



Oct. 2020 Ver.1.4  
TDK Corporation

## Multilayer Band Pass Filter

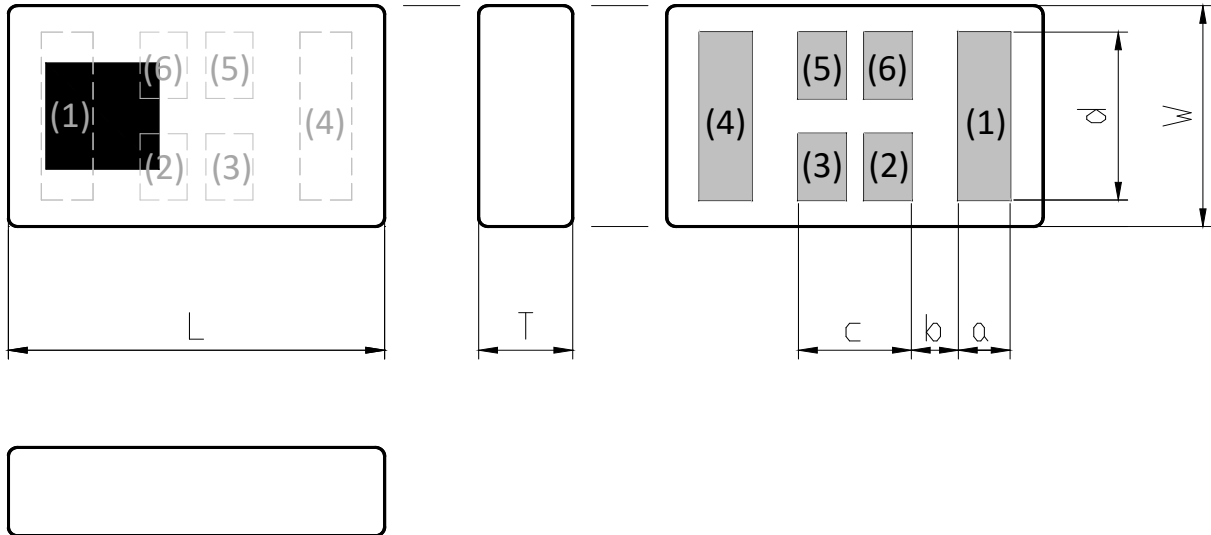
For 5G-H

DEA Series 2.0x1.25mm [EIA 0805] TYPE

P/N: **DEA204700BT-2307A1**

## DEA204700BT-2307A1

### SHAPES AND DIMENSIONS



Dimensions (mm)

| L       | W       | T    | a       | b       | c       | d       |
|---------|---------|------|---------|---------|---------|---------|
| 2.00    | 1.25    | 0.65 | 0.275   | 0.25    | 0.60    | 0.95    |
| +/-0.15 | +/-0.10 | Max  | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.15 |

Terminal functions

|     |            |
|-----|------------|
| (1) | Input Port |
| (2) | GND        |
| (3) | GND        |

|     |             |
|-----|-------------|
| (4) | Output Port |
| (5) | GND         |
| (6) | GND         |

### TERMINATION FINISH

| Material |
|----------|
| Ag       |

**DEA204700BT-2307A1****ELECTRICAL CHARACTERISTICS**

( Measurement )

| Parameter                                   | Frequency (MHz)                 | TDK Spec.    |              |        |
|---|---------------------------------|--------------|--------------|--------|
|   |                                 | Min.         | Typ.         | Max.   |
| Insertion Loss (dB)                         | 4400 to 5000                    | -            | 0.64         | 0.85   |
| Insertion Loss (dB)<br>( -40 to +90 °C )    | 4400 to 5000<br>to              | -            | -            | 1.08   |
| Return Loss (dB)<br>( Input / Output Port ) | 4400 to 5000<br>to              | 10           | 21.0         | -      |
| Attenuation (dB)                            | 500 to 1606                     | 20           | 22.6         | -      |
|   | 1606 to 2400                    | 23           | 27.2         | -      |
|   | 2400 to 2500                    | 23           | 37.2         | -      |
|   | 2500 to 2690                    | 21           | 27.0         | -      |
|   | 2700 to 3150                    | 5            | 24.5         | -      |
|   | 3300 to 3800                    | 13           | 17.0         | -      |
|   | 3800 to 4200                    | 0.7          | 1.5          | -      |
|   | 8800 to 10000<br>13200 to 15000 | 15<br>15     | 23.4<br>18.0 | -<br>- |
| Characteristic Impedance (ohm)              |                                 | 50 (Nominal) |              |        |

Ta = +25+/-5°C

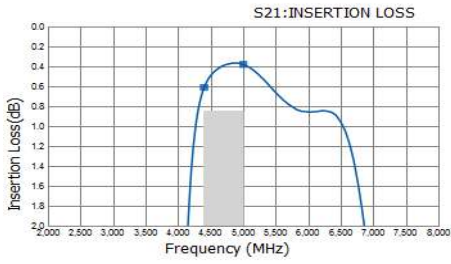
**MAXIMUM RATINGS**

| Parameter                                | TDK Spec      |      | Conditions                    |
|--|---------------|------|-------------------------------|
|  | Min.          | Max. |                               |
| Operating temperature (°C)               | -40 to +90 °C |      |                               |
| Storage temperature (°C)                 | -40 to +90 °C |      |                               |
| Power Handling (W)                       | -             | 2    | CW                            |
| Human Body Model : HBM @Each Port (V)    | -1000         | 1000 | 100pF / 1500ohm               |
| Machine Model : MM @Each Port (V)        | -150          | 150  | 200pF / 0ohm                  |
| Charged Device Model : CDM@Each Port (V) | -500          | 500  | Relative humidity : 60%RH max |

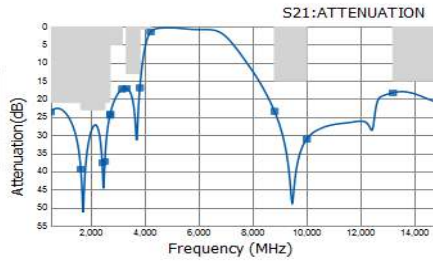
\*1 : Refer to 3GPP TS 38.101-1 V15.2.0

# DEA204700BT-2307A1

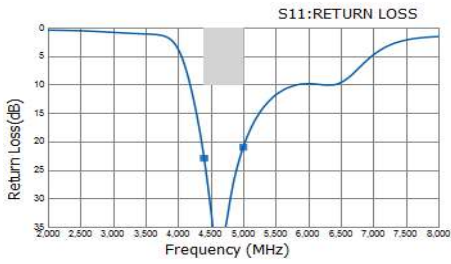
## FREQUENCY CHARACTERISTICS



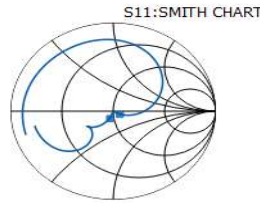
|      |                                      |
|------|--------------------------------------|
| P/N  | DEA204700BT-2307A1_ver1.0N_Feb282018 |
| 4400 | 0.61                                 |
| 5000 | 0.38                                 |



|       |                                      |
|-------|--------------------------------------|
| P/N   | DEA204700BT-2307A1_ver1.0N_Feb282018 |
| 500   | 23.56                                |
| 1606  | 39.35                                |
| 2400  | 37.59                                |
| 2500  | 37.21                                |
| 2690  | 24.48                                |
| 2700  | 24.15                                |
| 3150  | 17.25                                |
| 3300  | 17.04                                |
| 3800  | 16.95                                |
| 4200  | 1.47                                 |
| 8800  | 23.42                                |
| 10000 | 31.07                                |
| 13200 | 18.29                                |
| 15000 | 21.21                                |



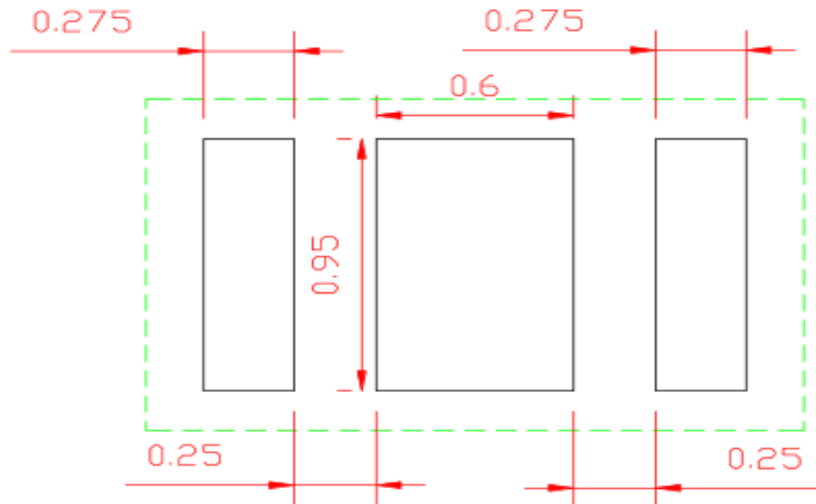
|      |                                      |
|------|--------------------------------------|
| P/N  | DEA204700BT-2307A1_ver1.0N_Feb282018 |
| 4400 | 22.93                                |
| 5000 | 21.00                                |



|      |                                      |
|------|--------------------------------------|
| P/N  | DEA204700BT-2307A1_ver1.0N_Feb282018 |
| 4400 | 0.06 / -0.03                         |
| 5000 | -0.04 / -0.08                        |

## DEA204700BT-2307A1

### RECOMMENDED LAND PATTERN



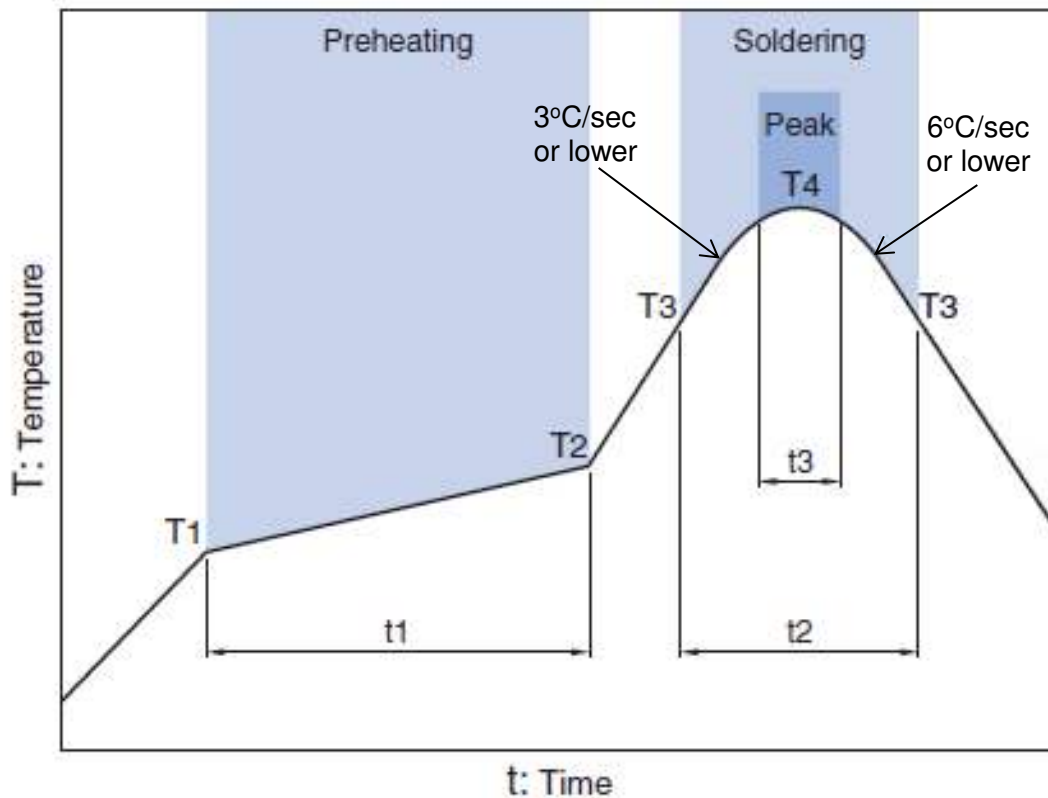
Unit[mm]

### ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

## DEA204700BT-2307A1

### 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 |

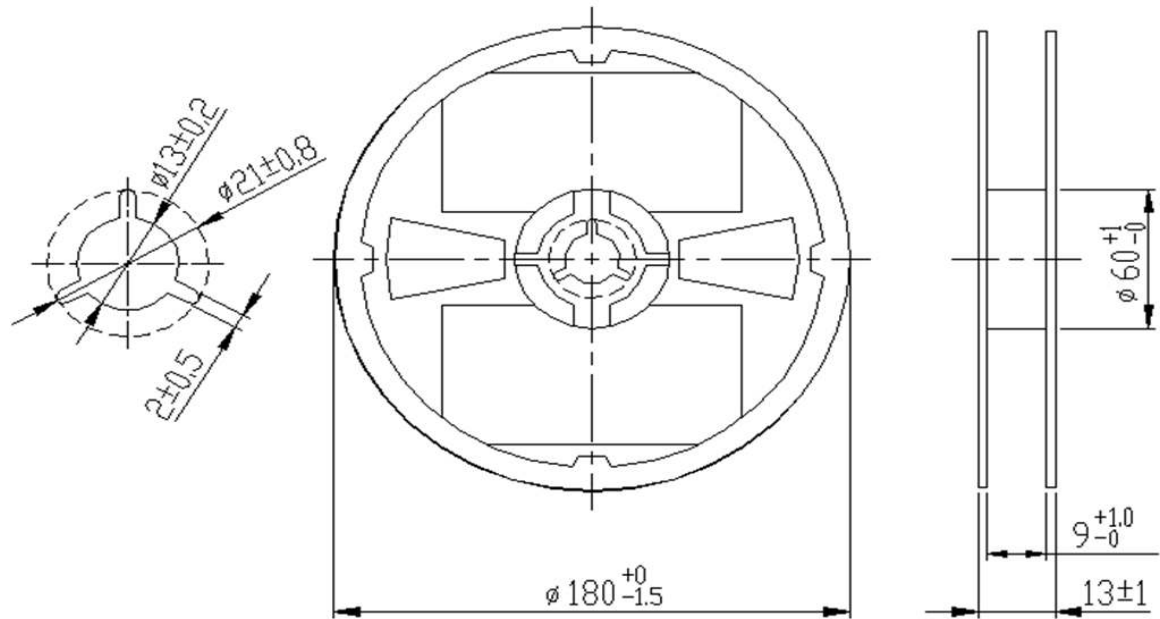
\* t3 : Time within 5°C of actual peak temperature

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)

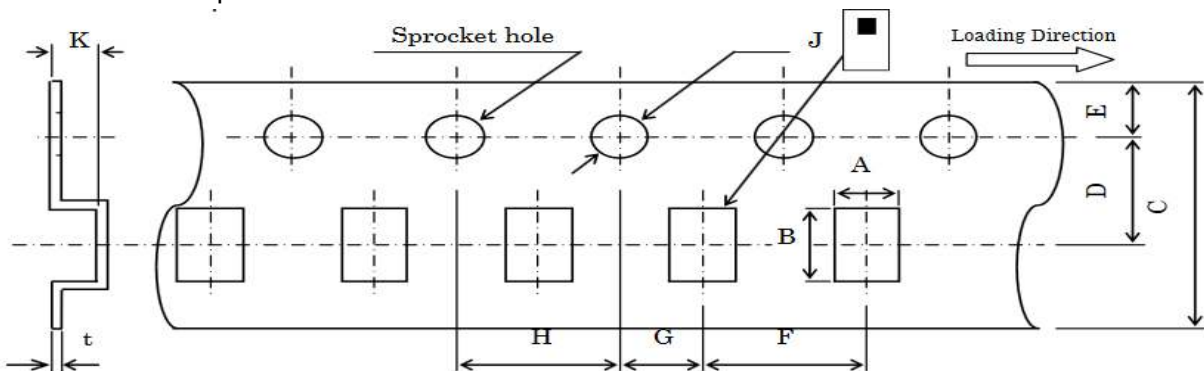
**DEA204700BT-2307A1****PACKAGING STYLE**

## Reel Dimensions



Dimensions in mm

## Carrier Tape



## Dimensions (mm)

| A          | B          | C           | D          | E         | F         | G          | H         | J         | K    | t          |
|------------|------------|-------------|------------|-----------|-----------|------------|-----------|-----------|------|------------|
| 1.45       | 2.2        | 8.0         | 3.5        | 1.75      | 4.0       | 2.0        | 4.0       | 1.5       | 0.8  | 0.25       |
| $\pm 0.05$ | $\pm 0.05$ | $+0.3/-0.1$ | $\pm 0.05$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.05$ | $\pm 0.1$ | $+0.1/-0$ | Max. | $\pm 0.05$ |

**STANDARD PACKAGE QUANTITY**  
( 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.