



Jul. 2016 Ver.3.0N  
TDK Corporation

## Multilayer Diplexer

For 2.4GHz W-LAN & Bluetooth / 5GHz W-LAN

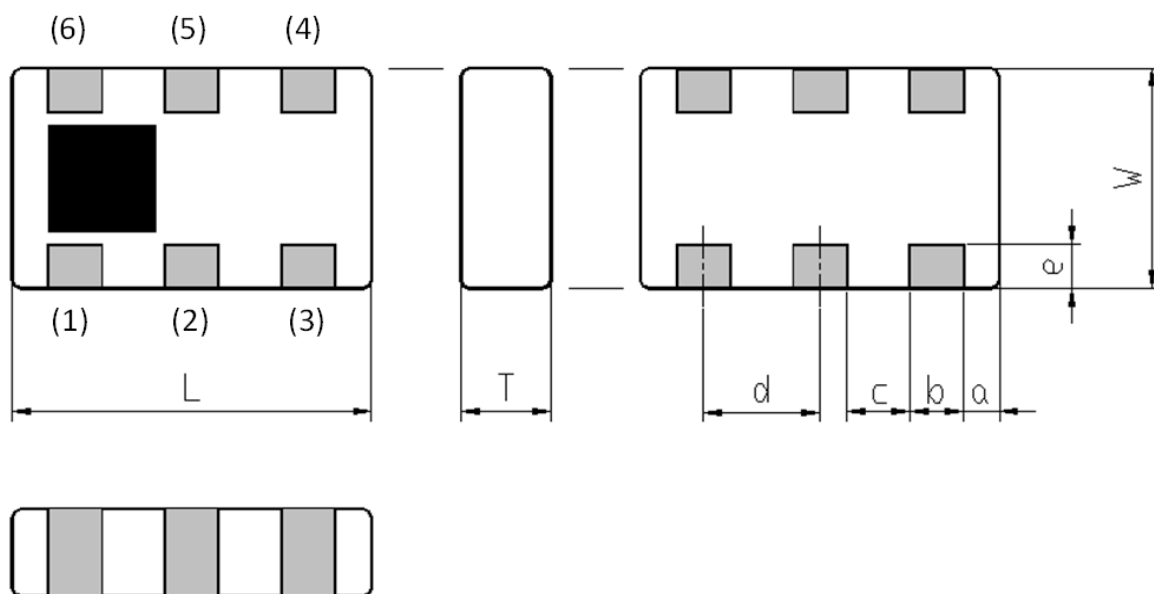
DPX Series 1.6x0.8mm [EIA 0603] TYPE

P/N: **DPX165950DT-8045A1**

**DPX165950DT-8045A1****■ SHAPES AND DIMENSIONS**

[Top View]

[Bottom View]



Dimensions (mm)

| L       | W       | T    | a       | b       | c       | d       | e       |
|---------|---------|------|---------|---------|---------|---------|---------|
| 1.60    | 0.80    | 0.60 | 0.10    | 0.30    | 0.25    | 0.55    | 0.15    |
| +/-0.15 | +/-0.15 | Max  | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 | +/-0.10 |

Terminal functions

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

|     |                |
|-----|----------------|
| (4) | High-Band Port |
| (5) | GND            |
| (6) | Low-Band Port  |

**■ TEMPERATURE RANGE**

| Operating temperature | Storage temperature |
|-----------------------|---------------------|
| -40 to +90 °C         | -40 to +90 °C       |

## DPX165950DT-8045A1

### ■ ELECTRICAL CHARACTERISTICS

( Measurement )

#### Low-Band

| Parameter           | Frequency (MHz) | TDK Spec |      |      |
|---------------------|-----------------|----------|------|------|
|                     |                 | Min.     | Typ. | Max. |
| Insertion Loss (dB) | 2400 to 2500    | -        | 0.35 | 0.55 |
| VSWR                | 2400 to 2500    | -        | 1.20 | 2.0  |
| Attenuation (dB)    | 4800 to 5000    | 30       | 37   | -    |
|                     | 7200 to 7500    | 30       | 33   | -    |
| Isolation (dB)      | 4900 to 5950    | 28       | 30   | -    |

Ta = +25+/-5°C

#### High-Band

| Parameter           | Frequency (MHz) | TDK Spec |      |      |
|---------------------|-----------------|----------|------|------|
|                     |                 | Min.     | Typ. | Max. |
| Insertion Loss (dB) | 4900 to 5950    | -        | 0.60 | 0.80 |
| VSWR                | 4900 to 5950    | -        | 1.52 | 2.0  |
| Attenuation (dB)    | 30 to 2700      | 32       | 36   | -    |
|                     | 9800 to 11900   | 15       | 19   | -    |
|                     | 14700 to 17850  | 11       | 15   | -    |
| Isolation (dB)      | 30 to 2700      | 32       | 36   | -    |

Ta = +25+/-5°C

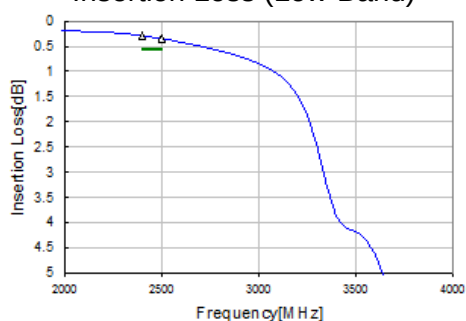
#### Common

| Parameter | Frequency (MHz) | TDK Spec |      |      |
|-----------|-----------------|----------|------|------|
|           |                 | Min.     | Typ. | Max. |
| VSWR      | 2400 to 2500    | -        | 1.27 | 2.0  |
|           | 4900 to 5950    | -        | 1.43 | 2.0  |

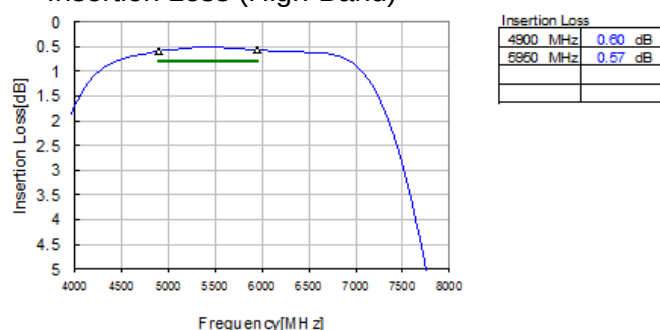
Ta = +25+/-5°C

**DPX165950DT-8045A1****■ FREQUENCY CHARACTERISTICS**

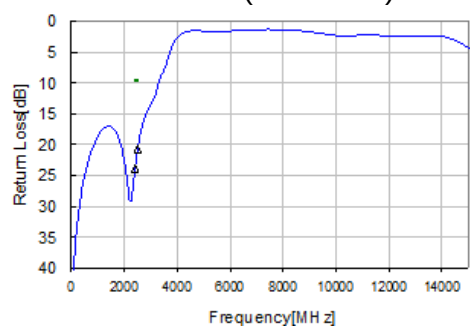
Insertion Loss (Low-Band)



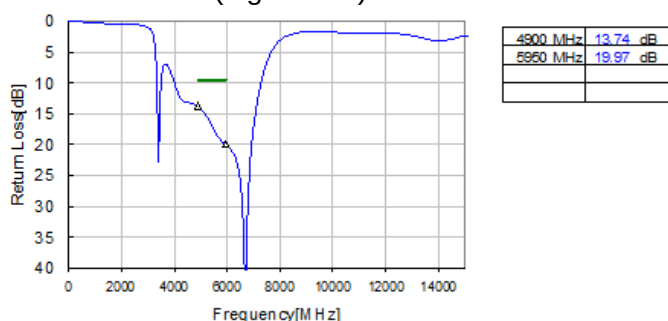
Insertion Loss (High-Band)



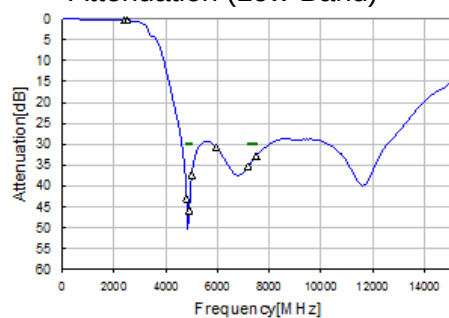
Return Loss (Low-Band)



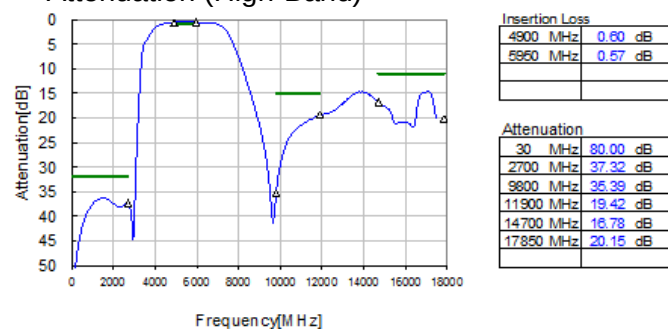
Return Loss (high-Band)



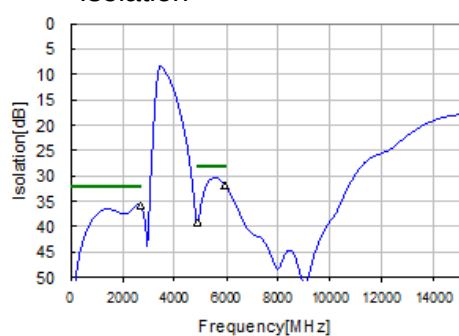
Attenuation (Low-Band)



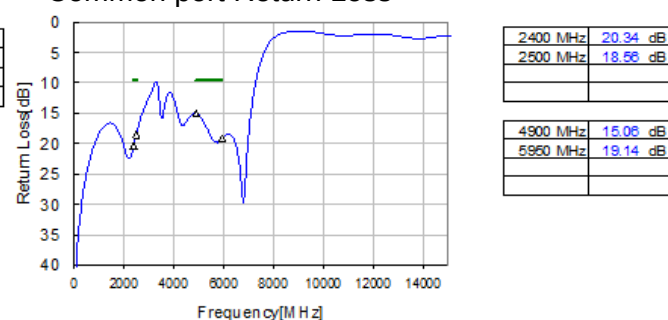
Attenuation (High-Band)



Isolation



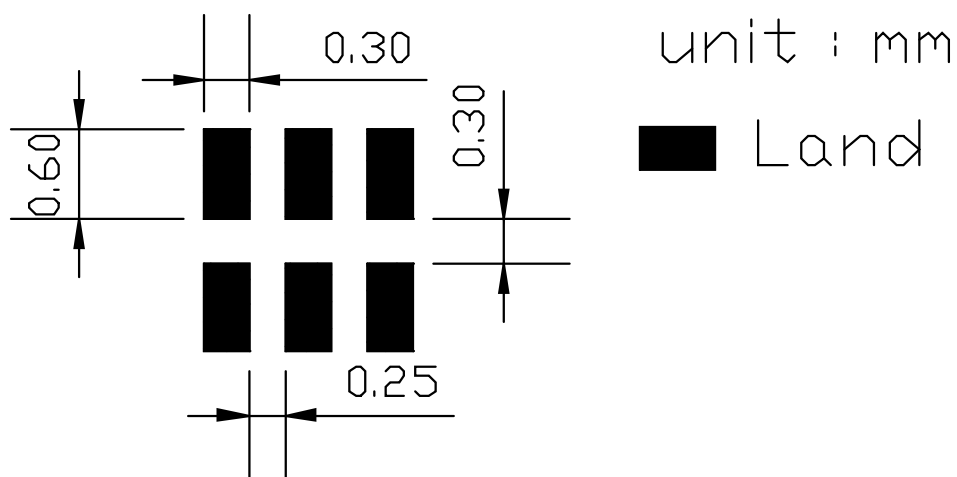
Common port Return Loss



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## DPX165950DT-8045A1

### RECOMMENDED LAND PATTERN

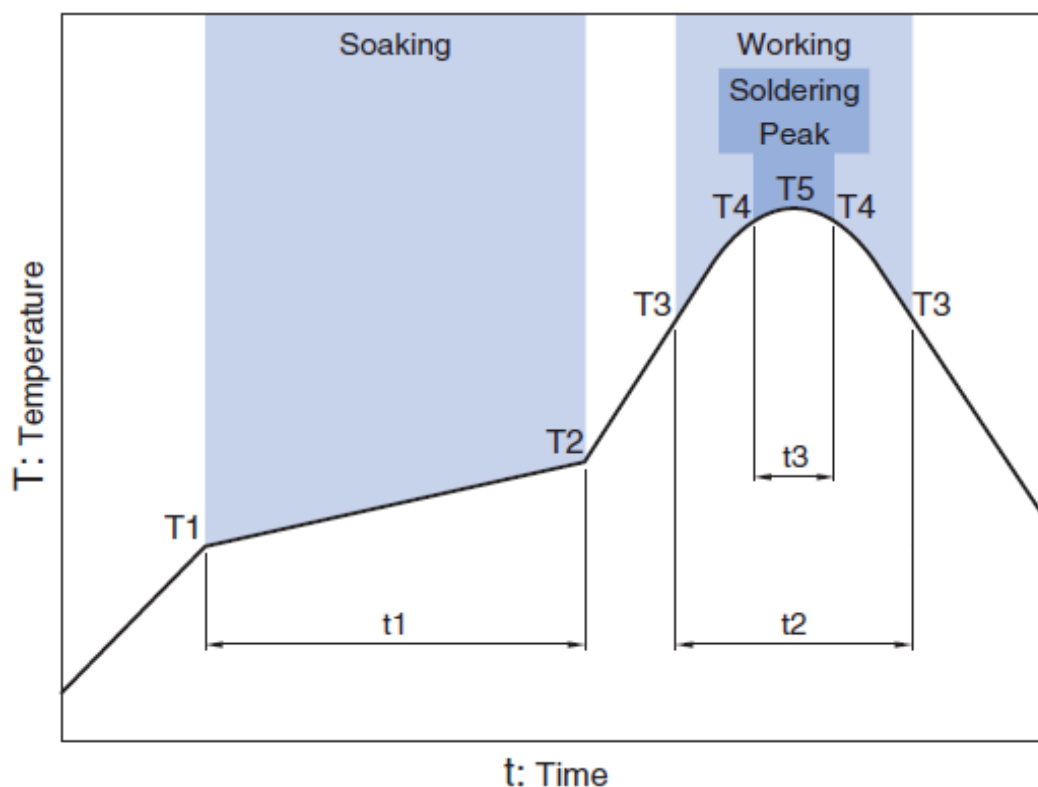


### ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

**DPX165950DT-8045A1****RECOMMENDED REFLOW PROFILE**

Pb free solder



| Soaking |       |              | Working |                 | Soldering    |              | Peak       |
|---------|-------|--------------|---------|-----------------|--------------|--------------|------------|
| Temp.   |       | Time         | Temp.   | Time            | Temp.        | Time         | Temp.      |
| T1      | T2    | t1           | T3      | t2              | T4           | t3           | T5         |
| 150°C   | 180°C | 60 to 120sec | 230°C   | more than 30sec | 247 to 253°C | within 10sec | 260°C Max. |

## 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.



#### REMINDERS

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.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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