TDK

December 2015

Multilayer Directional Coupler

For 698 to 2620MHz

HHM22137A2

1.6x0.8mm [EIA 0603]*

*** Dimensions Code JIS[EIA]**

Multilayer Directional Coupler

Conformity to RoHS Directive

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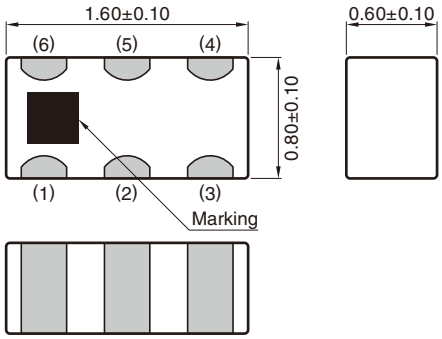
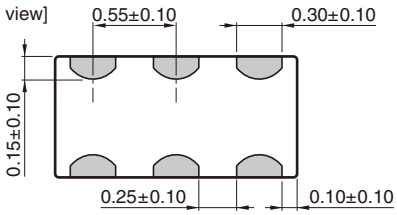
SHAPES AND DIMENSIONS

[Top view]



[Bottom view]

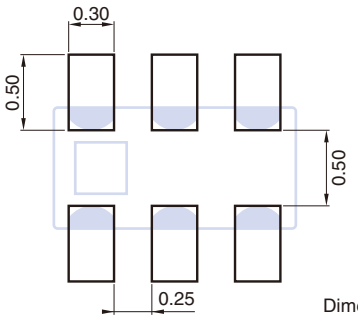


Terminal functions

1	Output
2	GND
3	Input
4	Coupling
5	GND
6	50Ω terminate

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/

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ELECTRICAL CHARACTERISTICS

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Coupling Factor (dB)	698 to 915	23.0	25.6	27.0
	1710 to 2025	21.5	24.0	26.5
	2300 to 2620	22.5	25.0	27.5
Insertion Loss (dB)	698 to 915	—	0.07	0.20
	1710 to 2025	—	0.09	0.20
	2300 to 2620	—	0.11	0.20
Isolation (dB)	698 to 915	45	46.3	—
	1710 to 2025	45	48.9	—
	2300 to 2620	45	49.8	—
Return Loss (dB)	698 to 915	15	27.6	—
	1710 to 2025	15	27.4	—
	2300 to 2620	15	29.1	—
Return Loss (Coupling port) (dB)	698 to 915	15	21.8	—
	1710 to 2025	15	24.5	—
	2300 to 2620	15	26.4	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25°C

TEMPERATURE RANGE

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

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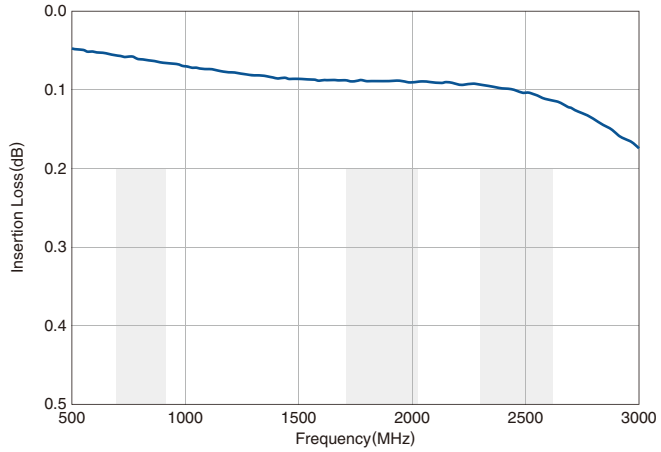
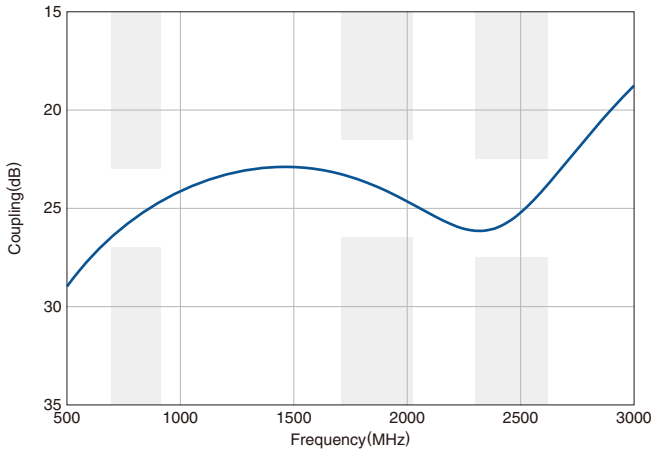
■FREQUENCY CHARACTERISTICS

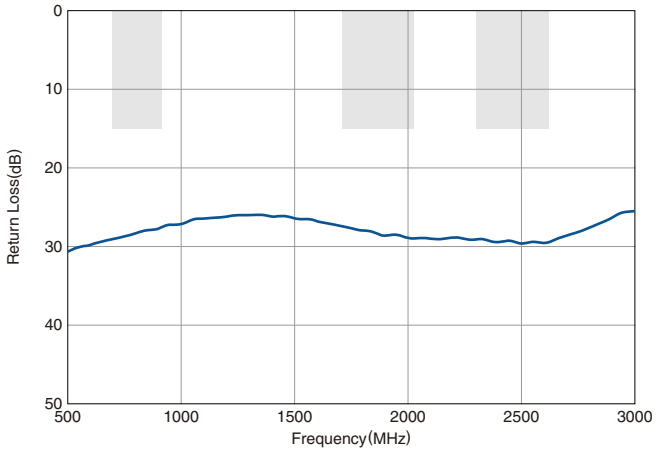
□INSERTION LOSS



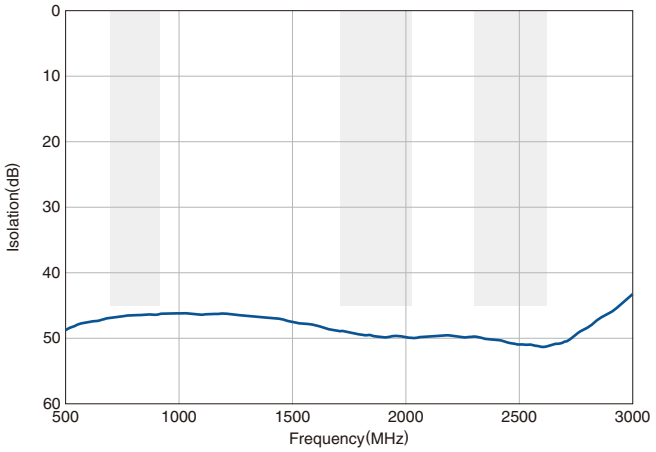
□COUPLING



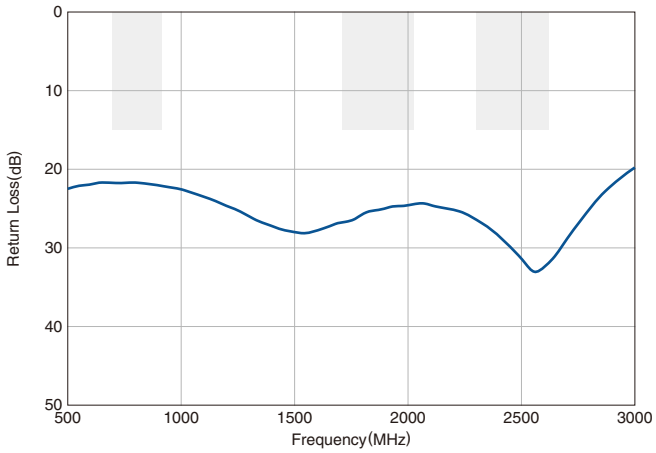
□RETURN LOSS



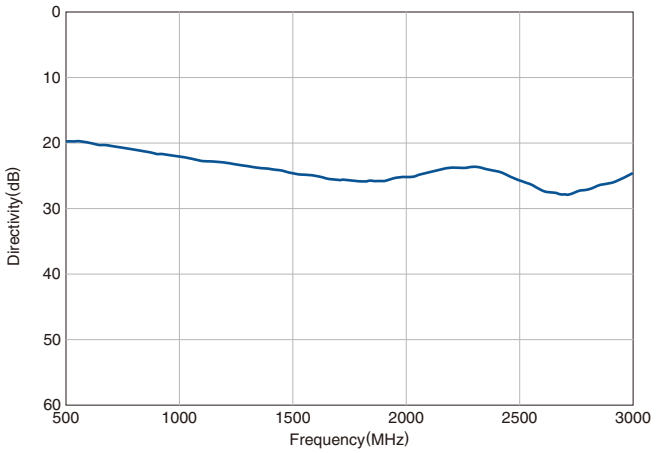
□ISOLATION



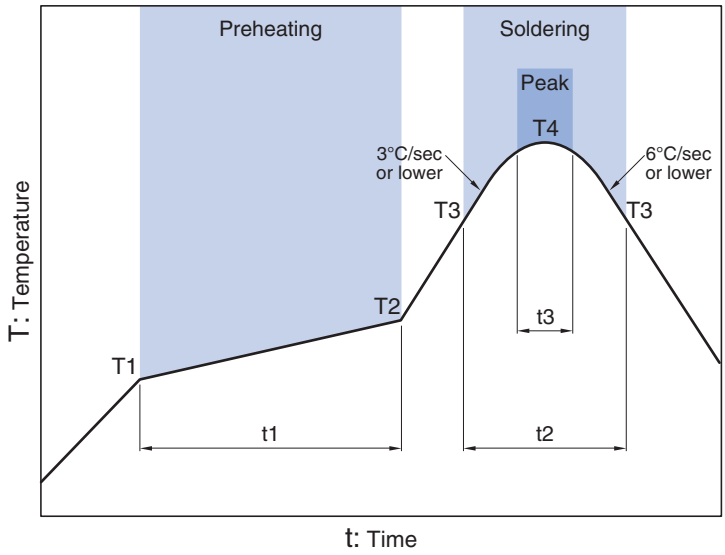
□RETURN LOSS AT COUPLING PORT



□DIRECTIVITY



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.