

LTCC 3225 Series

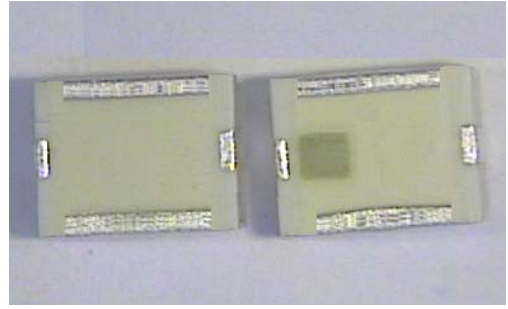
Multilayer Chip Band-Pass Filters

Features

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

Applications

- ❖ 5.15~5.33 GHz Wireless communication systems.



Specifications

Part Number	Freq. Range (MHz)	Insertion Loss @ BW (dB)	VSWR @ BW	Ripple @ BW	Frequency	Attenuation (dB)
LTCC3225-R5R2DAQ_	5150 ~5330	2.5 max.	2.0 max.	1.9 max.	2400 ~ 2500MHz	28 min.
					5490 ~ 5850MHz	25 min.
					10300 ~10660MHz	25 min.

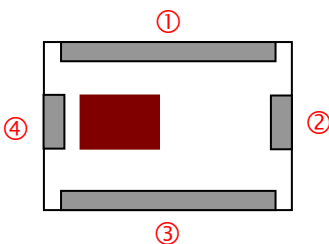
Q'ty/Reel (pcs) : 2,000
 Operating Temperature Range : -40 ~ +85 °C
 Storage Temperature Range : -40 ~ +85 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

Part Number

LTCC 3225 - R 5R2 DAQ □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	LTCC : Band-Pass Filter	② Dimensions (L x W)	3.2 x 2.5 mm
③ Material Code	R	④ Frequency Range	5R2=5200MHz
⑤ Specification Code	DAQ	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

Terminal Configuration



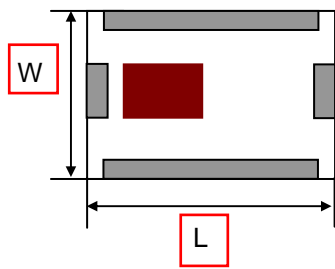
No.	Terminal Name	No.	Terminal Name
①	GND	③	GND
②	OUT/IN	④	IN/ OUT



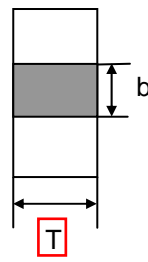
Dimensions and Recommended PC Board Pattern

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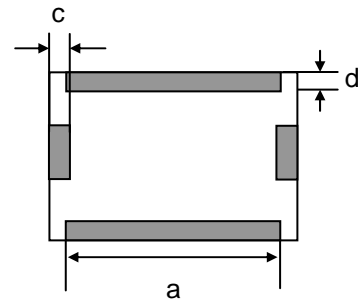
Unit : mm



<Top View>

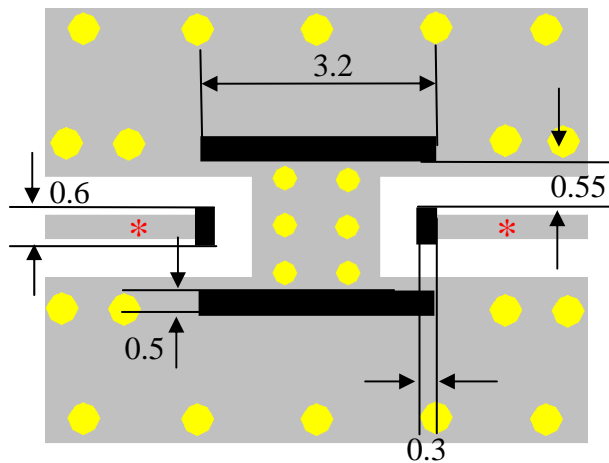


<Side View>



<Bottom View>

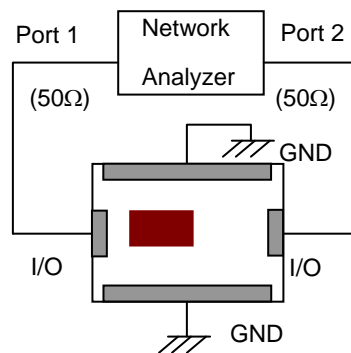
Mark	L	W	T	a	b	c	d
Dimensions	3.2 ±	2.5 ±	1.8 max.	2.8 ±	0.6 ±	0.3 ±	0.3 ±
	0.2	0.2		0.1	0.2	0.15	0.1



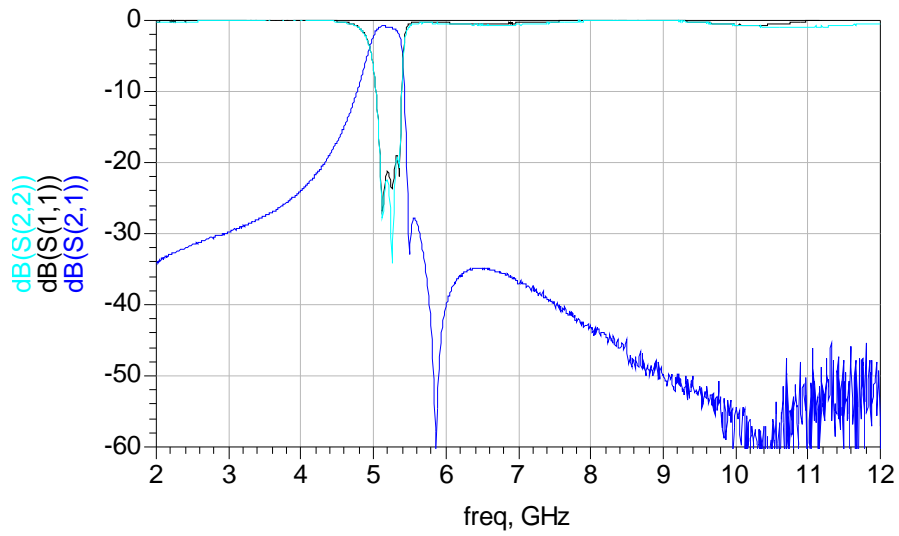
- Solder Resist
- Land
- Through-hole (ϕ 0.35/0.3)

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

Measuring Diagram



Electrical Characteristics (T=25°C)

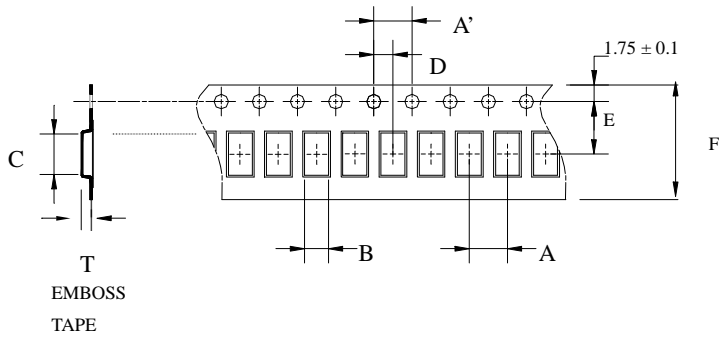


Notes

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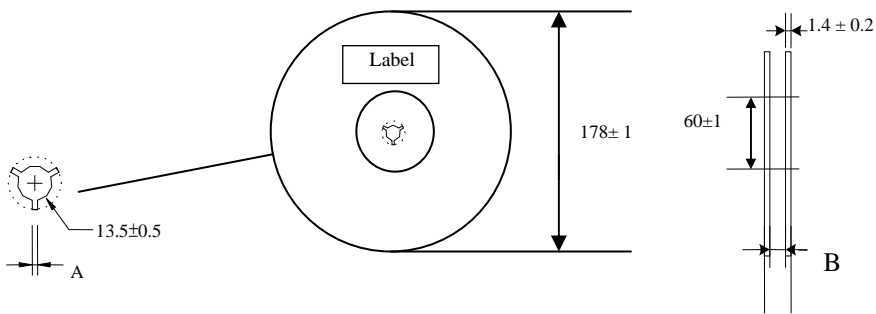
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
3225	4.0±	4.0±	2.75±	3.45±	2.0±	3.5±	8.0±	1.70±	2,000pcs	Plastic (Embossed)
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10		

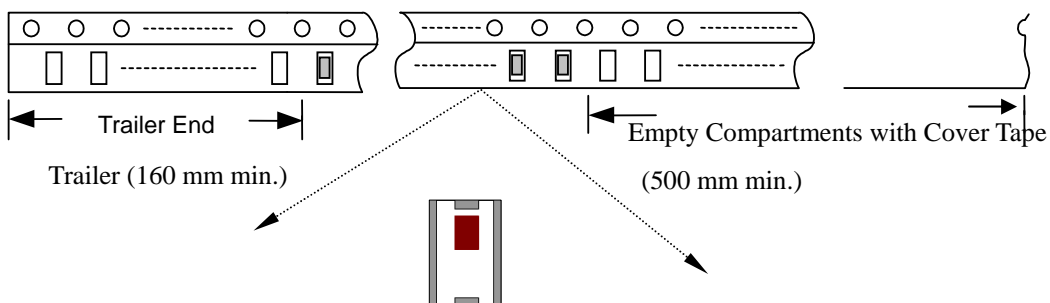
❖Reel Dimensions (Unit: mm)



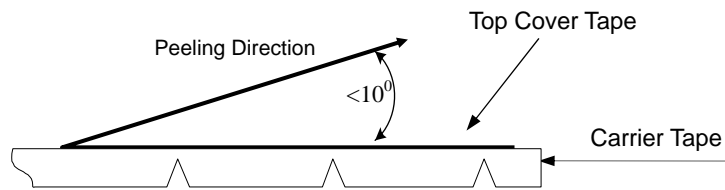
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
3225	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 .

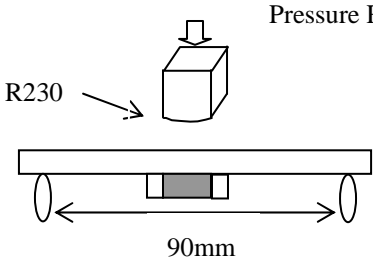
❖ Storage Conditions

- (1) Temperature: 5 ~35°C , relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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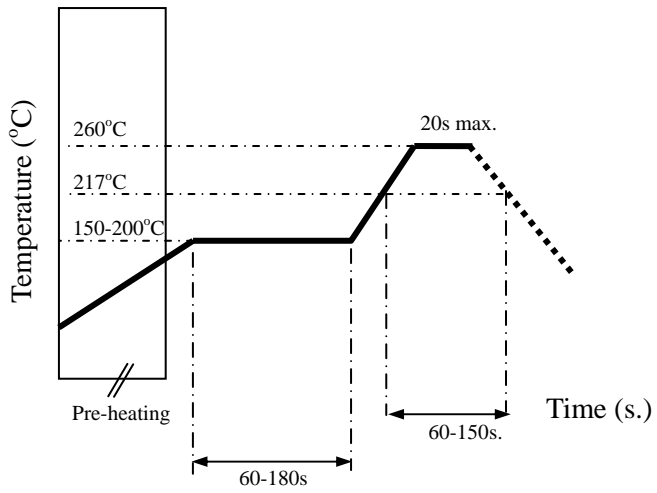
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> No apparent damage More than 95% 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 	<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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