



Apr. 2017 Ver.1.0  
TDK Corporation

## Multilayer Triplexer

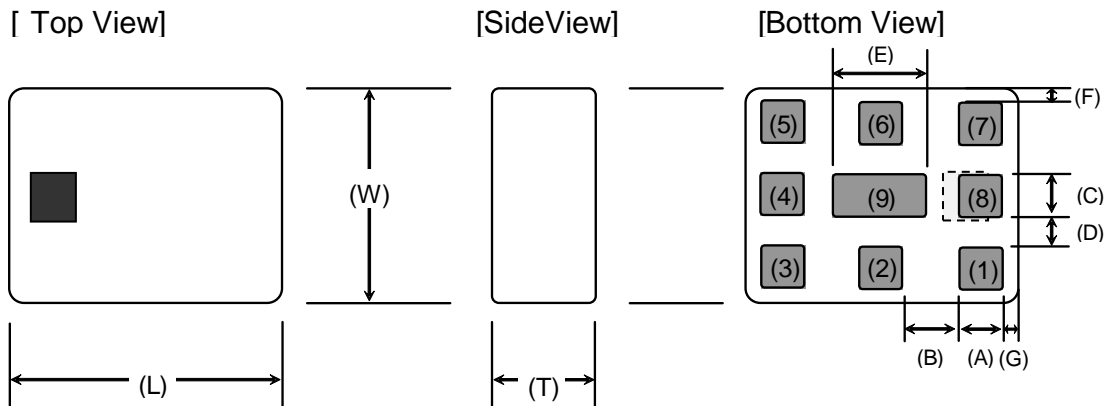
For Band 5&8&20 / Band 1&2&3&32 / Band 7&42

TPX Series 2.5x2.0mm [EIA 1008] TYPE

P/N: **TPX253800MT-7019B3**

## TPX253800MT-7019B3

### SHAPES AND DIMENSIONS



Dimensions (mm)

| L       | W       | T       | A       | B       | C       | D       | E       | F       | G       |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 2.50    | 2.00    | 0.90    | 0.40    | 0.55    | 0.40    | 0.30    | 0.90    | 0.10    | 0.10    |
| +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 |

Terminal functions

|     |                  |
|-----|------------------|
| (1) | High-Band Port   |
| (2) | GND              |
| (3) | Middle-Band Port |
| (4) | GND              |
| (5) | Low-Band Port    |

|     |             |
|-----|-------------|
| (6) | GND         |
| (7) | Common Port |
| (8) | GND         |
| (9) | GND         |

### TEMPERATURE RANGE

| Operating temperature | Storage temperature |
|-----------------------|---------------------|
| -40 to +85 °C         | -40 to +85 °C       |

## TPX253800MT-7019B3

### ■ ELECTRICAL CHARACTERISTICS

( Measurement )

#### Low-Band

| Parameter           | Frequency (MHz) | TDK Spec |      |      |
|---------------------|-----------------|----------|------|------|
|                     |                 | Min.     | Typ. | Max. |
| Insertion Loss (dB) | 698 to 960      | -        | 0.50 | 0.70 |
| Return Loss (dB)    | 698 to 803      | 14       | 17.0 | -    |
|                     | 803 to 960      | 14       | 20.7 | -    |
| Attenuation (dB)    | 1427 to 1511    | 7        | 10.7 | -    |
|                     | 1710 to 2170    | 12       | 15.3 | -    |
|                     | 2500 to 2690    | 27       | 32.2 | -    |
|                     | 3400 to 3600    | 35       | 51.3 | -    |

Ta = +25+/-5°C

#### Middle-Band

| Parameter           | Frequency (MHz) | TDK Spec |      |      |
|---------------------|-----------------|----------|------|------|
|                     |                 | Min.     | Typ. | Max. |
| Insertion Loss (dB) | 1427 to 1511    | -        | 0.98 | 1.20 |
|                     | 1710 to 2170    | -        | 0.83 | 1.20 |
| Return Loss (dB)    | 1427 to 1511    | 14       | 20.5 | -    |
|                     | 1710 to 2170    | 14       | 16.4 | -    |
| Attenuation (dB)    | 698 to 960      | 14       | 18.2 | -    |
|                     | 2500 to 2690    | 10       | 15.4 | -    |
|                     | 3400 to 3600    | 15       | 19.2 | -    |

Ta = +25+/-5°C

#### High-Band

| Parameter           | Frequency (MHz) | TDK Spec |      |      |
|---------------------|-----------------|----------|------|------|
|                     |                 | Min.     | Typ. | Max. |
| Insertion Loss (dB) | 2496 to 2690    | -        | 1.32 | 1.50 |
|                     | 3400 to 3800    | -        | 0.29 | 0.60 |
| Return Loss (dB)    | 2496 to 2690    | 14       | 17.7 | -    |
|                     | 3400 to 3800    | 14       | 15.9 | -    |
| Attenuation (dB)    | 698 to 960      | 18       | 20.3 | -    |
|                     | 1427 to 1511    | 16       | 18.9 | -    |
|                     | 1710 to 2170    | 15       | 21.7 | -    |

Ta = +25+/-5°C

## TPX253800MT-7019B3

### ■ ELECTRICAL CHARACTERISTICS

( Measurement )

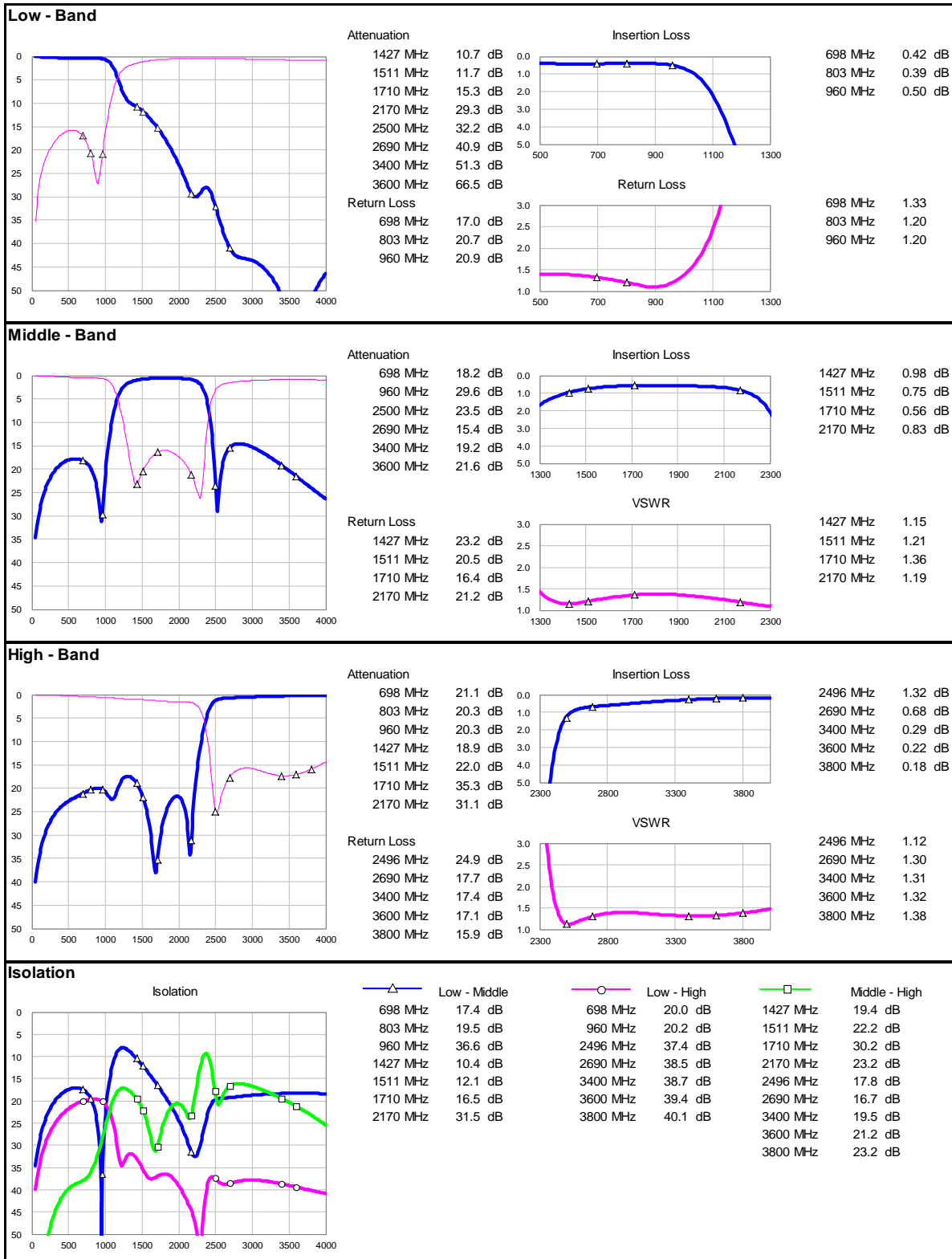
#### Isolation

| Parameter           | Frequency (MHz) | TDK Spec |      |      |
|---------------------|-----------------|----------|------|------|
|                     |                 | Min.     | Typ. | Max. |
| Low to Middle (dB)  | 698 to 960      | 14       | 17.4 | -    |
|                     | 1427 to 1511    | 7        | 10.4 | -    |
|                     | 1710 to 2170    | 13       | 16.5 | -    |
| Low to High (dB)    | 698 to 960      | 15       | 19.6 | -    |
|                     | 2496 to 2690    | 30       | 37.4 | -    |
|                     | 3400 to 3800    | 30       | 38.7 | -    |
| Middle to High (dB) | 1427 to 1511    | 15       | 19.4 | -    |
|                     | 1710 to 2170    | 15       | 20.0 | -    |
|                     | 2496 to 2690    | 13       | 16.7 | -    |
|                     | 3400 to 3800    | 15       | 19.5 | -    |

 $T_a = +25 \pm 5^\circ\text{C}$

# TPX253800MT-7019B3

## FREQUENCY CHARACTERISTICS

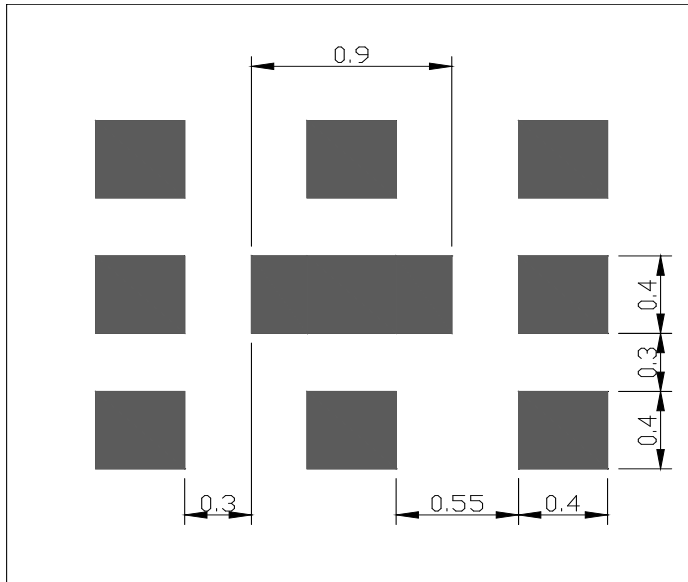


All specifications are subject to change without notice.

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## TPX253800MT-7019B3

### ■ RECOMMENDED LAND PATTERN



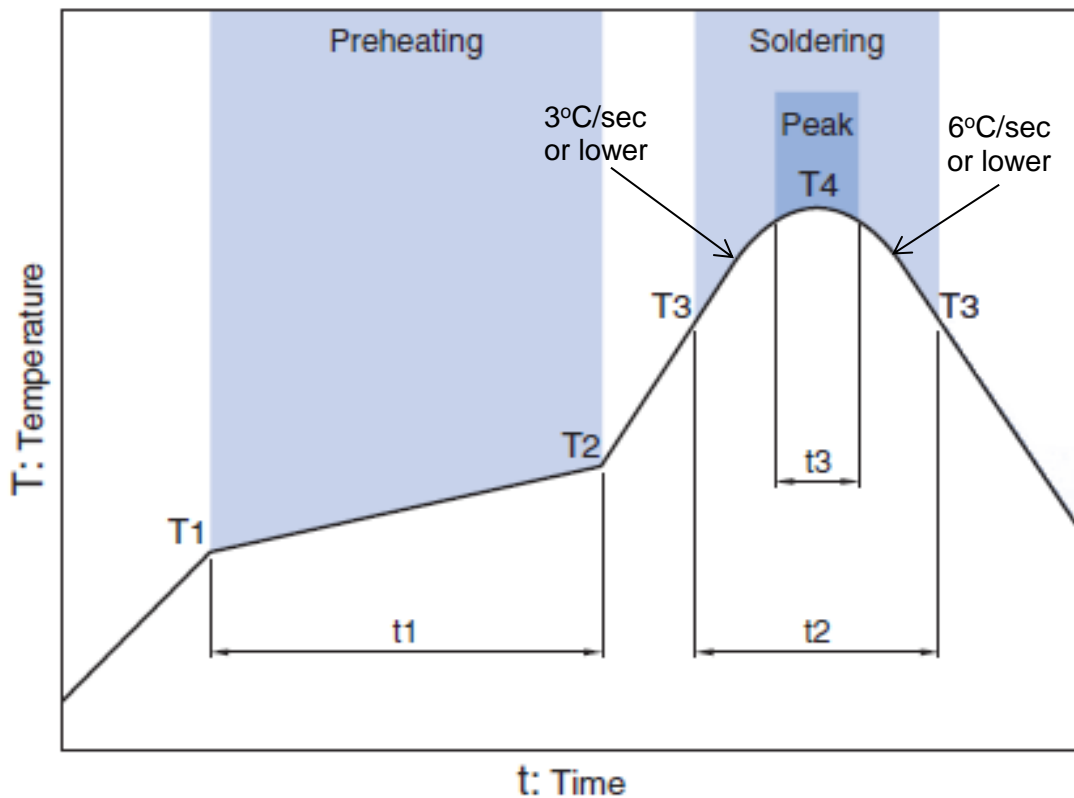
Unit : mm

### ■ ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

## TPX253800MT-7019B3

### RECOMMENDED REFLOW PROFILE



| Preheating |       |              | Soldering                |              |              |            |
|------------|-------|--------------|--------------------------|--------------|--------------|------------|
|            |       |              | Critical zone (T3 to T4) |              | Peak         |            |
| Temp.      | Temp. | Time         | Temp.                    | Time         | Temp.        | Time       |
| T1         | T2    | t1           | T3                       | t2           | T4           | t3 *       |
| 150°C      | 200°C | 60 to 120sec | 217°C                    | 60 to 120sec | 240 to 260°C | 30 sec Max |

\* t3 : Time within 5°C of actual peak temperature

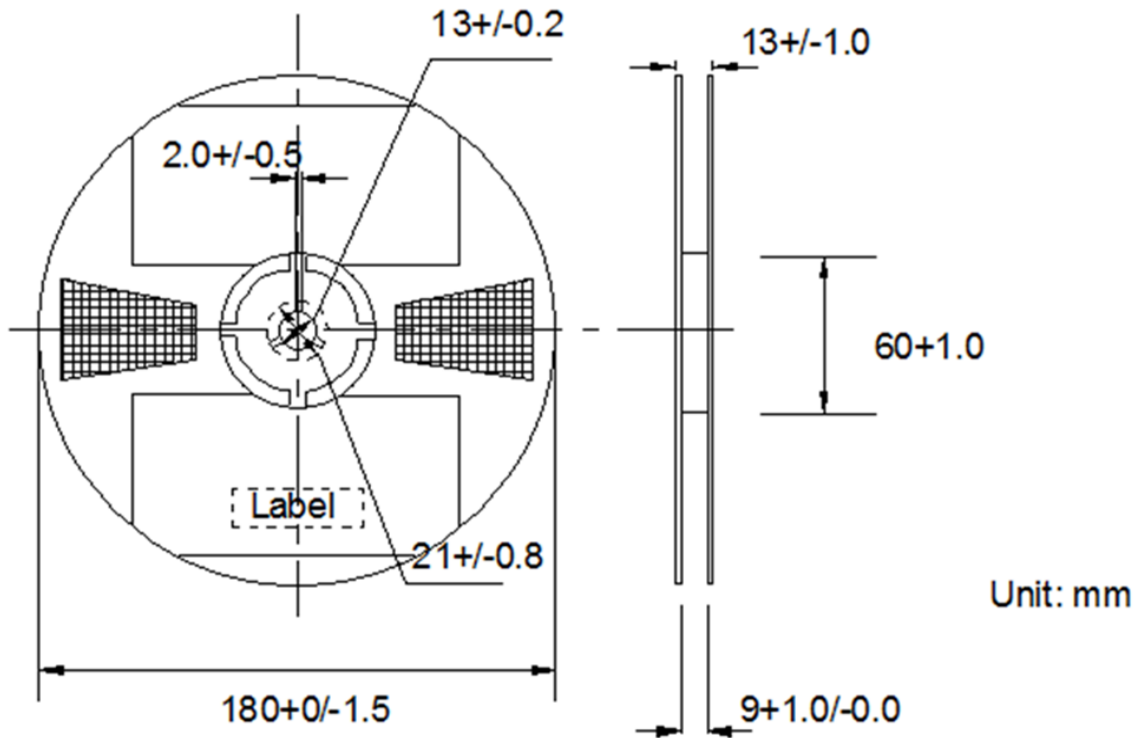
The maximum number of reflow is 3.

Note: Lead free solder is recommended.  
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

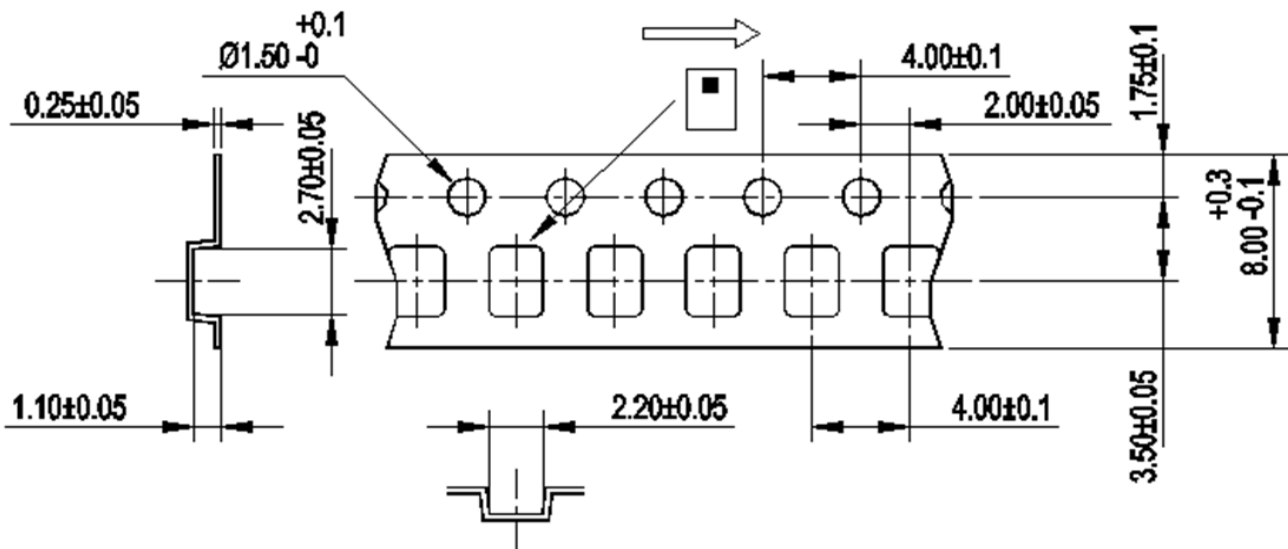
# TPX253800MT-7019B3

## PACKAGING STYLE

Reel Dimensions



Carrier Tape



| STANDARD PACKAGE QUANTITY<br>( pieces/reel ) |
|--|
| 2,000  |



## REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

### SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

|  |
|--|
|  <b>REMINDERS</b> |
|--|

The products listed on this specification sheet are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this specification sheet.

1. Aerospace/Aviation equipment
2. Transportation equipment (cars, electric trains, ships, etc.)
3. Medical equipment
4. Power-generation control equipment
5. Atomic energy-related equipment
6. Seabed equipment
7. Transportation control equipment
8. Public information-processing equipment
9. Military equipment
10. Electric heating apparatus, burning equipment
11. Disaster prevention/crime prevention equipment
12. Safety equipment
13. Other applications that are not considered general-purpose applications

When using this product in general-purpose applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc., to ensure higher safety.

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