



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: LTCC Filter 2450 MHz Size 2.0x1.25 mm

TST Part No.: TL0043AA2095

Customer Part No.: _____

| |
|-----------------------------|
| Customer signature required |
| Company: _____ |
| Division: _____ |
| Approved by : _____ |
| Date: _____ |

Checked by: _____ Alisa Kuo *Alisa Kuo*

Approved by: _____ Kazuma Lee *Kazuma Lee*

Date: _____ 2022/02/10

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the change



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LTCC Filter 2450 MHz SMD 2.0X1.25 mm

MODEL NO.: TL0043AA2095

REV.2.0

A. MAXIMUM RATING:

1. Operating temperature range: -40°C to +85°C
2. Storage temperature range: -40 °C to +85 °C
3. Impedance (Unbalanced) : 50Ω
4. Moisture Sensitive Level: Level 1 (MSL1)

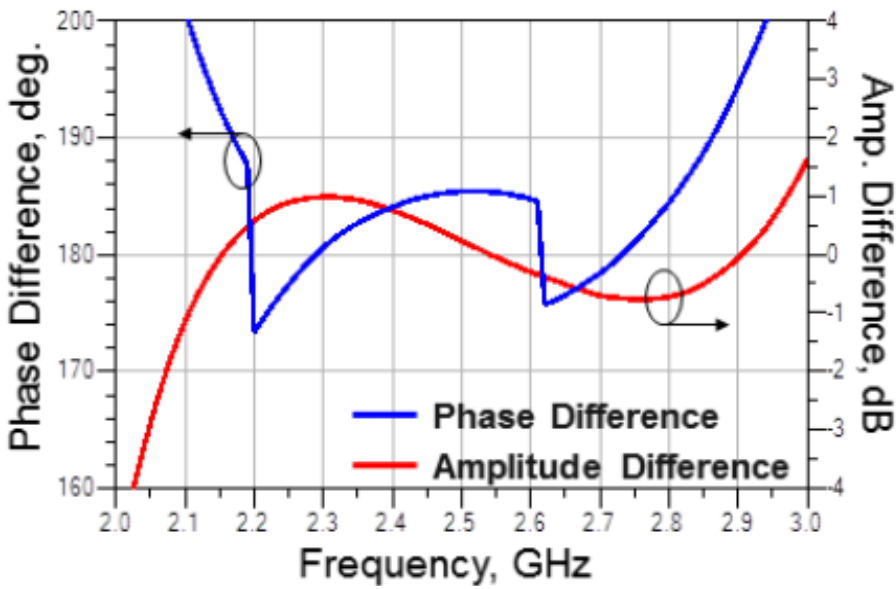
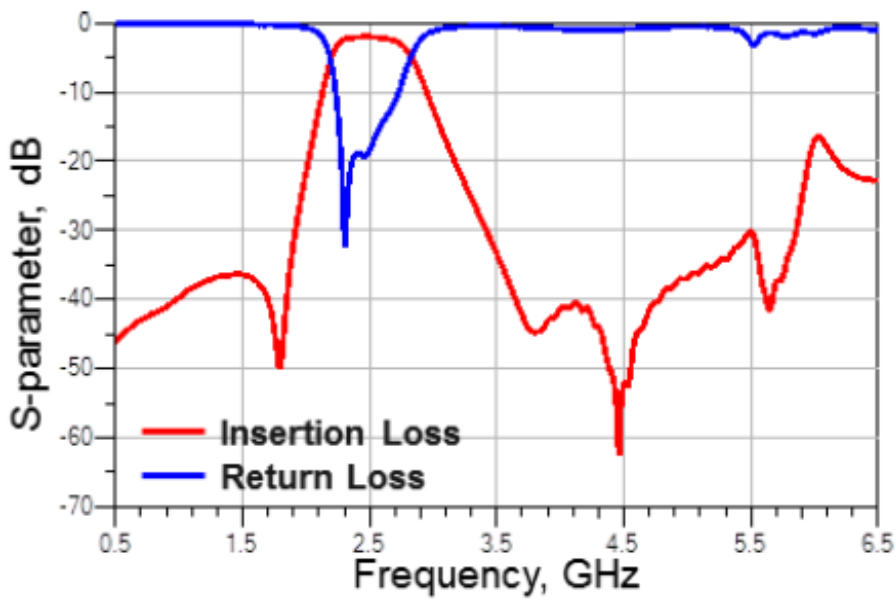
RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

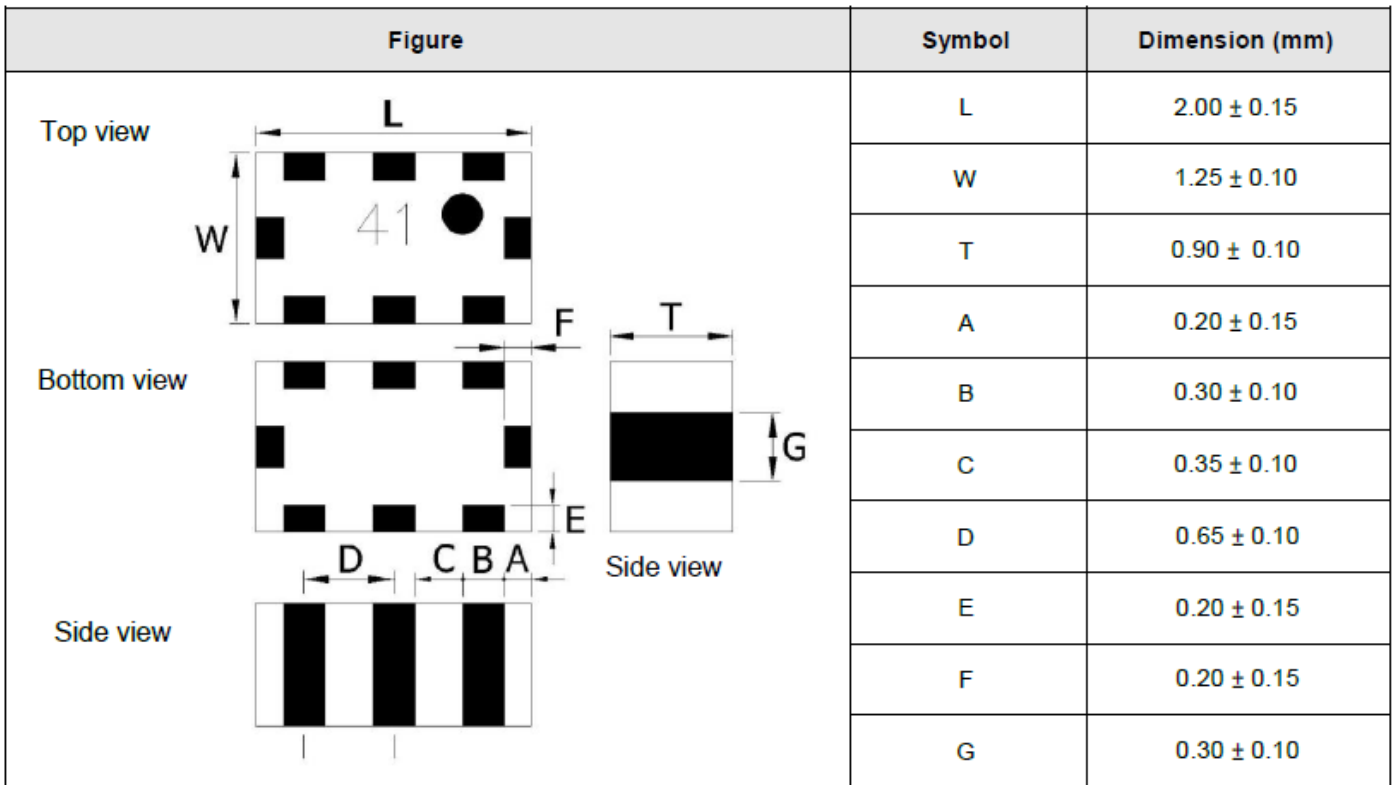
B. ELECTRICAL CHARACTERISTICS:

| Item | Specifications |
|---|---|
| Frequency range | 2400 ~ 2500 MHz |
| Insertion Loss (at 25°C) | 3.50 dB max. |
| Insertion Loss (at -40 ~ +85°C) | 4.0 dB max. |
| Attenuation | 35 dB Min. (40 dB typ)@ 880 ~ 960 MHz 30 dB Min. (34 dB typ)@ 1710 ~ 1880 MHz 20 dB Min. (22 dB typ)@ 1880 ~ 1990 MHz 30 dB Min. (36 dB typ)@ 4800 ~ 5000 MHz |
| Phase Difference | 180°±10° |
| Amplitude Difference | 2.0 dB max |
| VSWR | 2.1 Max. |
| Characteristics Impedance | 50Ω |
| Balanced Impedance | Conjugate match to BC series of Bluetooth chipset |
| Power Capacity | 500mW max. |
| Moisture sensitivity levels | MSL is LEVEL 1 (Refer to : IPC/JEDEC J-STD-020) |
| Operating & Storage Condition (Component) Operation Temperature Range: -40 ~ +85 °C. Storage Temperature Range: -40 ~ +85°C. | |
| Storage Condition before Soldering (Included packaging material) Storage Temperature Range: +5 ~ +40 °C. Humidity: 30 to 70% relative humidity | |

C. FREQUENCY CHARACTERISTICS:

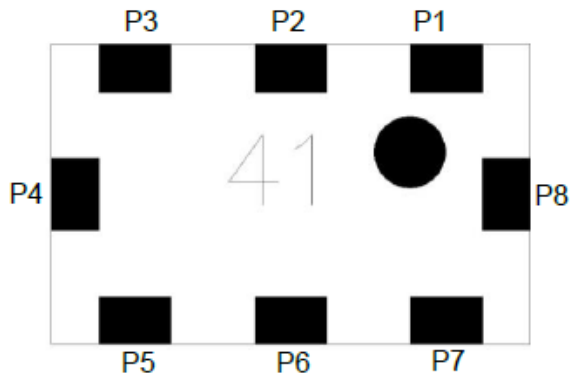


D. OUTLINE DRAWING:



E. CONSTRUCTION:

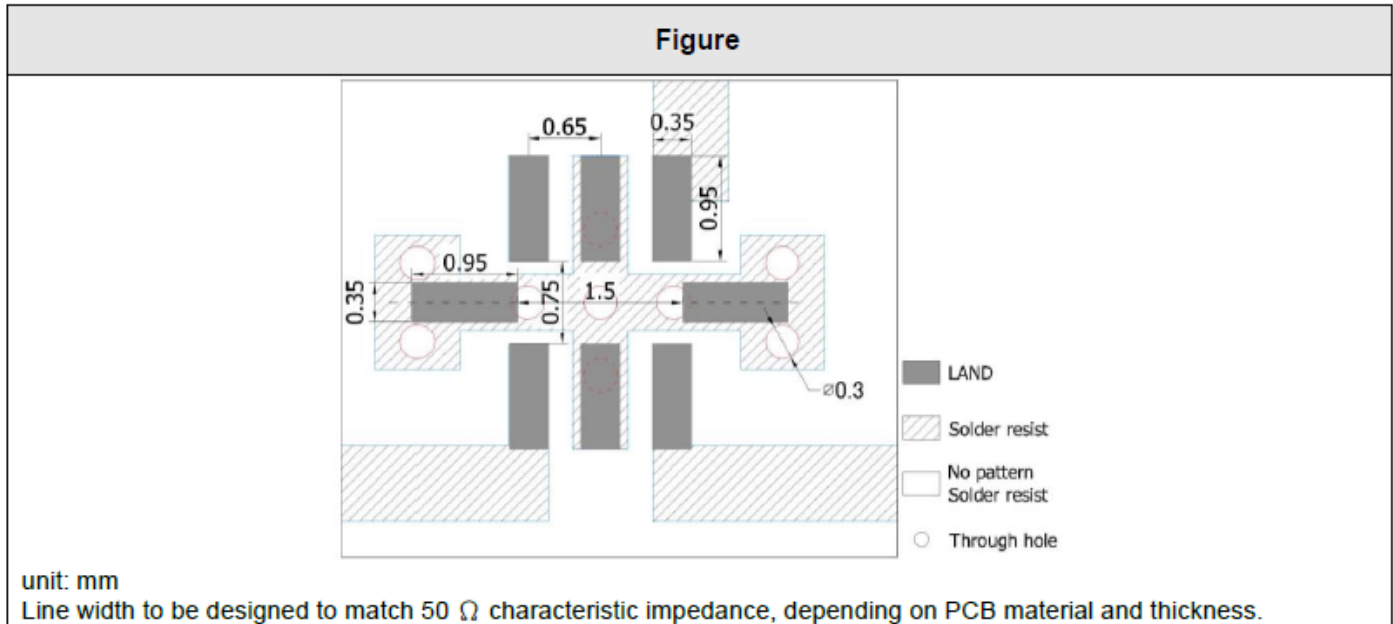
Top view



| PIN | Definition | PIN | Definition |
|-----|----------------|-----|--------------|
| P1 | Unbalance Port | P5 | Balance Port |
| P2 | DC/GND | P6 | GND |
| P3 | NC | P7 | Balance Port |
| P4 | GND | P8 | GND |

F. PCB FOOT PRINT:

LAND PATTERN



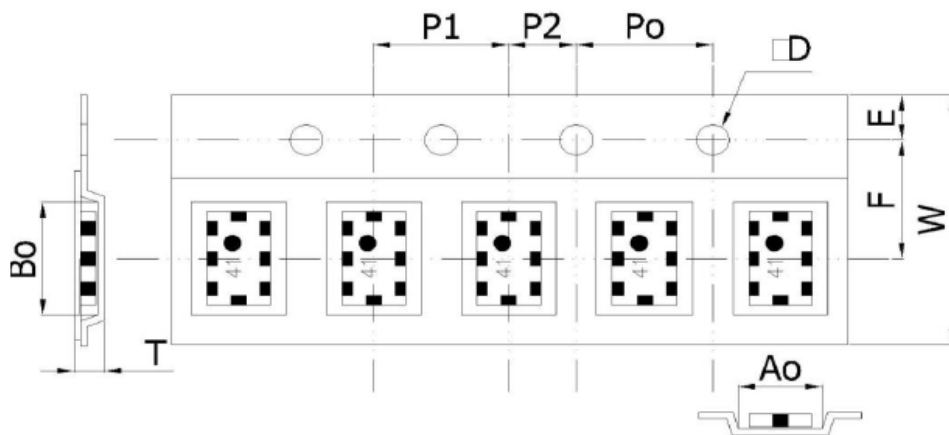
G. PACKING:

ORDERING CODE

| RF | BPB | 201209 | 0 | A | 1 | T |
|-------------------|---|--|--|---|-------------------------------------|------------------------------|
| RF Pb free device | Product Code BPB : Balanced Type Band Pass Filter | Dimension code Per 2 digits of Length, Width, Thickness : e.g : 201209 = Length 20, Width 12, Thickness 9 | Unit of dimension 0 : 0.1 mm 1 : 1.0 mm | Application A : 2.4GHz ISM Band | Specification Design Code | Packing T : Reeled |

Minimum Ordering Quantity: 2000 pcs per reel.

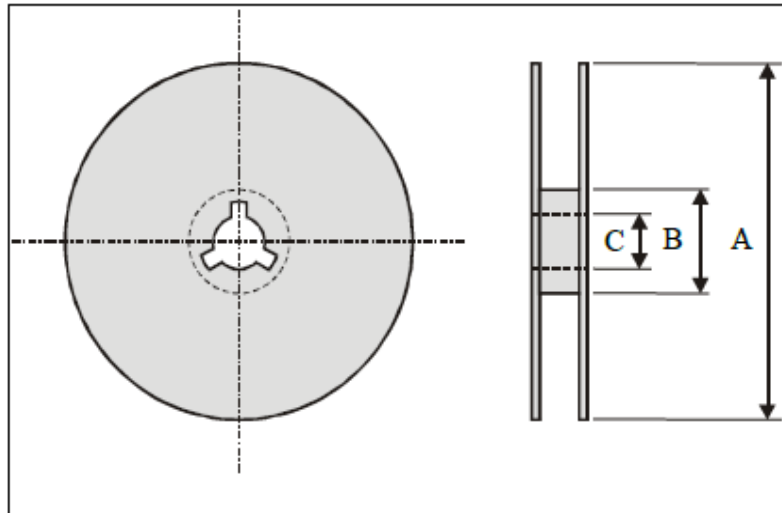
PACKAGING



Plastic Tape specifications (unit :mm)

| | | | | | |
|----------------|-------------|-------------|-------------|-------------|-------------|
| Index | Ao | Bo | ΦD | T | W |
| Dimension (mm) | 1.30 ± 0.10 | 2.25 ± 0.10 | 1.55 ± 0.05 | 1.10 ± 0.10 | 8.00 ± 0.10 |
| Index | E | F | Po | P1 | P2 |
| Dimension (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 |

Reel dimensions



| Index | A | B | C |
|----------------|------------|-------------|-------------|
| Dimension (mm) | $\Phi 178$ | $\Phi 60.0$ | $\Phi 13.5$ |

Taping Quantity: 4000 pieces per 7" reel

H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

