

LF 1005 Series

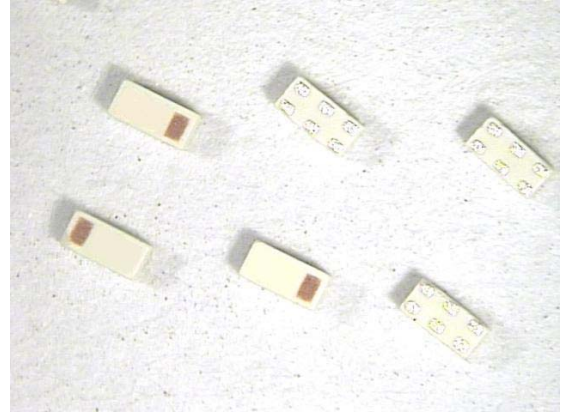
Multilayer Chip Low-Pass Filters

Features

- ❖ Ultra small SMD type with low loss at pass-band and high attenuation at stop-band.
- ❖ 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-W1R9NBA | 1695 ~ 2180 | 0.6 max. | 2.0 max | 3390~4360 | 20 min. |
| | | | | 5085~6540 | 45 min. |

Q'ty/Reel (pcs) : 10,000
 Operating Temperature Range : -40 ~ +85 °C
 Storage Temperature Range : -40 ~ +85 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

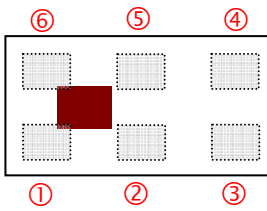
Part Number

LF 1005 - W 1R9 NBA □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

| | | | |
|----------------------|----------------------|------------------------|---------------------------|
| ① Type | LF : Low Pass Filter | ② Dimensions (L x W) | 1.0 x 0.5 mm |
| ③ Material Code | W | ④ Frequency Range | 1R9=1900MHz |
| ⑤ Specification Code | NBA | ⑥ Packaging | T: Tape & Reel B: Bulk |
| ⑦ Soldering | /LF=lead-free | | |

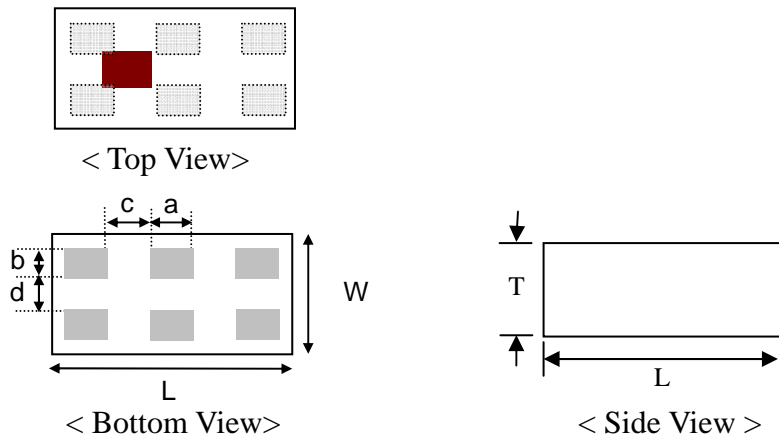
Terminal Configuration

<Top View>

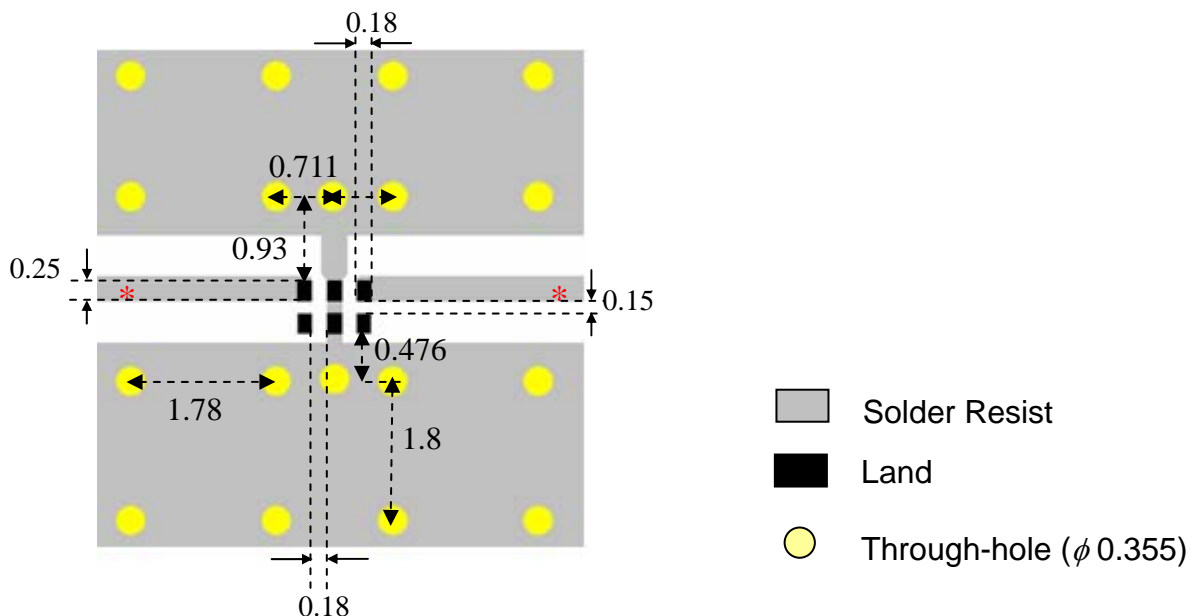


| No. | Terminal Name | No. | Terminal Name |
|-----|---------------|-----|---------------|
| ① | NC | ④ | OUT |
| ② | GND | ⑤ | GND |
| ③ | NC | ⑥ | IN |

Dimensions and Recommended PC Board Pattern

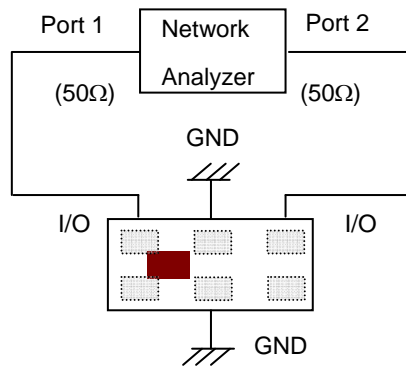


| Mark | L | W | T | a | b | c | d |
|------------|--------------|--------------|---------------|---------------|----------------|---------------|---------------|
| Dimensions | 1.0 ±0.05 | 0.5 ±0.05 | 0.38 ±0.05 | 0.18 ±0.05 | 0.125 ±0.05 | 0.18 ±0.05 | 0.15 ±0.05 |

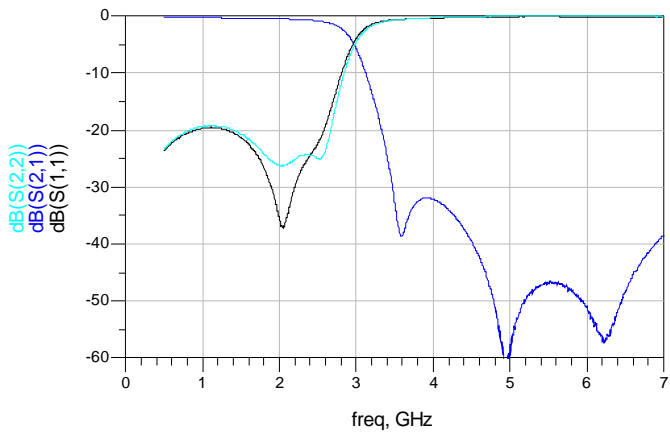


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram



Typical Electrical Characteristics (T=25°C)

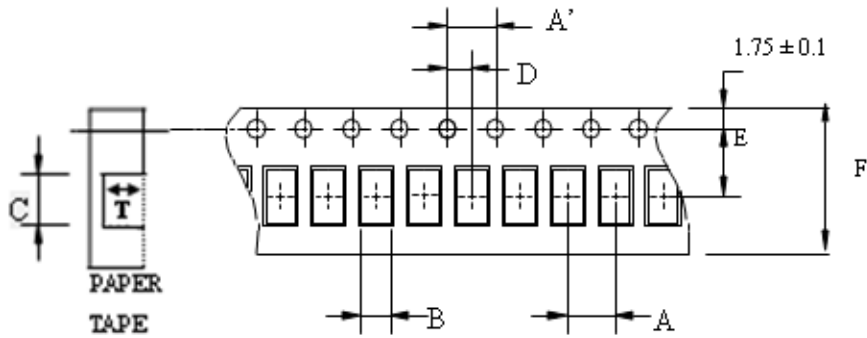


Notes

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

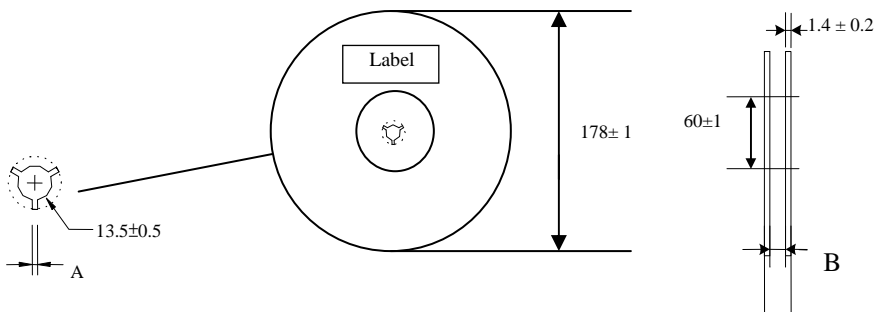
Taping Specifications

❖ Tape Dimensions (Unit: mm) & Quantity



| Type | A | A' | B | C | D | E | F | T | Quantity/reel | Tape material |
|------|------|------|-------|-------|------|------|------|-------|---------------|---------------|
| 1005 | 2.0± | 4.0± | 0.62± | 1.12± | 2.0± | 3.5± | 8.0± | 0.45± | 10,000pcs | Paper |
| | 0.05 | 0.10 | 0.03 | 0.03 | 0.05 | 0.05 | 0.10 | 0.03 | | |

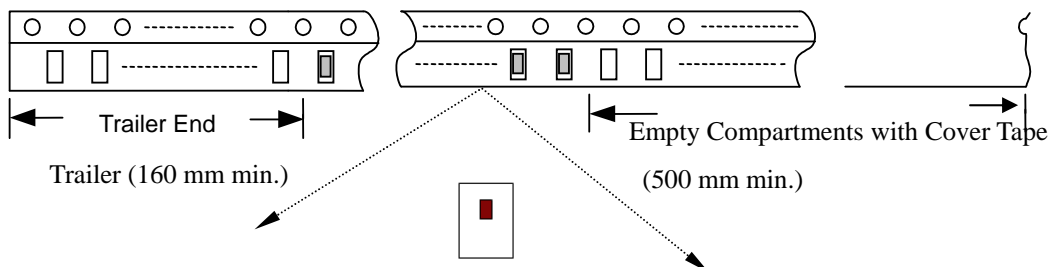
❖ Reel Dimensions (Unit: mm)



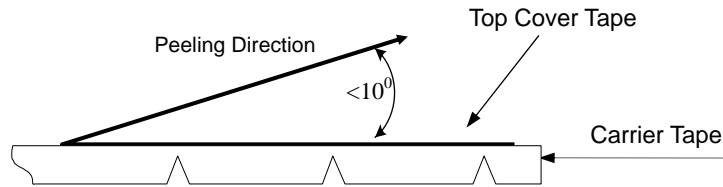
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

| 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 .

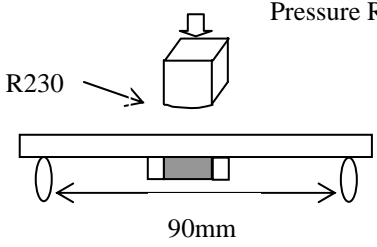
❖Storage Conditions

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

Notes

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

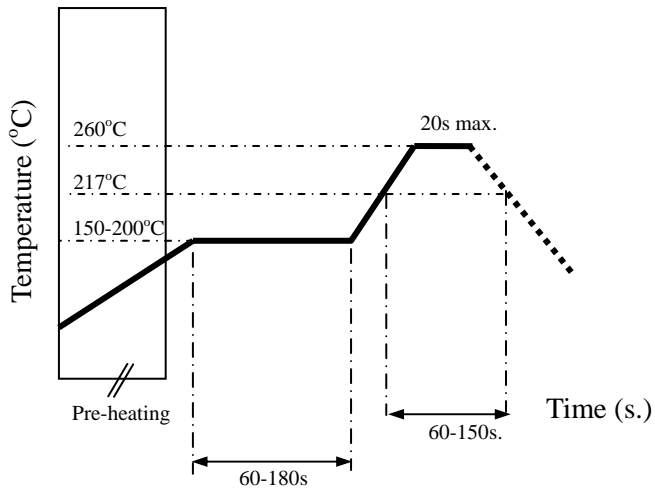
Mechanical & Environmental Characteristics

| 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"> 3N 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, 1.6mm) 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 :



Notes

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

Advanced Ceramic X Corp.

16 Tzu Chiang Road, Hsinchu Industrial District Hsinchu Hsien 303, Taiwan

TEL:886-3-5987008 FAX:886-3-5987001

E-mail: acx@acxc.com.tw <http://www.acxc.com.tw>