



# Multilayer Band Pass Filter (Balance Output Type)

For 2402–2480MHz

# DEA202450BT-7099A1

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**2.0x1.25mm [EIA 0805]\***

\* Dimensions Code JIS[EIA]

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# Multilayer Band Pass Filter (Balance Output Type)

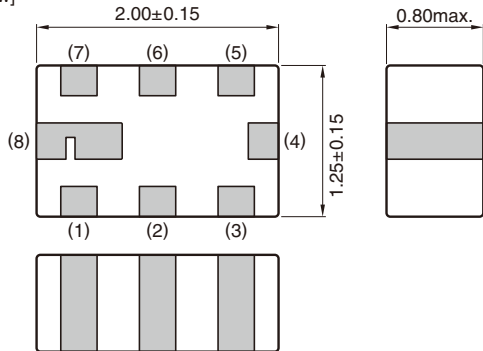
Conformity to RoHS Directive

For 2402–2480MHz

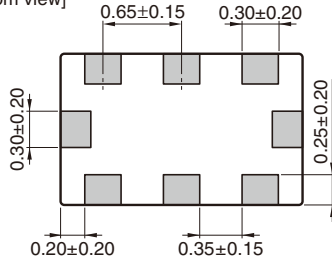
## DEA202450BT-7099A1

### SHAPES AND DIMENSIONS

[Top view]



[Bottom view]

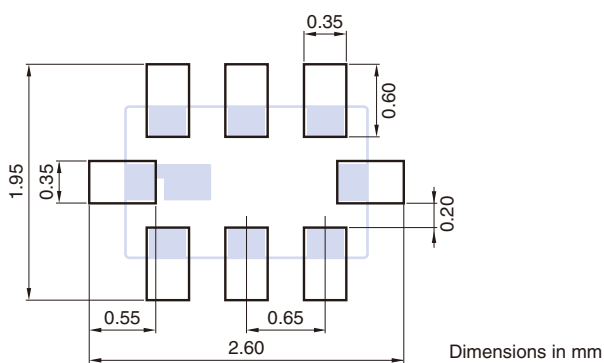


Terminal functions

1	Unbalanced port
2	DC feed
3	N.C.
4	GND
5	Balanced port
6	GND
7	Balanced port
8	GND

Dimensions in mm

### RECOMMENDED LAND PATTERN

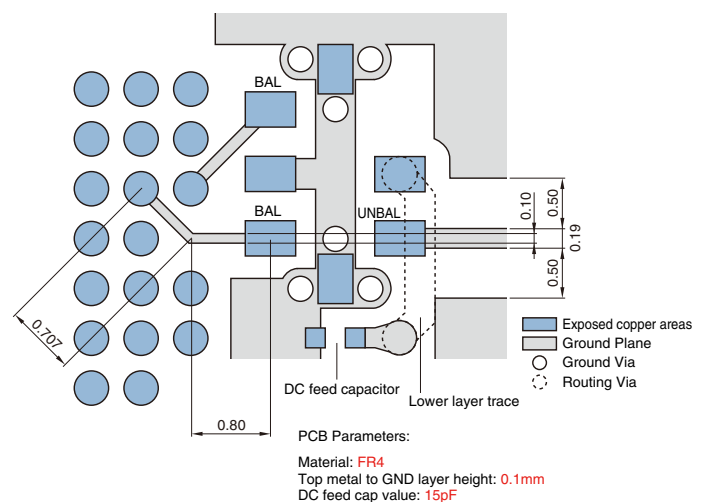


Dimensions in mm

Note1: Pin 2 of the filter provides a DC feed connection to the balanced ports. In the event that this function is used, Pin 2 should be connected to ground using a de-coupling capacitor.

Note2: In the event that the pin 2 function is not used, the pin should be left unconnected.

### EVALUATION BOARD



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.

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## ELECTRICAL CHARACTERISTICS

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Unbalanced Port Characteristic Impedance ( $\Omega$ )			50 (Nominal)	
Balanced Port Characteristic Impedance ( $\Omega$ )			Matched to CSR BC04 IC	
Insertion Loss (dB)	2402 to 2480	—	—	3
Attenuation (dB)	880 to 960	35	—	—
	1710 to 1880	22	—	—
	1880 to 1910	20	—	—
	4804 to 4960	18	—	—
Return Loss at Unbalanced Port (dB)	2402 to 2480	8.5	—	—
Return Loss at Balanced Port (dB)	2402 to 2480	8.5	—	—
Phase Balance (deg.)	2402 to 2480	170	—	190
Amplitude Balance (dB)	2402 to 2480	-2	—	2

· Ta: +25±5°C

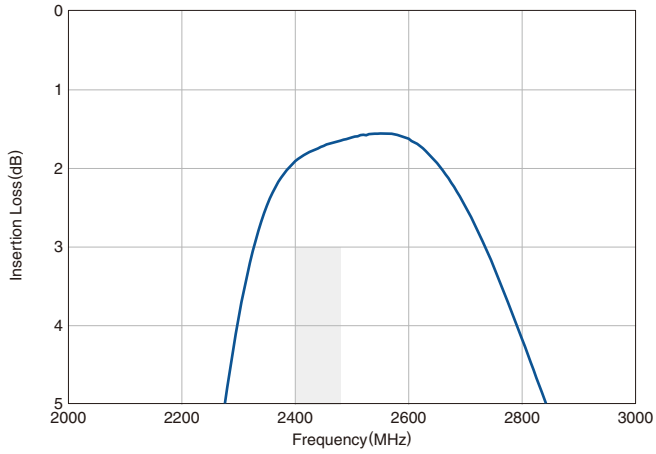
## TEMPERATURE RANGE

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

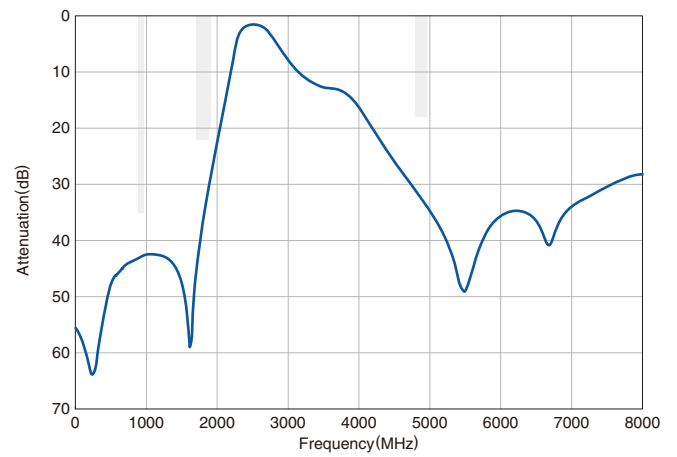
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## FREQUENCY CHARACTERISTICS

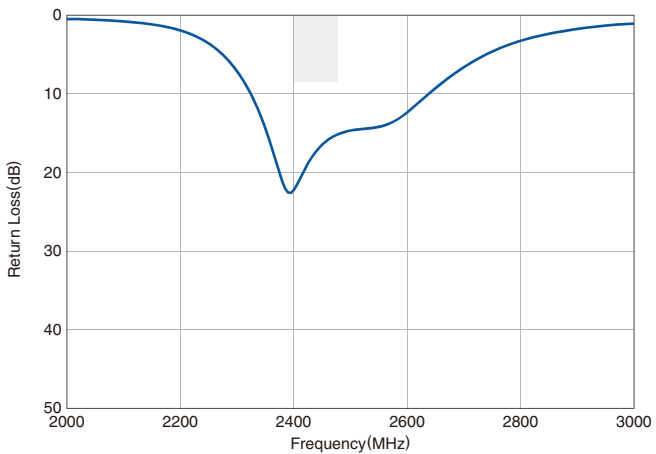
### SDS21 INSERTION LOSS



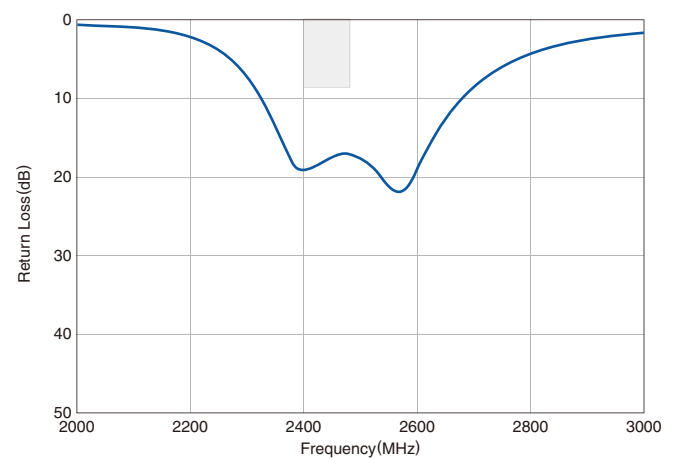
### SDS21 ATTENUATION



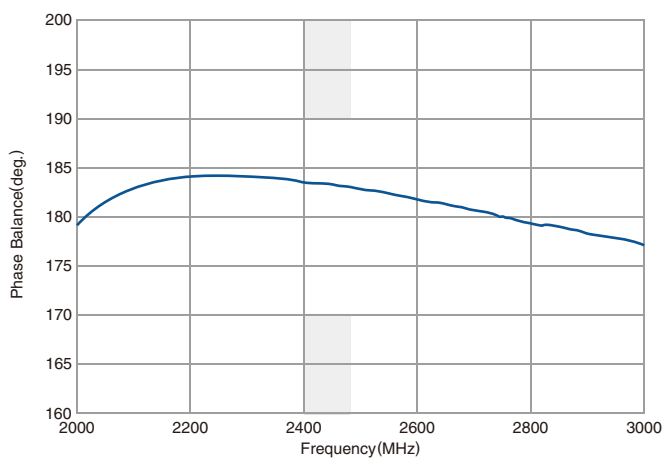
### SSS11 RETURN LOSS at UNBALANCE PORT



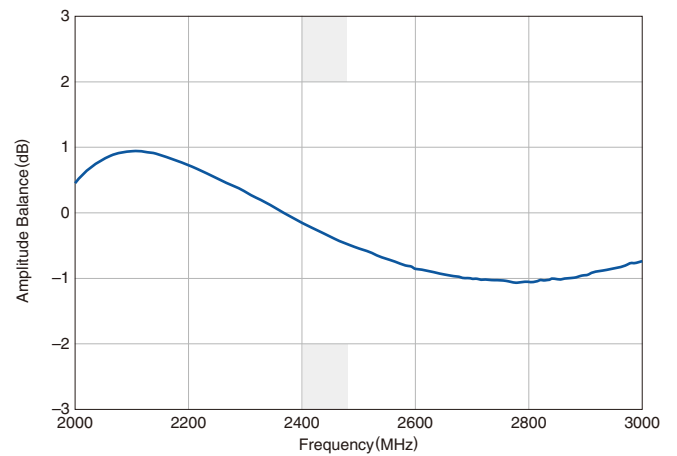
### SDD22 RETURN LOSS at BALANCE PORT



### PHASE BALANCE



### AMPLITUDE BALANCE



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RECOMMENDED REFLOW PROFILE



Preheating			Soldering			
Temp.	Time		Critical zone (T3 to T4)		Peak	
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                                  | (8) Public information-processing equipment                                  |
| (2) Transportation equipment (cars, electric trains, ships, etc.) | (9) Military equipment   |
| (3) Medical equipment   | (10) Electric heating apparatus, burning equipment                           |
| (4) Power-generation control equipment                            | (11) Disaster prevention/crime prevention equipment                          |
| (5) Atomic energy-related equipment                               | (12) Safety equipment  |
| (6) Seabed equipment  | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment                              |  |

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.