2200 2300-2400 2496-2690	1.00 max. (0.86 typ.) 0.75 max. (0.66 typ.) 0.75 max. (0.59 typ.) 0.75 max. (0.53 typ.) 0.75 max. (0.57 typ.) 1.00 max. (0.88 typ.)	1.30 max. 0.95 max. 0.95 max. 0.95 max. 0.95 max. 1.30 max.	10 min.	18 min. @ 500-960 MHz 13 min. @ 3300-3400 MHz 20 min. @ 3400-3800 MHz 23 min. @ 3800-4200 MHz 24 min. @ 4400-5000 MHz 21 min. @ 5150-5925 MHz
3300-3400 3400-3600 3600-3800 3800-4200 4400-5000 5150-5950	1.35 max. (0.86 typ.) 0.85 max. (0.69 typ.) 0.70 max. (0.52 typ.) 0.70 max. (0.47 typ.) 0.70 max. (0.47 typ.) 0.80 max. (0.53 typ.)	1.60 max. 1.10 max. 0.90 max. 0.90 max. 0.90 max. 1.00 max.	10 min.	22 min. @ 500-960 MHz 14 min. @ 1427-2690 MHz 14 min. @ 10300-11850 MHz
Isolation (dB)	LB-MB	17 min. @ 500-960 MHz 14 min. @ 1427-2690 MHz 17 min. @ 3300-5925 MHz		
	LB-HB	20 min. @ 500-960 MHz 33 min. @ 1427-2690 MHz 33 min. @ 3300-5925 MHz		
	MB-HB	33 min. @ 500- 960 MHz 17 min. @ 1427-2690 MHz 14 min. @ 3300-5925 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

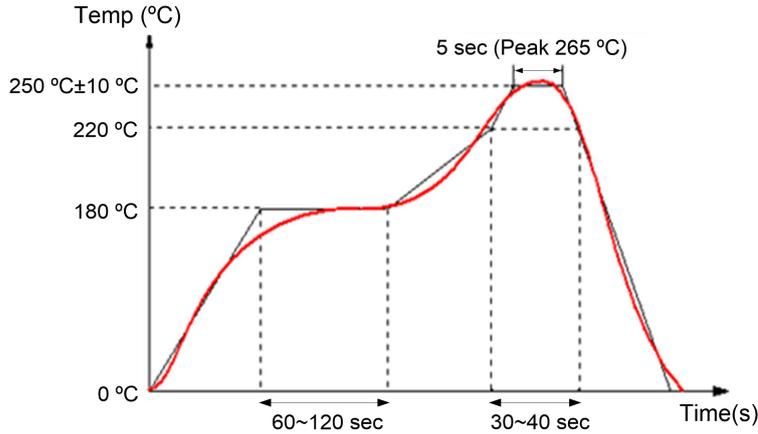


7. Soldering Land Pattern



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

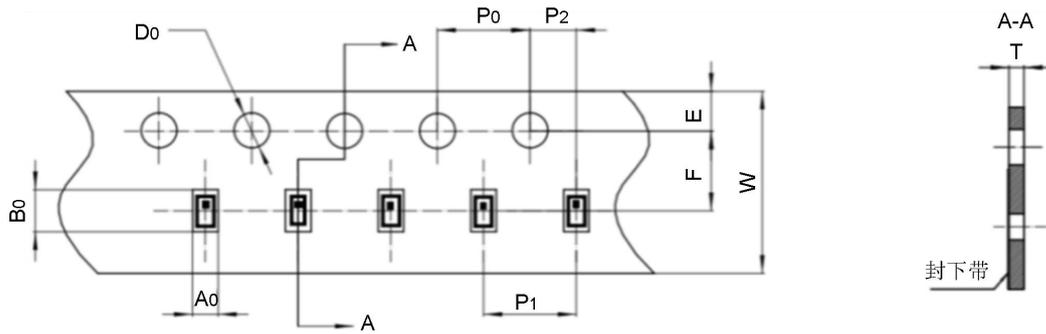
8. Reflow Soldering Standard Condition



9. Packaging and Dimensions 2520 (BS 1008)

◆ Plastic Tape

Unit: mm



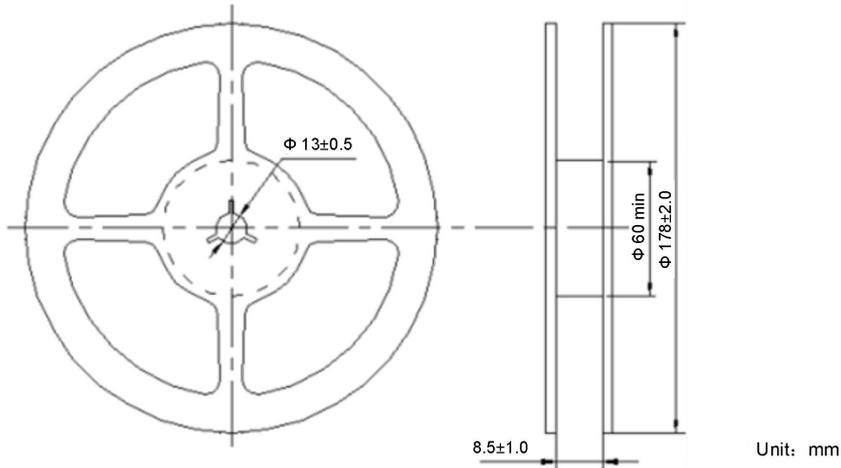
A ₀	B ₀	W	F	E	P ₀	P ₁	P ₂	D ₀	T	10 P ₀
2.22 ±0.10	2.71 ±0.10	8.00 ±0.10	3.50 ±0.10	1.75 ±0.10	4.00 ±0.10	4.00 ±0.10	2.00 ±0.10	1.50 +0.10/0	0.95 ±0.10	40.00 ±0.20

◆ Ordering Code

F	LT	25	T	0914263359	L	4300A
FTR device	LTCC Technology	Size: 2520	Triplexer	Working Frequency: 500-960 MHz / 1427-2690 MHz/ 3300-5925 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 (3000 pcs/Reel)**◆ Storage Period**

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

Storage Temperature Range : $+10 \sim +30$ 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.

RF COMPONENTS

<p>Bending test IEC 60068-2-21 GB/T 2423.60</p>	<p>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.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Temperature cycle IEC60068-2-14 GB/T 2423.22</p>	<p>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.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>High temperature IEC 60068-2-2 GB/T2423.2</p>	<p>*Temperature: 85±2°C. *Test duration: 500+24/-0 hours. Measurement to be made after keeping at room temperature for 24±2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics.</p>
<p>Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3</p>	<p>*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 ※ 200hrs measuring the first data then 300hrs data.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Low temperature IEC 60068-2-1 GB/T2423.1</p>	<p>*Temperature: -40±2°C. *Test duration: 500+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>