

# Thin-film Diplexer

For W-LAN

TFSD Series

Type: TFSD10055950-5001C1

Issue date: June 2017

## Caution

**The products in this catalog will be or have been  
stopped production**

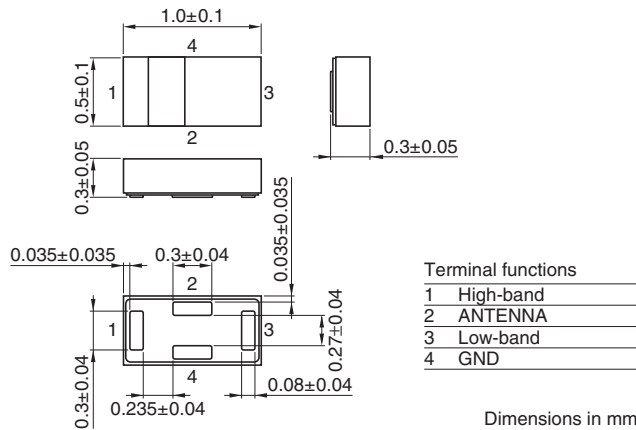
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

# Thin-film Diplexer For W-LAN

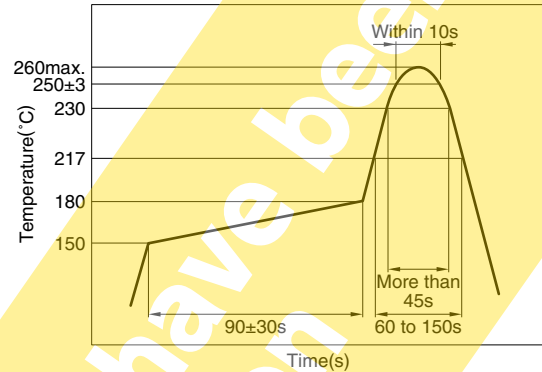
Conformity to RoHS Directive

TFSD Series TFSD10055950-5001C1

## SHAPES AND DIMENSIONS

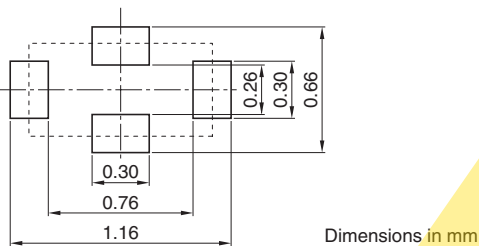


## RECOMMENDED REFLOW SOLDERING CONDITION



\* In this product, the recommended soldering condition is 'reflow'.  
Reflow Soldering : Maximum 2 times

## RECOMMENDED PC BOARD PATTERNS



The recommended distance to the PCB ground plane is 0.2mm.  
Line width be designed to match 50Ω characteristic impedance depending on PCB Material and thickness.

## ELECTRICAL CHARACTERISTICS

| Item              | Port      | Frequency range  |      | Minimum value | Typical value | Maximum value |
|-------------------|-----------|------------------|------|---------------|---------------|---------------|
| Insertion loss    | Low-band  | 2400 to 2500MHz  | (dB) | —             | 0.43          | 0.5           |
|                   | High-band | 4900 to 5950MHz  | (dB) | —             | 0.49          | 0.65          |
| Return loss       | ANT       | 2400 to 2500MHz  | (dB) | 10            | 19.5          | —             |
|                   | ANT       | 4900 to 5950MHz  | (dB) | 10            | 20.4          | —             |
|                   | Low-band  | 2400 to 2500MHz  | (dB) | 10            | 21.4          | —             |
| Attenuation       | High-band | 4900 to 5950MHz  | (dB) | 10            | 22.5          | —             |
|                   | Low-band  | 4800 to 5000MHz  | (dB) | 20            | 23.1          | —             |
|                   | Low-band  | 7200 to 7500MHz  | (dB) | 20            | 29.2          | —             |
|                   | High-band | 824 to 915MHz    | (dB) | 20            | 25.6          | —             |
| Isolation         | High-band | 1800 to 2500MHz  | (dB) | 20            | 24.1          | —             |
|                   | High-band | 9800 to 11900MHz | (dB) | 18            | 21.0          | —             |
|                   | High-band | DC to 2500MHz    | (dB) | 20            | 23.4          | —             |
| Temperature range | High-band | 4900 to 5950MHz  | (dB) | 20            | 23.9          | —             |
|                   | Operating |                  | (°C) | -40           | —             | +85           |
|                   | Storage   |                  | (°C) | -40           | —             | +85           |

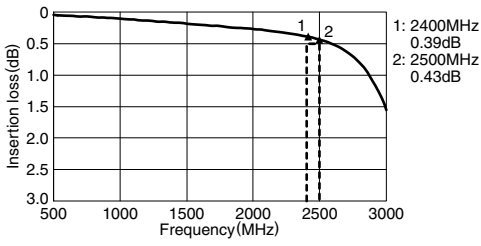
• Ta: +25°C

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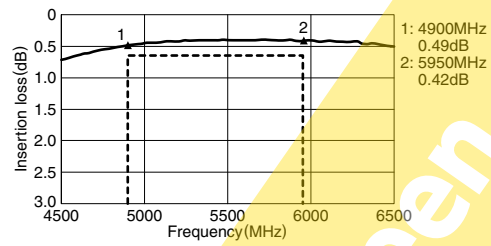
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### FREQUENCY CHARACTERISTICS

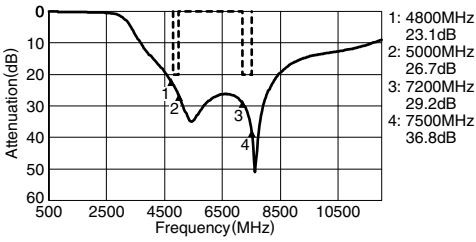
#### Low-BAND PORT INSERTION LOSS



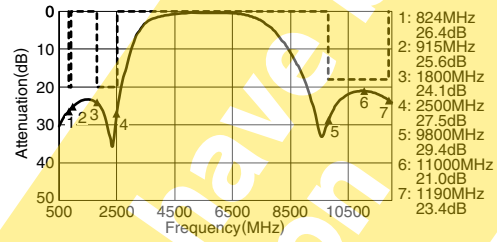
#### High-BAND PORT INSERTION LOSS



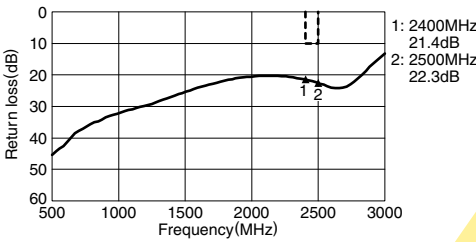
#### Low-BAND PORT ATTENUATION



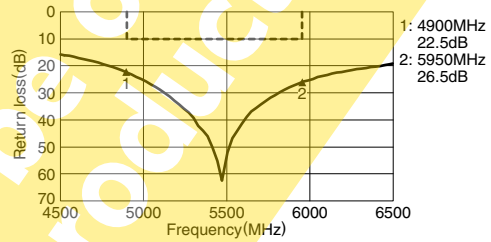
#### High-BAND PORT ATTENUATION



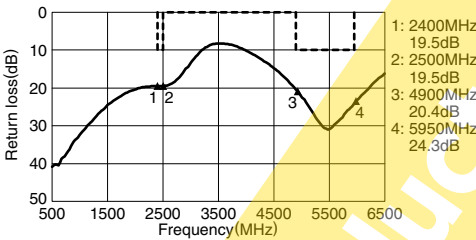
#### Low-BAND PORT RETURN LOSS



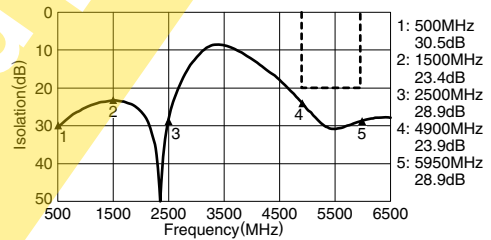
#### High-BAND PORT RETURN LOSS



#### ANTENNA PORT RETURN LOSS



#### ISOLATION (Low-High)



The products will be stopped production

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