



July 2015

## Multilayer Diplexer

For 2300-2500MHz / 3168-4752MHz

# DPX204752DT-4028A1

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**2.0x1.25mm [EIA 0805]\***

\* Dimensions Code JIS[EIA]

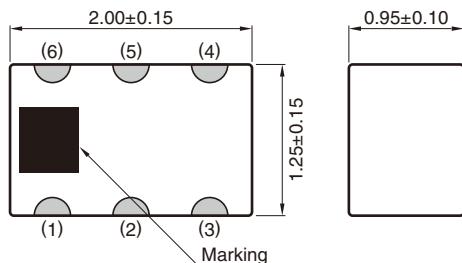
**Multilayer Diplexer**

Conformity to RoHS Directive

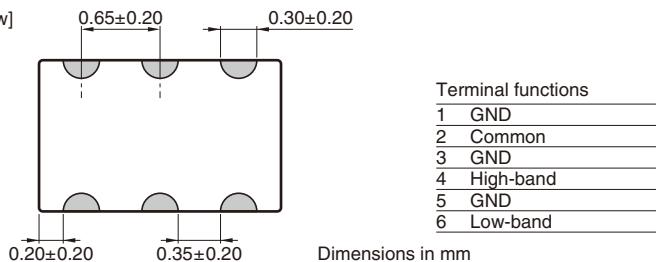
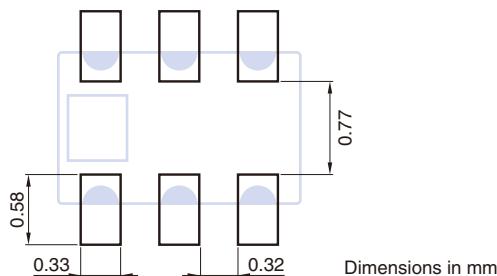
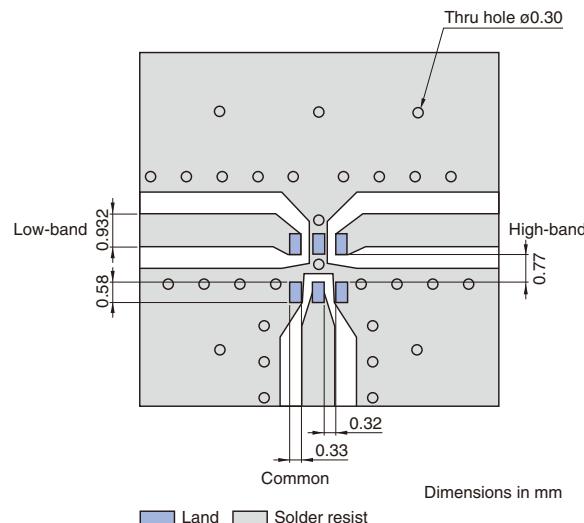
For 2300-2500MHz / 3168-4752MHz

**DPX204752DT-4028A1****■ SHAPES AND DIMENSIONS**

[Top view]



[Bottom view]

**■ RECOMMENDED LAND PATTERN****■ EVALUATION BOARD**

Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

○ RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://product.tdk.com/en/environment/rohs/>

- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

## DPX204752DT-4028A1

## ■ ELECTRICAL CHARACTERISTICS

## □ LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2300 to 2500	—	0.77	1.10
Attenuation (dB)	3168 to 4752	20	26.0	—
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

• Ta:  $+25\pm5^{\circ}\text{C}$

## □ HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	3168 to 4752	—	0.64	1.20
Attenuation (dB)	2300 to 2500	20	23.3	—
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

• Ta:  $+25\pm5^{\circ}\text{C}$

## □ COMMON

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Return Loss (dB)	2300 to 2500	10	16.0	—
	3168 to 4752	7	10.4	—
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

• Ta:  $+25\pm5^{\circ}\text{C}$

## ■ TEMPERATURE RANGE

Operating temperature (°C)	Storage temperature (°C)
–40 to +85	–40 to +85

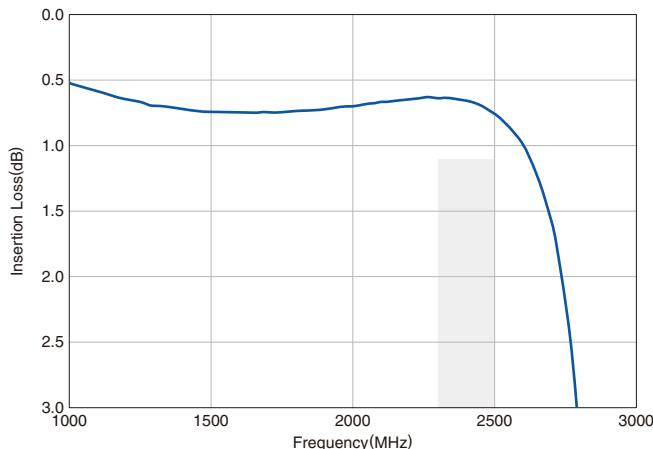
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## DPX204752DT-4028A1

## ■ FREQUENCY CHARACTERISTICS

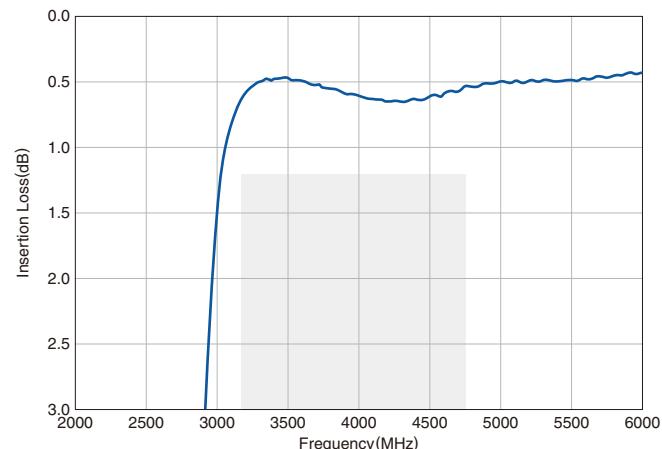
## □ LOW-BAND

## Insertion Loss

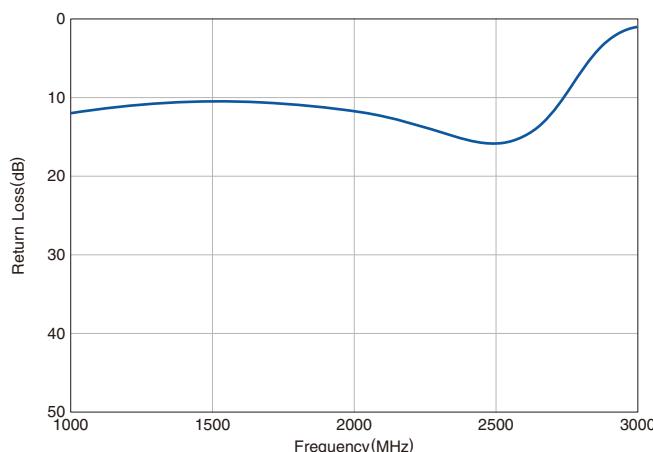


## □ HIGH-BAND

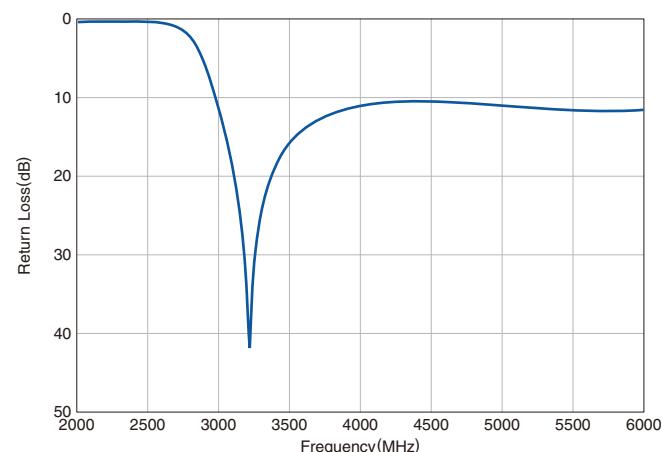
## Insertion Loss



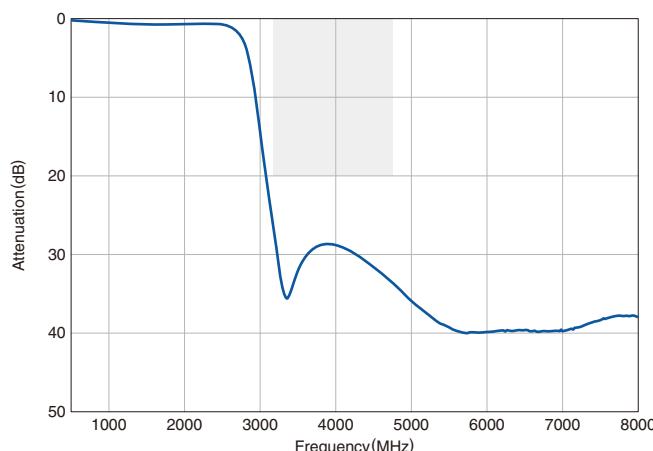
## Return Loss



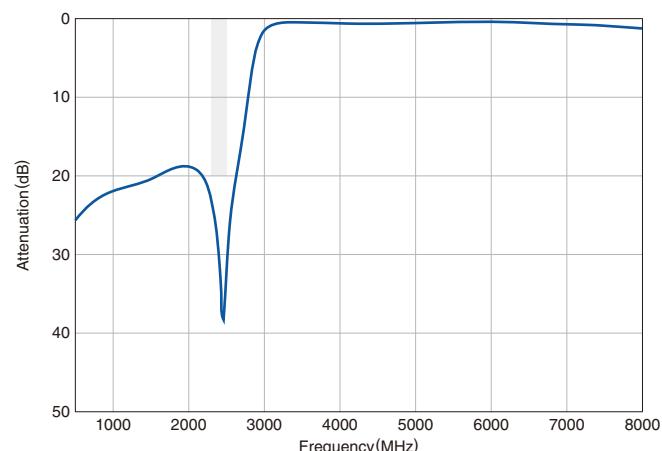
## Return Loss



## Attenuation



## Attenuation



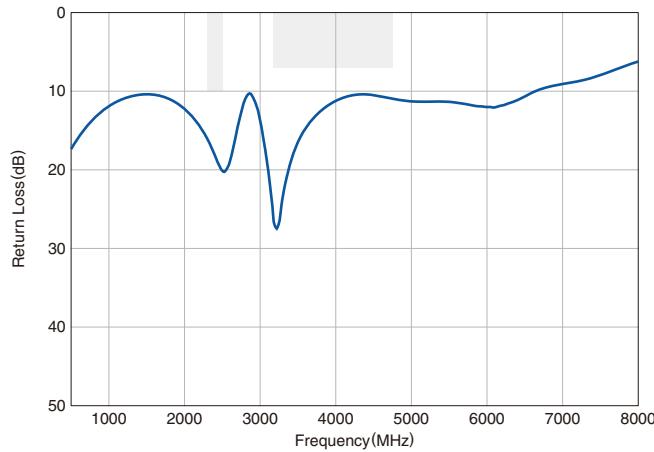
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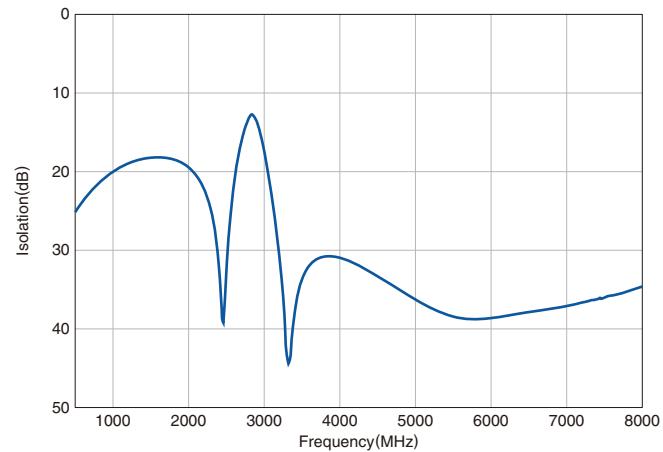
## ■ FREQUENCY CHARACTERISTICS

## □ COMMON

## Return Loss

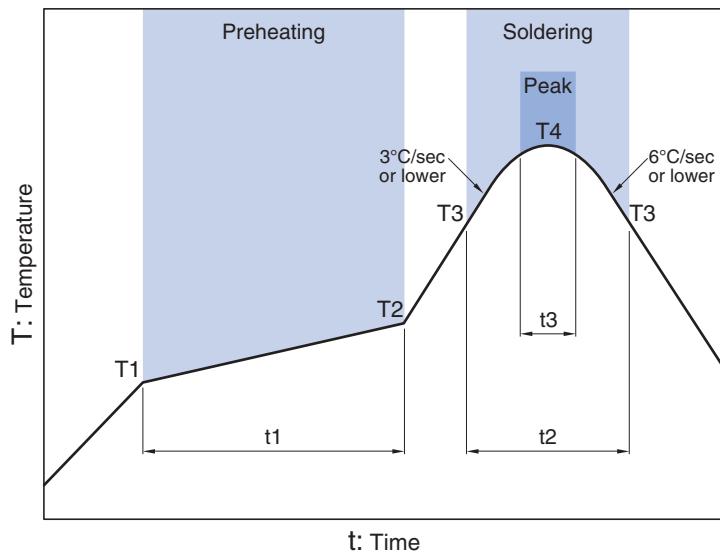


## Isolation



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## ■ RECOMMENDED REFLOW PROFILE



Preheating			Soldering		Peak	
			Critical zone (T3 to T4)			
Temp.	Time		Temp.	Time	Temp.	Time
$T_1$ 150°C	$T_2$ 200°C	$t_1$ 60 to 120sec	$T_3$ 217°C	$t_2$ 60 to 120sec	$T_4$ 240 to 260°C	$t_3^*$ 30sec max.

\*  $t_3$  : Time within 5°C of actual peak temperature

The maximum number of reflow is 3.

## 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 catalog 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 catalog.

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

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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