TDK

July 2015

Multilayer Diplexer

For 174-1578MHz / 2400-5850MHz

DPX205850DT-4152B2

2.0x1.25mm [EIA 0805]*

* Dimensions Code JIS[EIA]

⚠ Caution

The products in this catalog will be or have been stopped production

Discontinue Issue Date	Jun. 8, 2026
Last Purchase Order Date	Dec. 31, 2027
Last Shipment Date	Dec. 31, 2028

Please refer to our Web site about replacement information.

Multilayer Diplexer

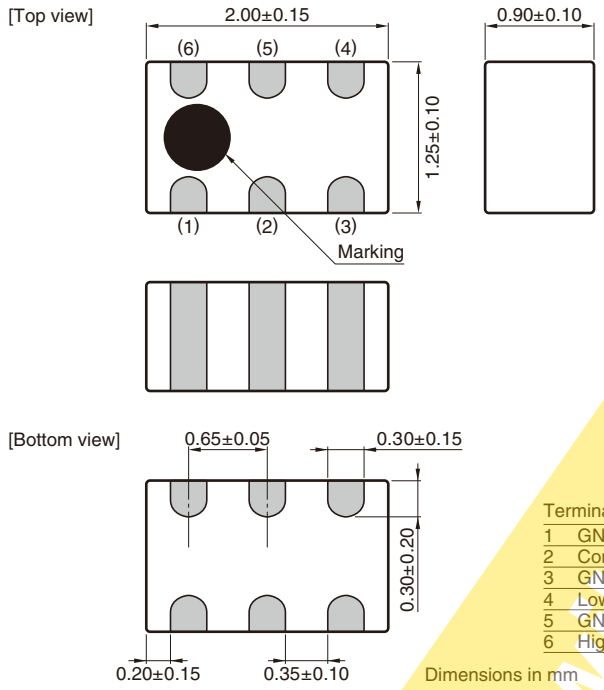
For 174-1578MHz / 2400-5850MHz

Conformity to RoHS Directive

DPX205850DT-4152B2

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SHAPES AND DIMENSIONS

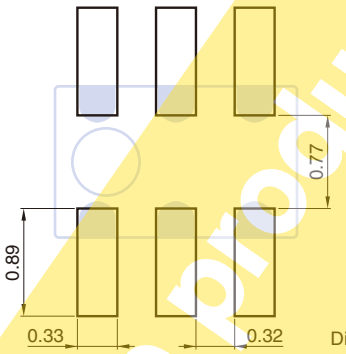


Terminal functions

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

Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

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.

DPX205850DT-4152B2

ELECTRICAL CHARACTERISTICS

LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	174 to 240	—	0.10	0.30
	704 to 960	—	0.45	0.65
	1572 to 1578	—	0.28	0.55
	174 to 240	—	—	0.45 (–40 to +85°C)
	704 to 960	—	—	0.80 (–40 to +85°C)
	1572 to 1578	—	—	0.70 (–40 to +85°C)
Return Loss (dB)	174 to 240	15	31.9	—
	704 to 960	12	26.2	—
	1572 to 1578	15	21.6	—
Attenuation (dB)	2400 to 2500	13	22.8	—
	2500 to 2690	12	16.7	—
	5150 to 5850	22	27.8	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	—	0.31	0.45
	2500 to 2690	—	0.25	0.45
	5150 to 5850	—	0.13	0.40
	2400 to 2500	—	—	0.60 (–40 to +85°C)
	2500 to 2690	—	—	0.60 (–40 to +85°C)
	5150 to 5850	—	—	0.55 (–40 to +85°C)
Return Loss (dB)	2400 to 2500	15	27.8	—
	2500 to 2690	15	27.8	—
	5150 to 5850	10	20.6	—
Attenuation (dB)	174 to 240	12	19.4	—
	704 to 960	9	11.9	—
	1572 to 1578	20	28.2	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

TEMPERATURE RANGE

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

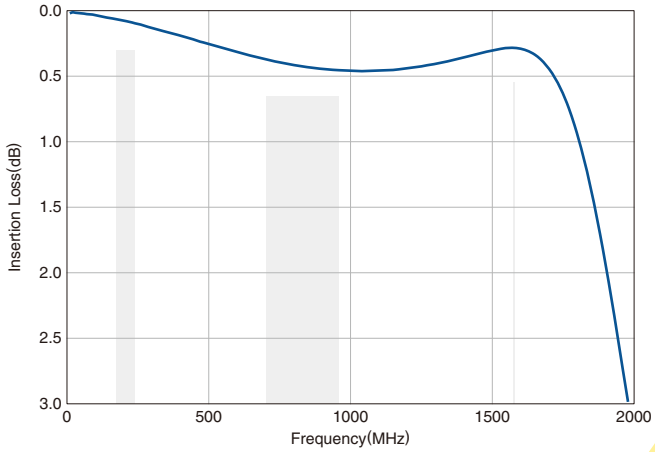
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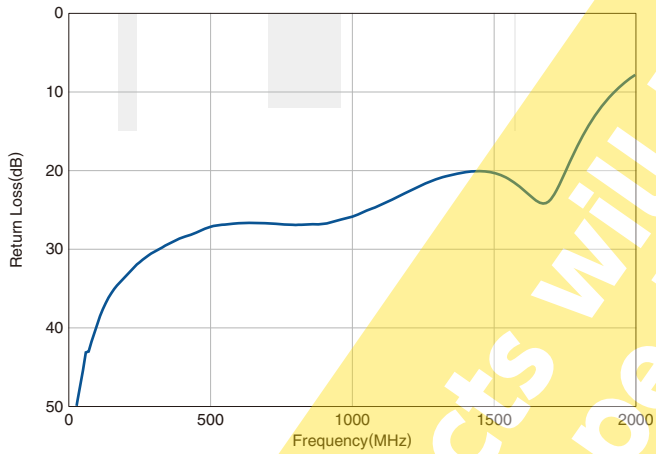
FREQUENCY CHARACTERISTICS

LOW-BAND

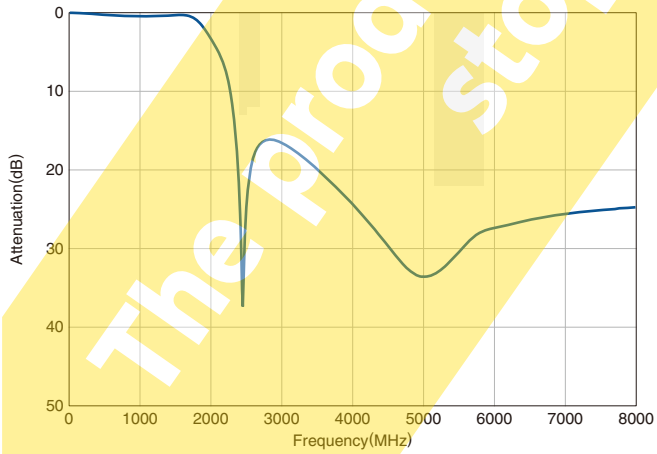
Insertion Loss



Return Loss

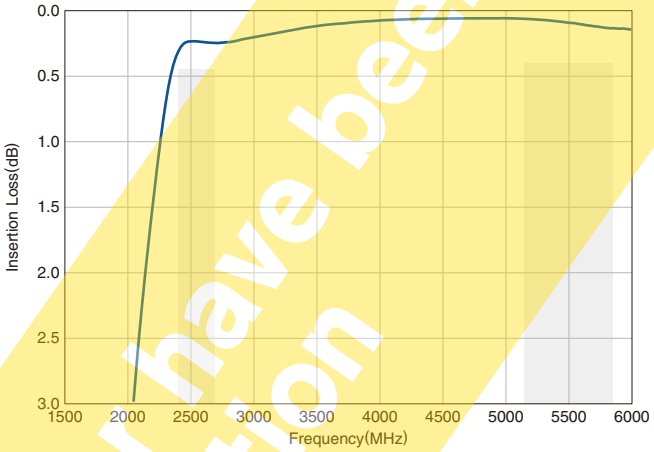


Attenuation

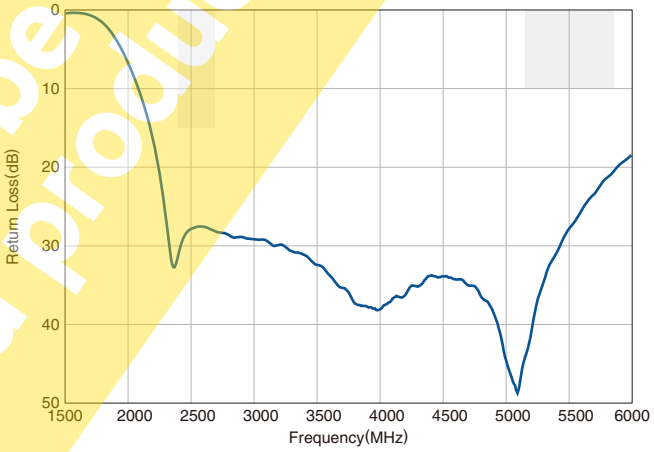


HIGH-BAND

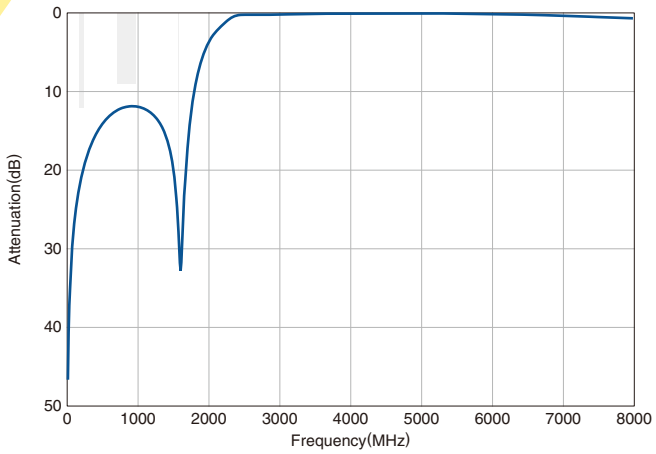
Insertion Loss



Return Loss



Attenuation



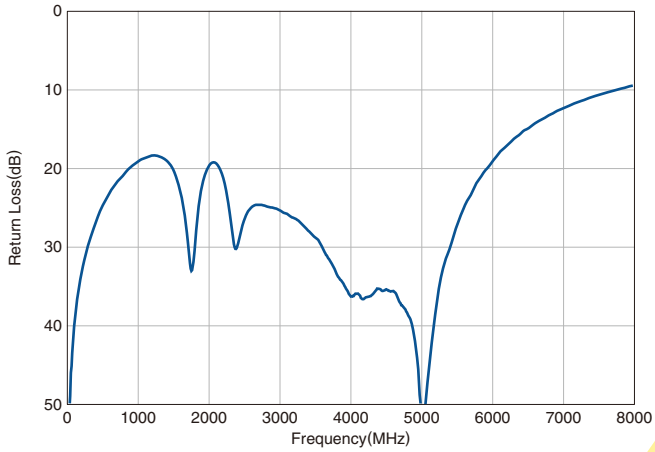
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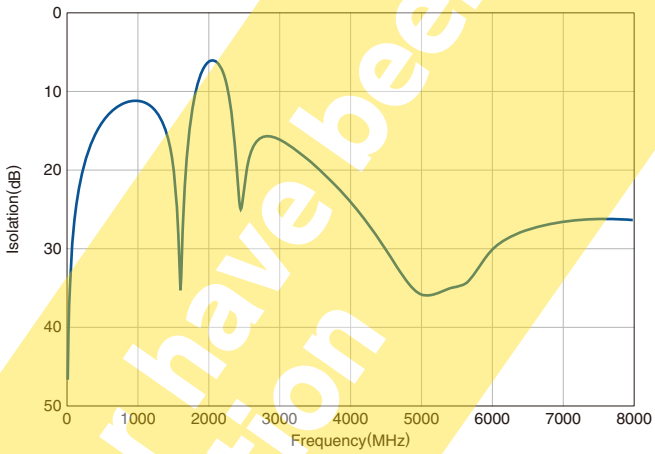
FREQUENCY CHARACTERISTICS

COMMON

Return Loss

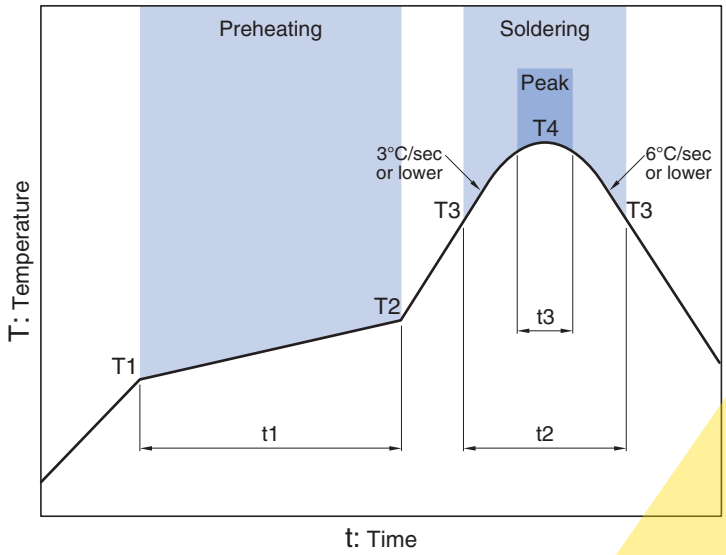


Isolation



The products will be or have been stopped production

RECOMMENDED REFLOW PROFILE



Preheating			Soldering			
			Critical zone (T3 to T4)		Peak	
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	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.

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