

April 2019

# **Multilayer Diplexer**

For 2400-2500MHz / 4900-5950MHz

# DPX165950DT-8145A1

1.6x0.8mm [EIA 0603]\*

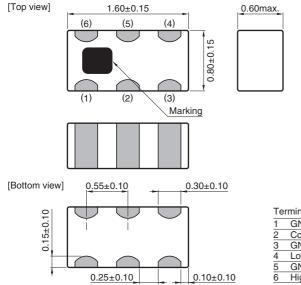
\* Dimensions Code JIS[EIA]

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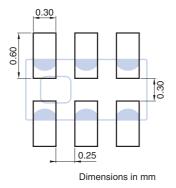
#### SHAPES AND DIMENSIONS



Dimensions in mm

Terminal functions					
1	GND				
2	Common				
3	GND				
4	Low-Band				
5	GND				
6	High-Band				

#### RECOMMENDED LAND PATTERN



O RoHS Directive Compliant Product: See the following for more details.https://product.tdk.com/info/en/environment/rohs/index.html

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

**公TDK** 

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#### **ELECTRICAL CHARACTERISTICS**

#### LOW-BAND

Item	Frequency Range (MHz)	Min.	Тур.	Max.
Insertion Loss (dB)	2400 to 2500	—	0.35	0.55
Return Loss (dB)	2400 to 2500	9.54	21	—
Attenuation (dB)	4800 to 5000	30	37	—
Alternation (db)	7200 to 7500	30	33	—
Characteristic Impedance (Ω)			50 (Nominal)	

• Ta: +25±5°C

#### **HIGH-BAND**

Item	Frequency Range (MHz)	Min.	Тур.	Max.
Insertion Loss (dB)	4900 to 5950	—	0.60	0.80
Return Loss (dB)	4900 to 5950	9.54	14	—
	30 to 2700	32	36	_
Attenuation (dB)	9800 to 11900	15	19	_
	14700 to 17850	11	15	_
Characteristic Impedance (Ω)			50 (Nominal)	

• Ta: +25±5°C

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ltem	Frequency Range (MHz)	Min.	Тур.	Max.
Isolation (dB)	30 to 2700	32	36	_
Isolation (ub)	4900 to 5950	28	30	_
Deturn Loop (dB)	2400 to 2500	9.54	19	—
Return Loss (dB)	4900 to 5950	9.54	15	_
Characteristic Impedance (Ω)			50 (Nominal)	

• Ta: +25±5°C

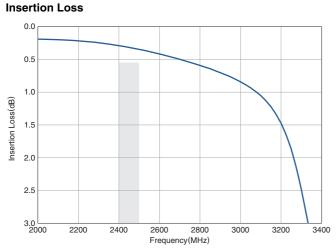
#### **TEMPERATURE RANGE**

Operating temperature	Storage temperature
(° <b>C</b> )	(°C)
-40 to +85	-40 to +85

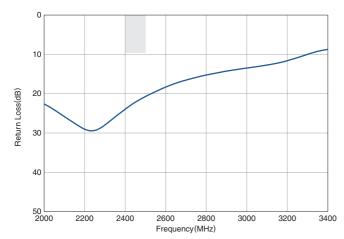
All specifications are subject to change without notice.Before using these products, be sure to request the delivery specifications.

#### FREQUENCY CHARACTERISTICS

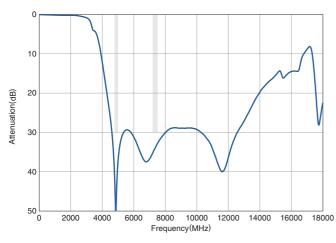


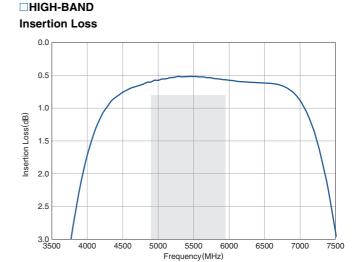


**Return Loss** 

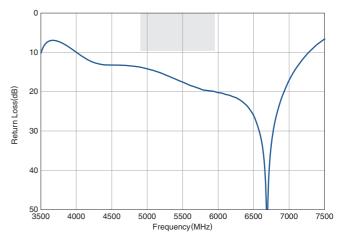




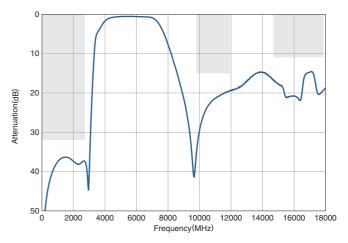




**Return Loss** 



Attenuation



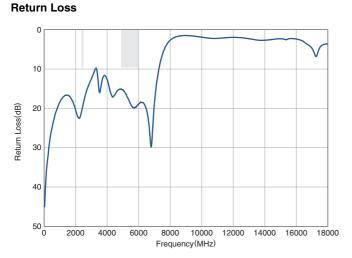
• All specifications are subject to change without notice.

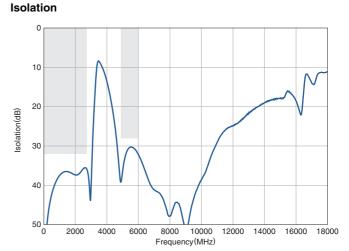
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#### FREQUENCY CHARACTERISTICS





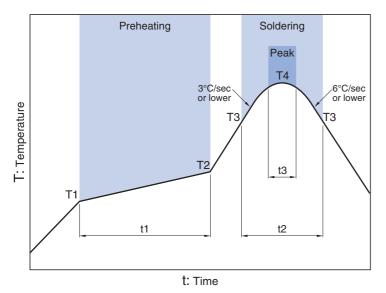


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#### RECOMMENDED REFLOW PROFILE



Preheating			Soldering			
Freneating			Critical zone (T3 to T4)		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	Т3	t2	T4	t3*
150°C	200°C	60 to 120sec	217°C	60 to 120sec	240 to 260°C	30sec max.

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

The maximum number of reflow is 3.

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## **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
- (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.

· All specifications are subject to change without notice.

<sup>•</sup> Before using these products, be sure to request the delivery specifications.