TDK

April 2015

Multilayer Directional Coupler

For 2400-2500MHz / 4900-5850MHz

HHM2942A2

1.0x0.5mm [EIA 0402]*

* Dimensions Code JIS[EIA]

⚠ Caution

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

Discontinue Issue Date	Jun. 3, 2022
Last Purchase Order Date	Mar. 31, 2023
Last Shipment Date	Mar. 31, 2027

Please refer to our Web site about replacement information.

Multilayer Directional Coupler

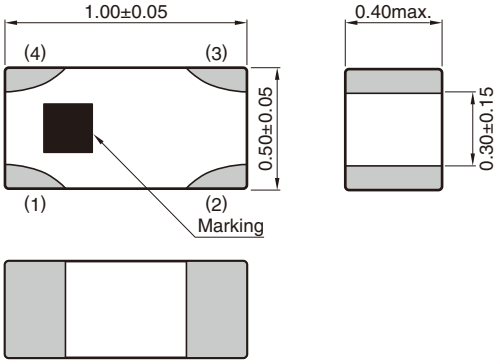
For 2400-2500MHz / 4900-5850MHz

Conformity to RoHS Directive

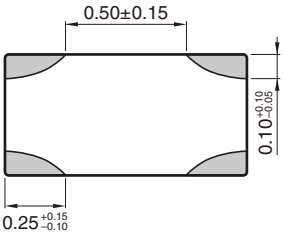
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SHAPES AND DIMENSIONS

[Top view]



[Bottom view]

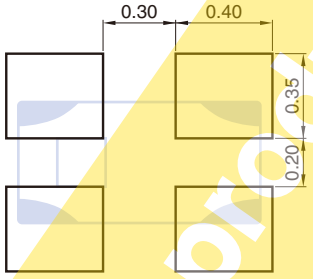


Terminal functions

1	Coupling
2	50Ω term
3	Output
4	Input

Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

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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)	2400 to 2500	17.2	—	19.2
	4900 to 5850	10.2	—	13.2
Insertion Loss (dB)	2400 to 2500	—	—	0.25
	4900 to 5850	—	—	0.45
	2400 to 2500	—	—	0.28 (–40 to +85°C)
	4900 to 5850	—	—	0.50 (–40 to +85°C)
Return Loss (dB)	2400 to 2500	17.69	—	—
	4900 to 5850	17.69	—	—
Directivity (dB)	2400 to 2500	15	—	—
	4900 to 5850	15	—	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25°C

TEMPERATURE RANGE

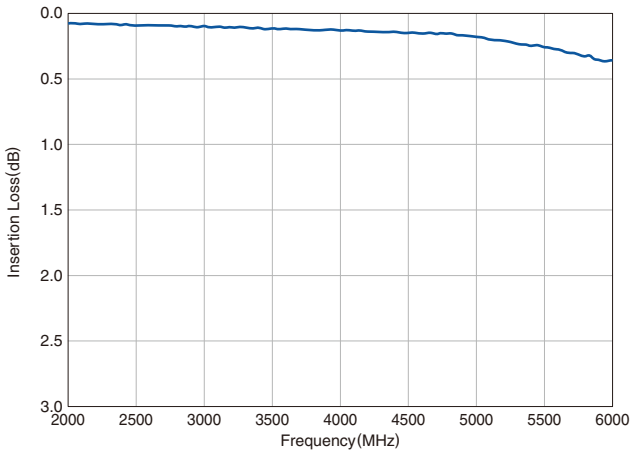
Operating temperature (°C)	Storage temperature (°C)
–40 to +85	–40 to +85

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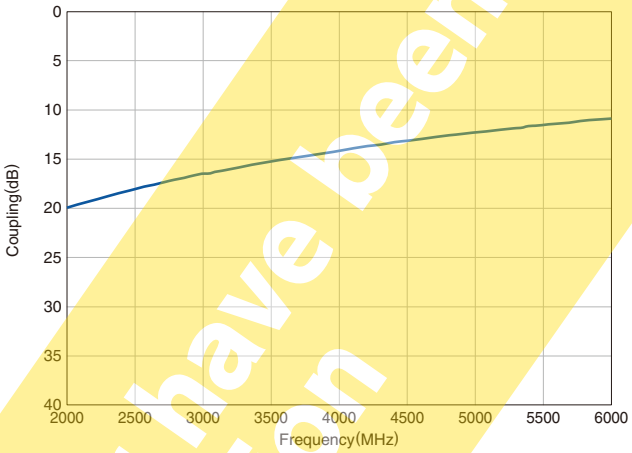
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FREQUENCY CHARACTERISTICS

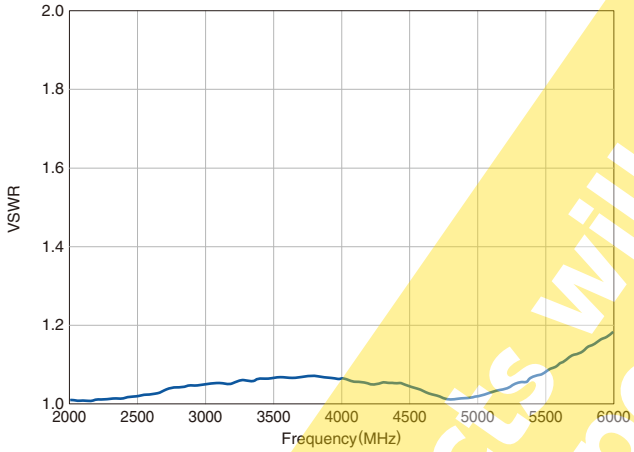
INSERTION LOSS



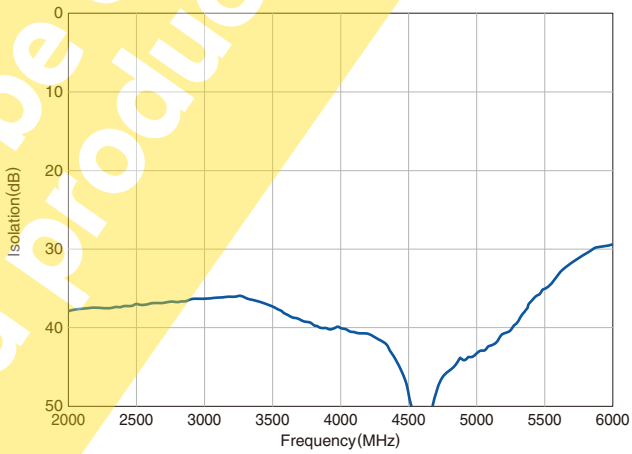
COUPLING



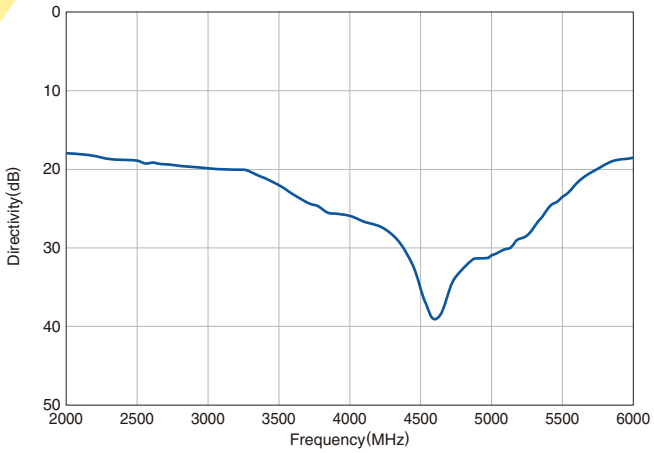
VSWR



ISOLATION

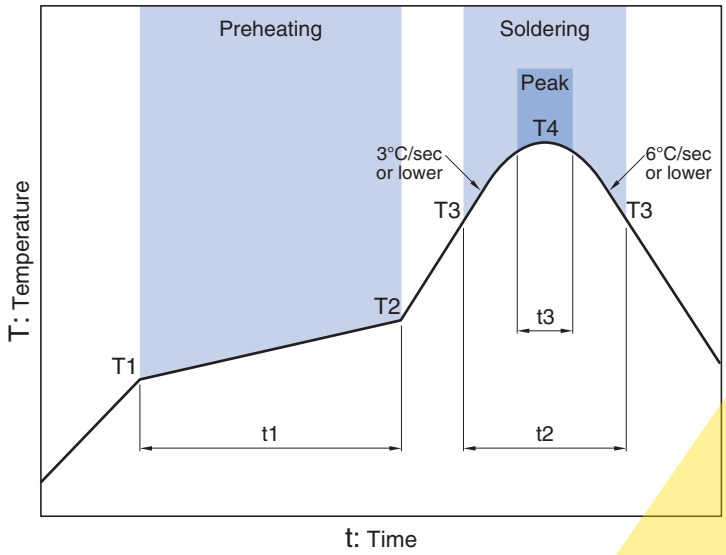


DIRECTIVITY



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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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