

LF 1005 Series

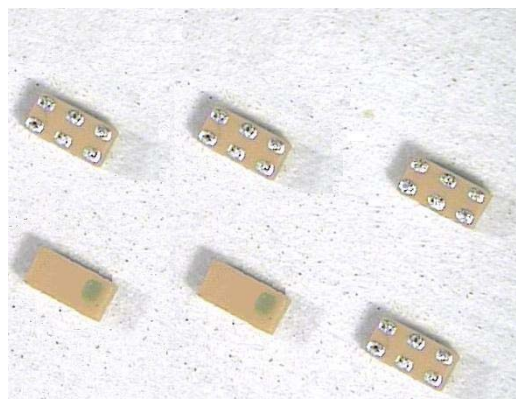
Multilayer Chip Low-Pass Filters

Features

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

Applications

- ❖ Mobile wireless communication systems, including GSM/WCDMA/LTE phones, etc.



Specifications

Part Number	Frequency Range (MHz)	Insertion Loss @ BW (dB)	VSWR @ BW	Frequency (MHz)	Attenuation (dB)
LF1005-LR83NBA_	698 ~ 960	0.6 max.@ 25°C 0.8 max.@-40~105°C	2.0 max.	1554~1610	13 min.
				1805~1830	35 min.
				2110~2170	35 min.
				1710~2700	30 min.

Q'ty/Reel (pcs) : 10,000

Operating Temperature Range : -40 ~ +105 °C

Storage Temperature Range : -40 ~ +105 °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.

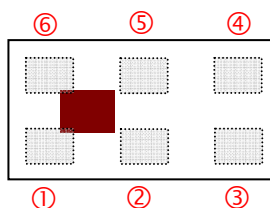
Part Number

LF 1005 - L R83 NBA □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	LF : Low Pass Filter	② Dimensions (L × W)	1.0 × 0.5 mm
③ Material Code	L	④ Frequency Range	R83=830MHz
⑤ Specification Code	NBA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

Terminal Configuration

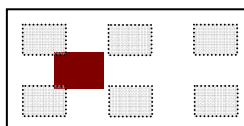
<Top View>



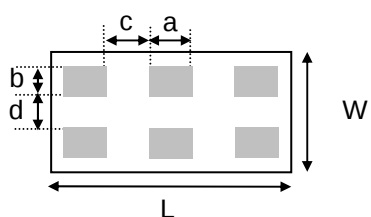
No.	Terminal Name	No.	Terminal Name
①	NC	④	OUT
②	GND	⑤	GND
③	NC	⑥	IN

Dimensions and Recommended PC Board Pattern

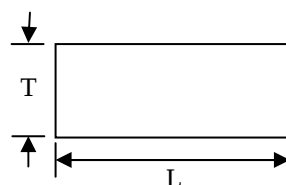
Unit: mm



< Top View >

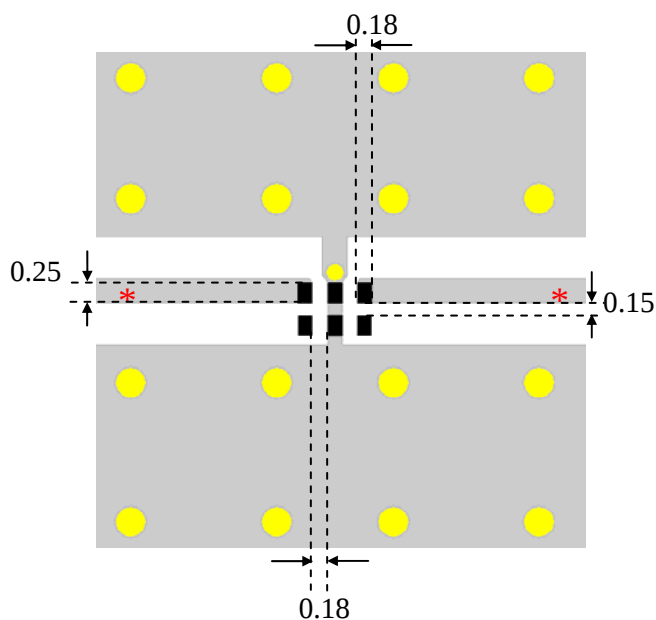


< Bottom View >



< Side View >

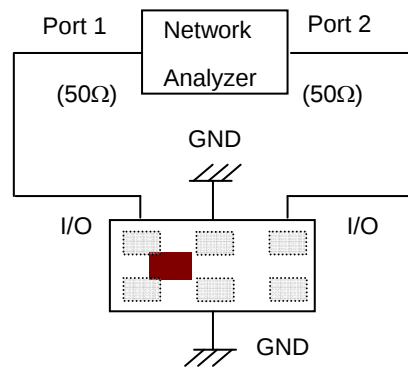
Mark	L	W	T	a	b	c	d
Dimensions	1.0 ±0.05	0.5 ±0.05	0.38 ±0.05	0.18 ±0.05	0.125 ±0.05	0.18 ±0.05	0.15 ±0.05



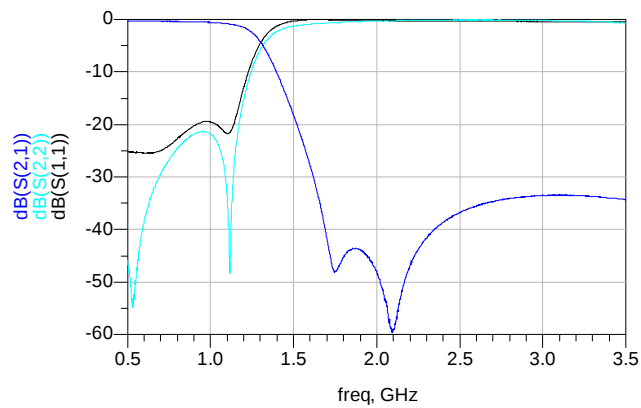
-  Solder Resist
-  Land
-  Through-hole (ϕ 0.35)
-  Through-hole (ϕ 0.2)

* 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)

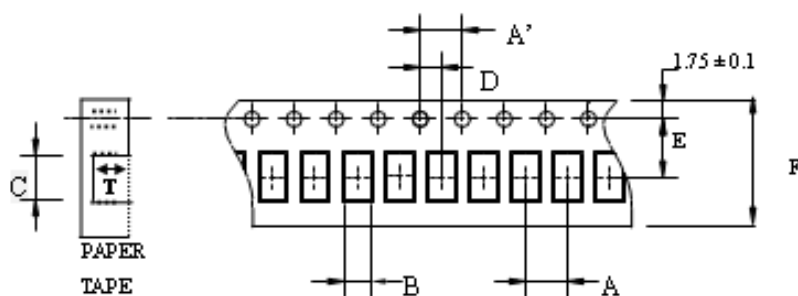


Notes

- ❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

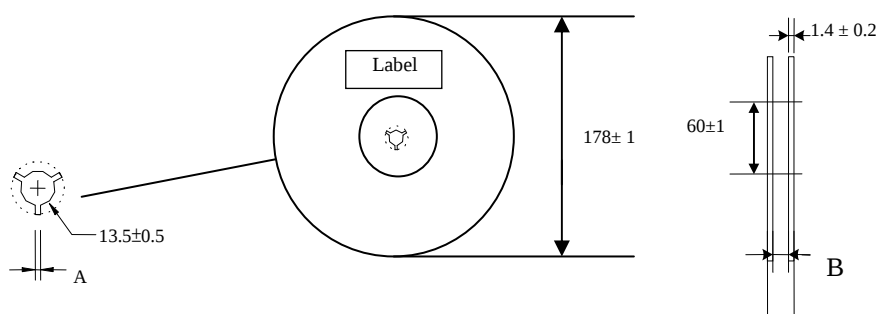
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
1005	2.0± 0.05	4.0± 0.1	0.62± 0.03	1.12± 0.03	2.0± 0.05	3.5± 0.05	8.0± 0.1	0.45± 0.03	10,000pcs	Paper

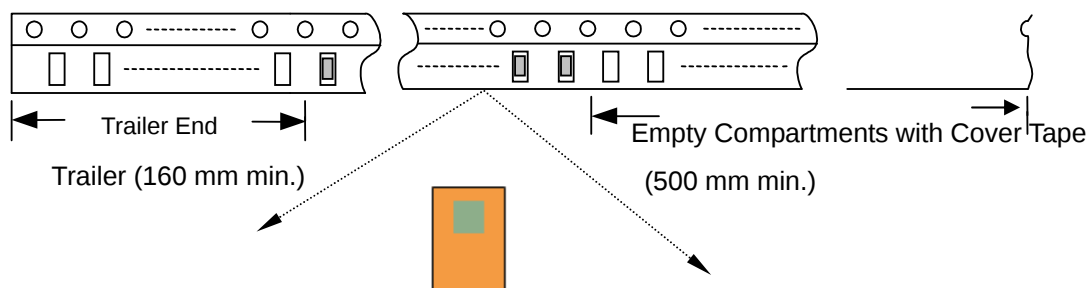
❖Reel Dimensions (Unit: mm)



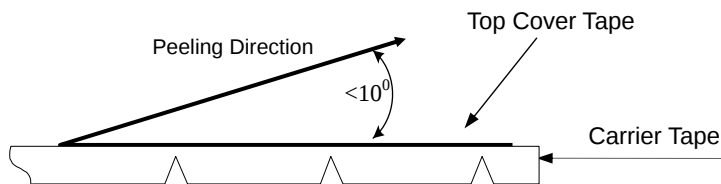
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
1005	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 .

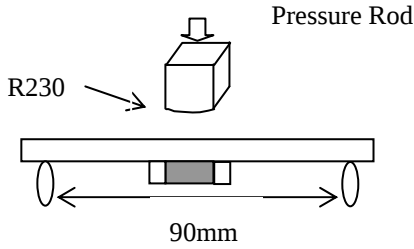
❖ Storage Conditions

- (1) Temperature: $5 \sim 35^{\circ}\text{C}$, relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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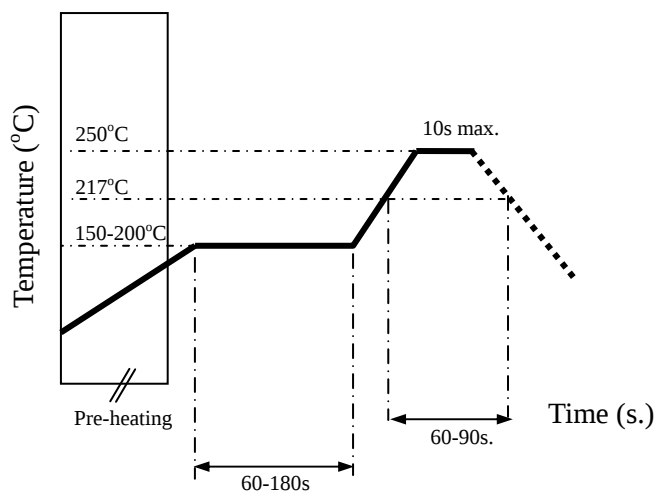
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solder ability	- No apparent damage - More than 75% of the terminal electrode shall be covered with new solder.	- Preheat: $120 \pm 5^{\circ}\text{C}$ - Solder: $245 \pm 5^{\circ}\text{C}$ for 5 ± 1 sec
Soldering strength (Termination Adhesion)	3N minimum	- 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)	- No apparent damage - Fulfill the electrical specification	- Solder specimen onto test jig (FR4, 1.6mm) using the recommend soldering profile. - Apply a bending force of 2mm deflection 
Heat/Humidity Resistance	- No apparent damage - Fulfill the electrical specification after test	- Temperature: $85 \pm 2^{\circ}\text{C}$ - Humidity: 90% ~ 95% RH - Duration: 1000 ± 48hrs - Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	- No apparent damage - Fulfill the electrical specification after test	- 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	- No apparent damage - Fulfill the electrical specification after test	- 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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