⚠The products in this catalog are not recommended for new design

RF Components

August 2015

Multilayer Diplexer

For 704-1610MHz / 2400-5900MHz

DPX165850DT-8033B1

1.6x0.8mm [EIA 0603]*

* Dimensions Code JIS[EIA]

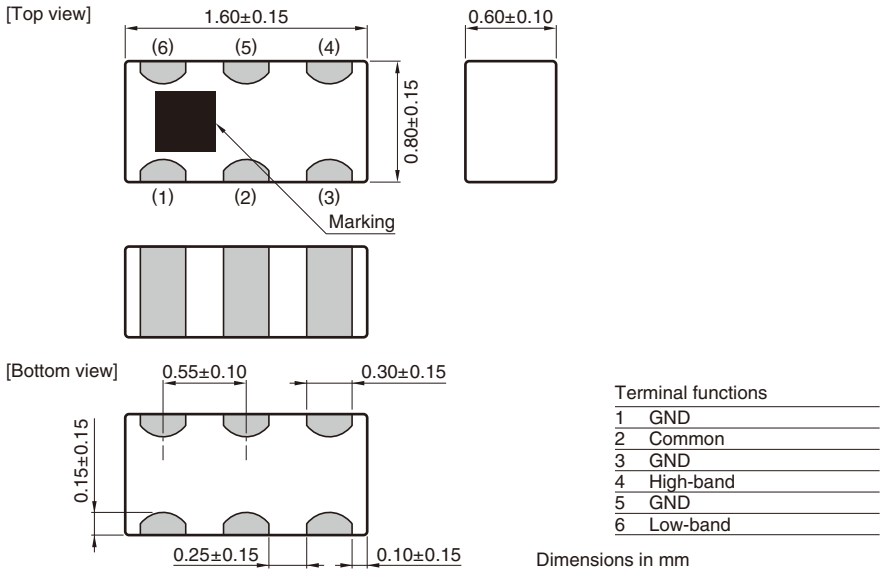
Multilayer Diplexer

Conformity to RoHS Directive

For 704-1610MHz / 2400-5900MHz

DPX165850DT-8033B1

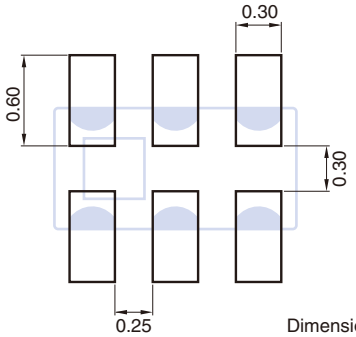
SHAPES AND DIMENSIONS



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

DPX165850DT-8033B1

■ELECTRICAL CHARACTERISTICS

□LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	704 to 960	—	0.35	0.50
	1572 to 1578	—	0.52	0.75
	1570 to 1610	—	0.61	0.85
	704 to 960	—	—	0.70 (–40 to +85°C)
	1572 to 1578	—	—	0.95 (–40 to +85°C)
	1570 to 1610	—	—	1.05 (–40 to +85°C)
Return Loss (dB)	704 to 960	10	13.5	—
	1572 to 1578	10	19.1	—
	1570 to 1610	10	16.1	—
Attenuation (dB)	2400 to 2500	15	24	—
	2500 to 2690	13	19	—
	4900 to 5150	18	23	—
	5150 to 5850	20	28	—
	5850 to 5900	20	28	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

□HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	—	0.64	0.75
	2500 to 2690	—	0.70	0.85
	4900 to 5150	—	0.24	0.55
	5150 to 5850	—	0.22	0.55
	5850 to 5900	—	0.36	0.55
	2400 to 2500	—	—	0.95 (–40 to +85°C)
	2500 to 2690	—	—	1.05 (–40 to +85°C)
	4900 to 5150	—	—	0.75 (–40 to +85°C)
	5150 to 5850	—	—	0.75 (–40 to +85°C)
	5850 to 5900	—	—	0.75 (–40 to +85°C)
Return Loss (dB)	2400 to 2500	10	19.7	—
	2500 to 2690	10	12.6	—
	4900 to 5150	10	17.0	—
	5150 to 5850	10	15.4	—
	5850 to 5900	10	14.7	—
Attenuation (dB)	704 to 960	25	32	—
	1572 to 1578	20	37	—
	1570 to 1610	20	30	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

■TEMPERATURE RANGE

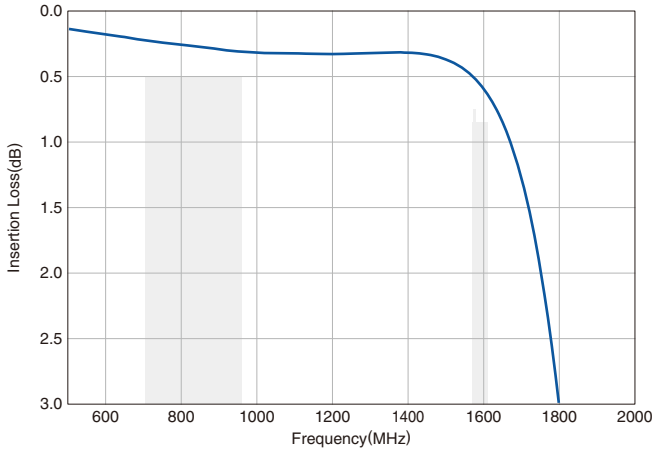
Operating temperature (°C)	Storage temperature (°C)
–40 to +85	–40 to +85

DPX165850DT-8033B1

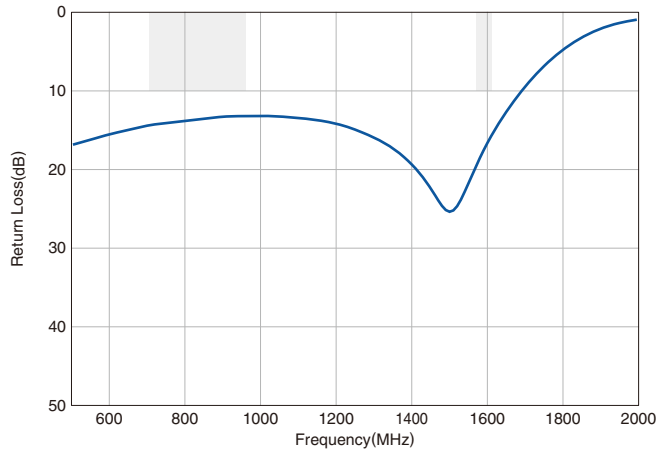
■FREQUENCY CHARACTERISTICS

□LOW-BAND

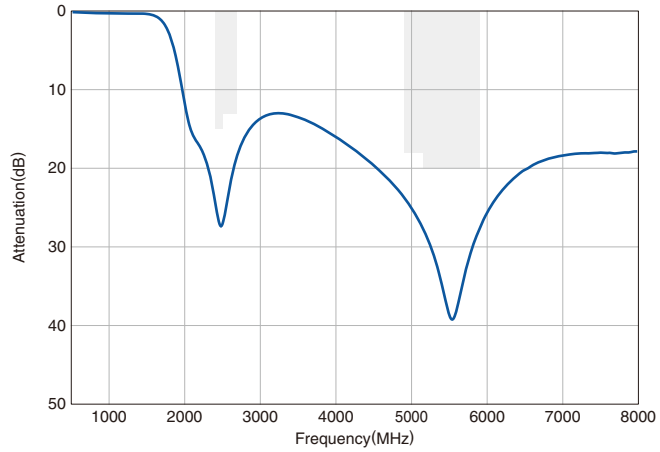
Insertion Loss



Return Loss

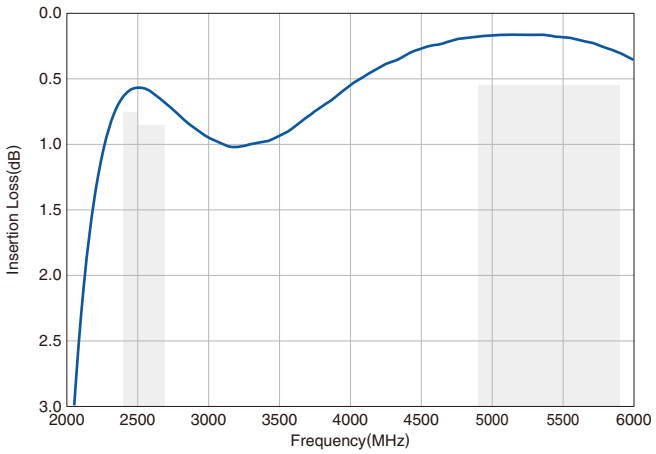


Attenuation

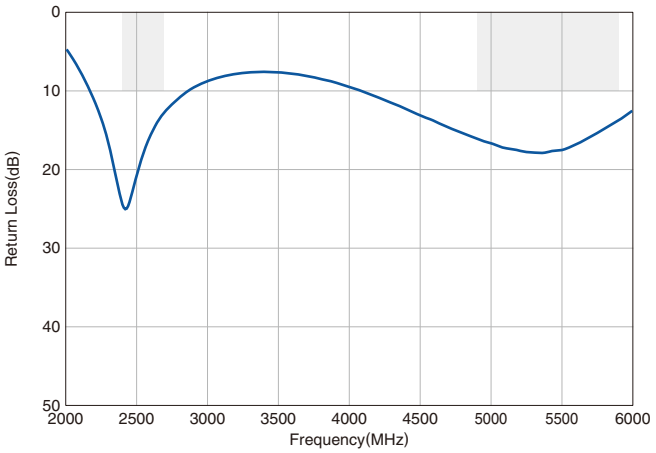


□HIGH-BAND

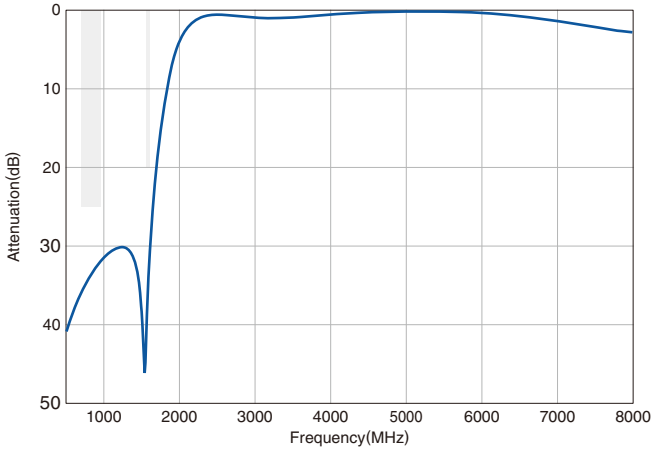
Insertion Loss



Return Loss



Attenuation



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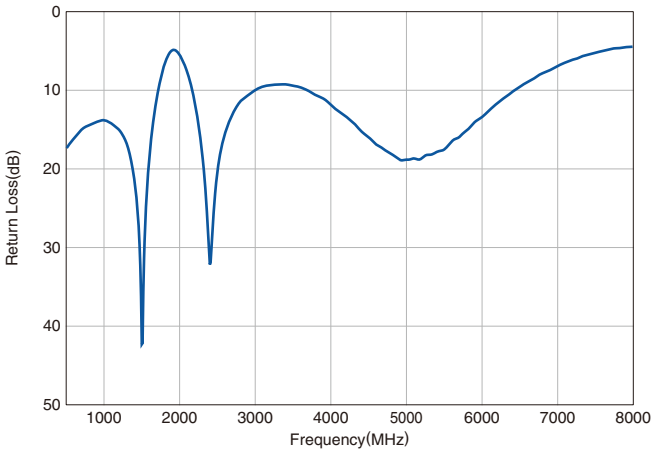
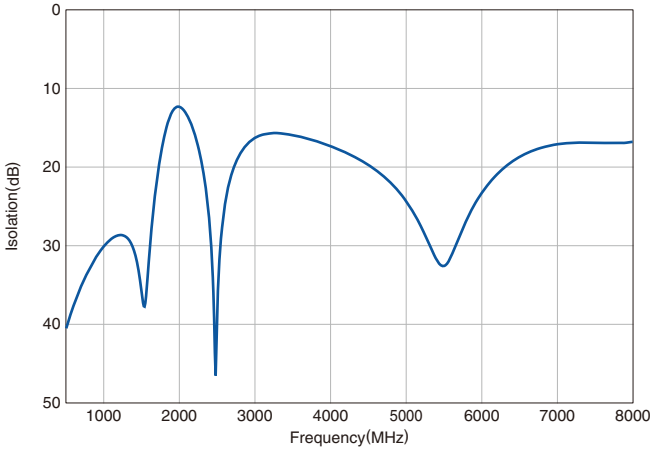
FREQUENCY CHARACTERISTICS

COMMON

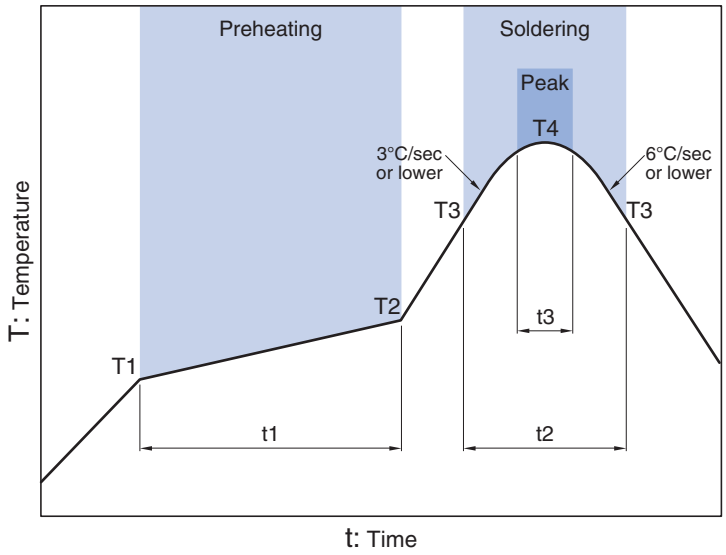
Return Loss



Isolation



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.

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.