



July 2015

Multilayer Diplexer

For 806-941MHz / 1574.42-1576.42MHz

DPX161576DT-8011B1

1.6x0.8mm [EIA 0603]*

* Dimensions Code JIS[EIA]

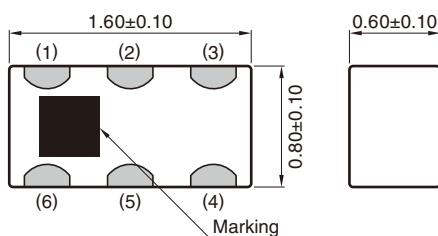
Multilayer Diplexer

Conformity to RoHS Directive

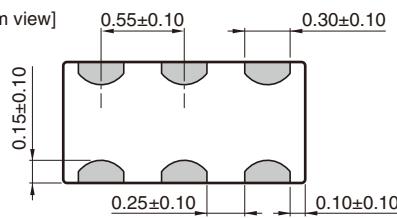
For 806-941MHz / 1574.42-1576.42MHz

DPX161576DT-8011B1**■ SHAPES AND DIMENSIONS**

[Top view]



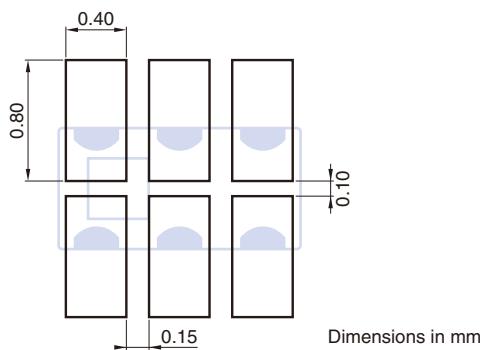
[Bottom view]



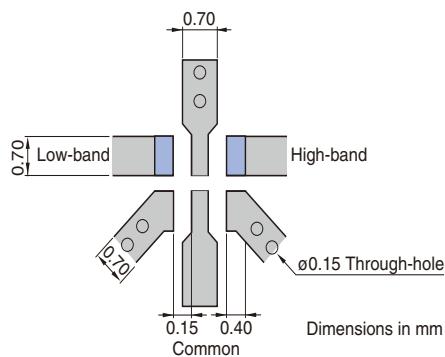
Terminal functions

1	Low-band
2	GND
3	High-band
4	GND
5	Common
6	GND

Dimensions in mm

■ RECOMMENDED LAND PATTERN

Dimensions in mm

■ EVALUATION BOARD

Dimensions in mm

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.

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■ ELECTRICAL CHARACTERISTICS

□ LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	806 to 941	—	0.40	0.60
	806 to 941	—	—	0.70 (-30 to +85°C)
Return Loss (dB)	806 to 941	14	16.8	—
	1575	16	21.7	—
	1612 to 1648	18	25.2	—
	1792 to 1856	14	18.9	—
Attenuation (dB)	2000 to 3000	5	10.1	—
	Characteristic Impedance (Ω)		50 (Nominal)	
	• Ta: +25±5°C			

□ HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	1574.42 to 1576.42	—	0.66	0.70
	1574.42 to 1576.42	—	—	0.80 (-30 to +85°C)
Return Loss (dB)	1574.42 to 1576.42	14	22.8	—
	Attenuation (dB)	20	30.5	—
Characteristic Impedance (Ω)			50 (Nominal)	
• Ta: +25±5°C				

□ COMMON

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Isolation (dB)	806 to 928	20	30.8	—
	1575	16	22.3	—
	1612 to 1648	18	26.0	—
	1792 to 1856	14	21.5	—
Return Loss (dB)	806 to 941	14	17.6	—
	1574.42 to 1576.42	14	16.7	—
Characteristic Impedance (Ω)			50 (Nominal)	
• Ta: +25±5°C				

■ TEMPERATURE RANGE

Operating temperature

(°C)

-30 to +85

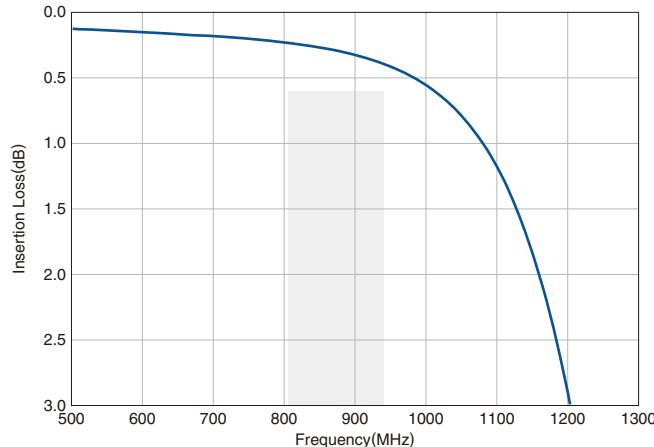
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■ FREQUENCY CHARACTERISTICS

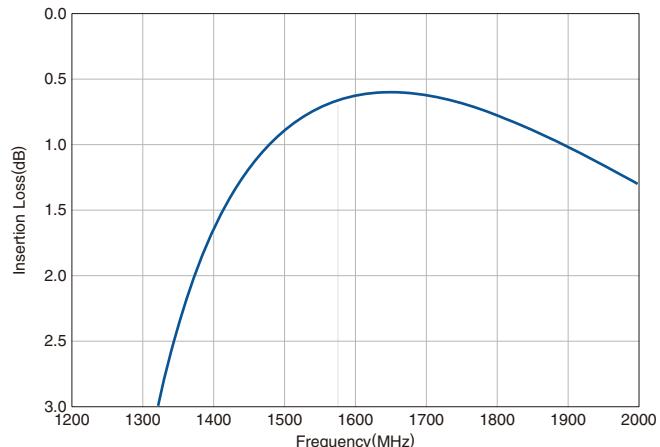
□ LOW-BAND

Insertion Loss

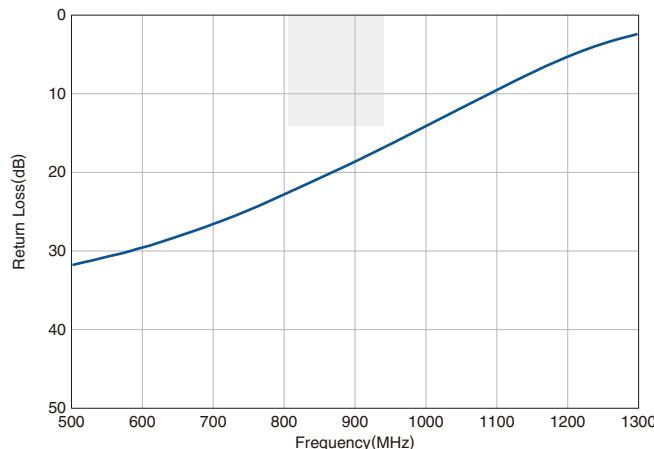


□ HIGH-BAND

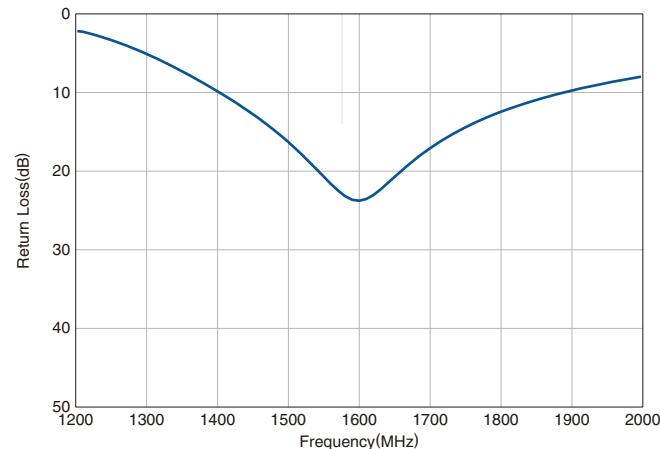
Insertion Loss



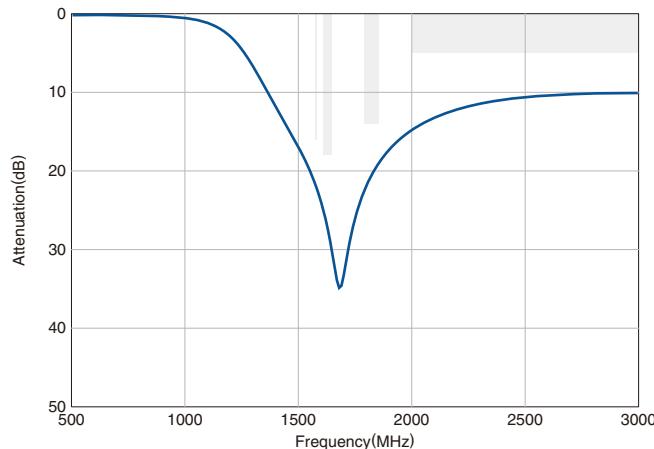
Return Loss



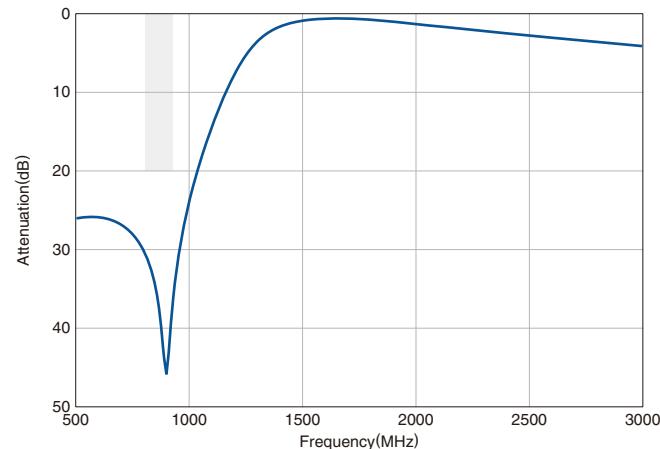
Return Loss



Attenuation



Attenuation



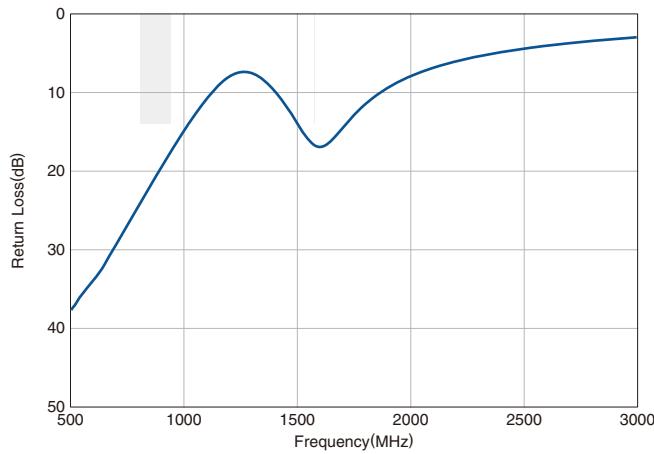
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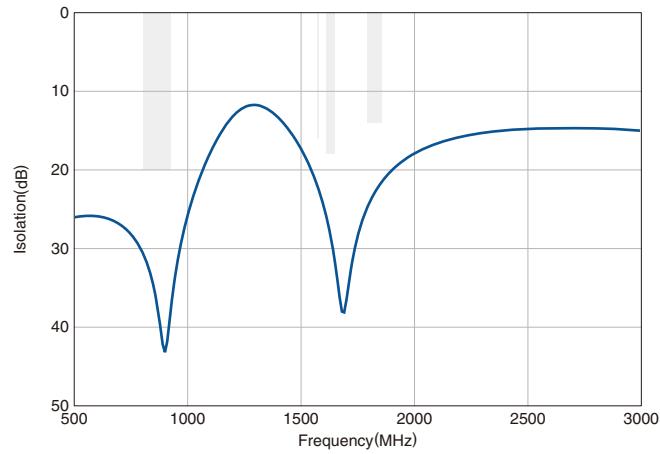
■ FREQUENCY CHARACTERISTICS

□ COMMON

Return Loss

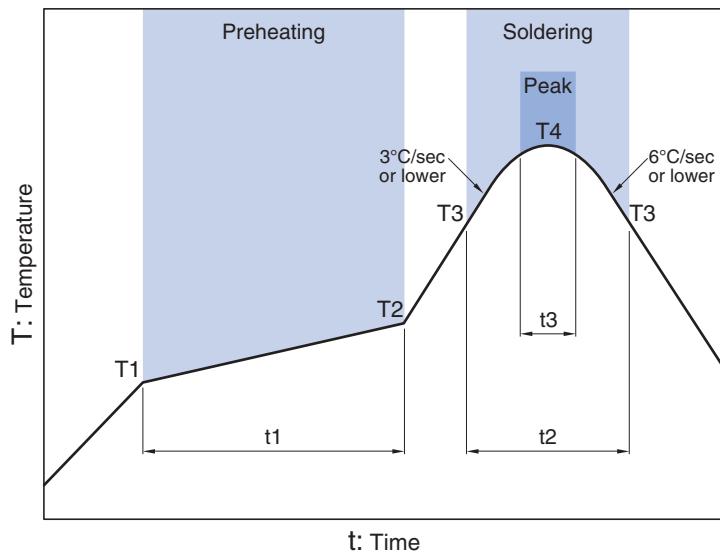


Isolation



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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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