

July 2015

Multilayer Diplexer

For 800-2170MHz / 2400-5850MHz

DPX205850DT-4154B1

2.0x1.25mm [EIA 0805]*

* Dimensions Code JIS[EIA]



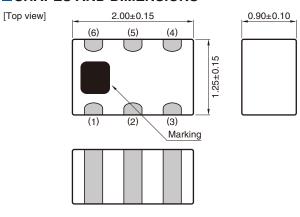
Multilayer Diplexer

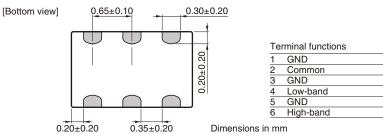
For 800-2170MHz / 2400-5850MHz

Conformity to RoHS Directive

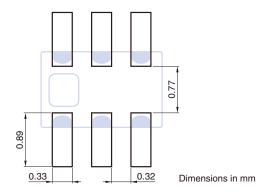
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SHAPES AND DIMENSIONS

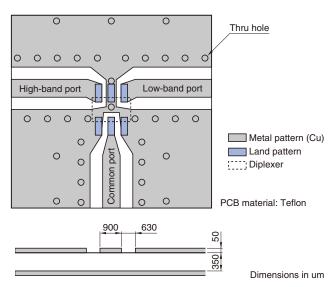




■ RECOMMENDED LAND PATTERN



■ 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.



DPX205850DT-4154B1

ELECTRICAL CHARACTERISTICS

□LOW-BAND

Item	Frequency Range (MHz)	Min.	Тур.	Max.
Insertion Loss (dB)	800 to 960	_	0.23	0.50
	1710 to 1990	_	0.53	0.80
	1990 to 2170	_	0.98	1.30
	800 to 960	_	_	0.60 (-40 to +85°C)
	1710 to 1990	_	_	1.00 (-40 to +85°C)
	1990 to 2170	_	_	1.55 (-40 to +85°C)
Return Loss (dB)	800 to 960	10	16	_
	1710 to 2170	10	17	_
Attanuation (dD)	2400 to 2500	10	15	_
Attenuation (dB)	5150 to 5850	25	36	_
Characteristic Impedance (Ω)			50 (Nominal)	

[•] Ta: +25±5°C

☐HIGH-BAND

Item	Frequency Range (MHz)	Min.	Тур.	Max.
Insertion Loss (dB)	2400 to 2500	_	1.27	1.70
	5150 to 5850	_	0.27	0.50
	2400 to 2500	_	_	2.00 (-40 to +85°C)
	5150 to 5850	_	_	0.60 (-40 to +85°C)
Return Loss (dB)	2400 to 2500	10	23	_
	5150 to 5850	10	14	_
Attenuation (dB)	800 to 960	18	24	_
	1710 to 2170	12	15	
Characteristic Impedance (Ω)			50 (Nominal)	

[·] Ta: +25±5°C

□ COMMON

ltem	Frequency Range (MHz)	Min.	Тур.	Max.
Isolation (dB)	800 to 960	18	23	
	1710 to 2170	12	15	_
	2400 to 2500	10	17	
	5150 to 5850	25	35	
Characteristic Impedance (Ω)		50 (Nominal)		

[•] Ta: +25±5°C

■TEMPERATURE RANGE

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

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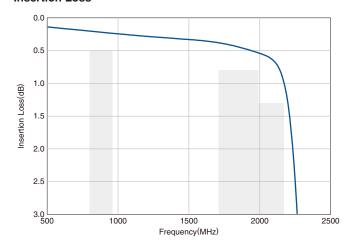


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■FREQUENCY CHARACTERISTICS

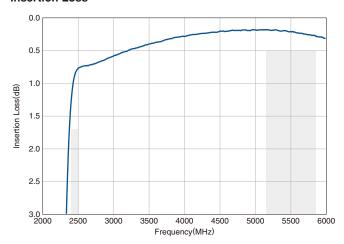
□LOW-BAND

Insertion Loss

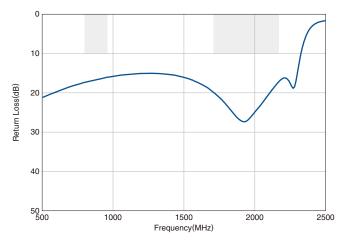


☐HIGH-BAND

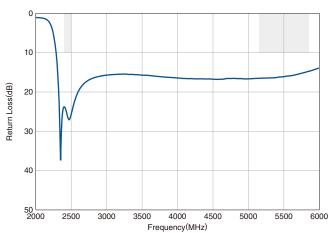
Insertion Loss



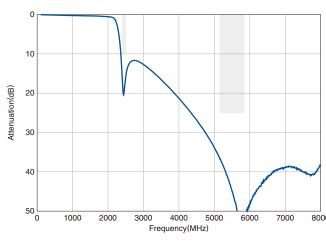
Return Loss



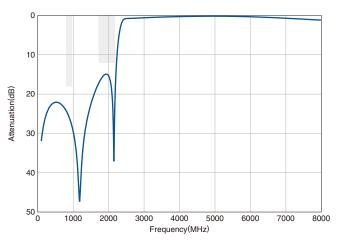
Return Loss



Attenuation



Attenuation



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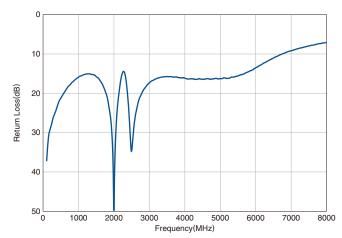


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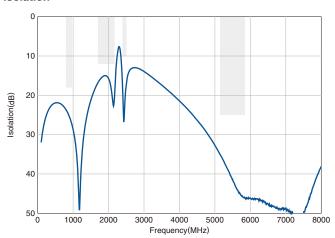
■ FREQUENCY CHARACTERISTICS

□ COMMON

Return Loss



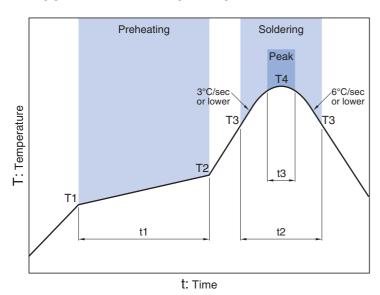
Isolation



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■ 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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