



# Multilayer Band Pass Filter (Balance Output Type) (2in1)

For 869-960MHz / 1805-2025MHz

# DEA211898BT-9033B1

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**2.0x1.5mm**

\* Dimensions Code JIS

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# Multilayer Band Pass Filter (Balance Output Type) (2in1)

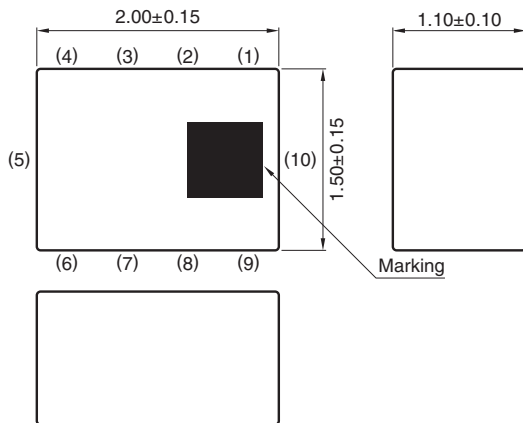
Conformity to RoHS Directive

For 869-960MHz / 1805-2025MHz

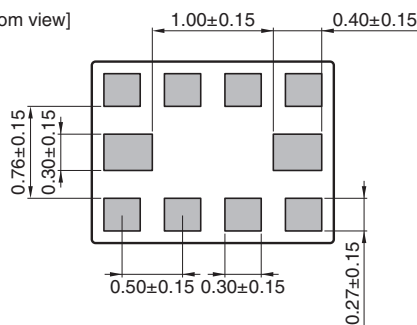
## DEA211898BT-9033B1

### SHAPES AND DIMENSIONS

[Top view]



[Bottom view]

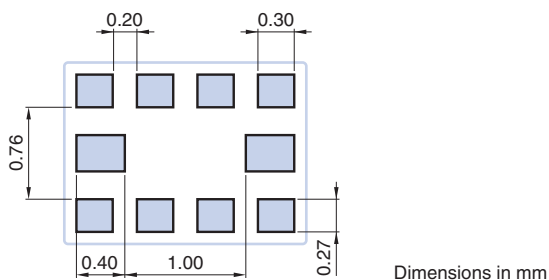


## Terminal functions

1	GSM850/900(Unbalanced port)
2	GND
3	GND
4	GSM1800/1900(Unbalanced port)
5	GND
6	GSM1800/1900(Balanced port)
7	GSM1800/1900(Balanced port)
8	GSM850/900(Balanced port)
9	GSM850/900(Balanced port)
10	GND

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/>

- 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

### Band1

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Unbalanced Port Characteristic Impedance ( $\Omega$ )			50 (Nominal)	
Balanced Port Characteristic Impedance ( $\Omega$ )			200 (Nominal)	
Insertion Loss (dB)	869 to 960	—	1.35	1.5
Attenuation (dB)	434.5 to 480	15	17.6	—
	1738 to 1920	20	21.6	—
	2607 to 2880	20	25.6	—
Amplitude Balance (dB)	869 to 960	-1.0	0.51	1.0
Phase Balance (deg.)	869 to 960	170	176.4	190

· Ta: +25±5°C

### Band2

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Unbalanced Port Characteristic Impedance ( $\Omega$ )			50 (Nominal)	
Balanced Port Characteristic Impedance ( $\Omega$ )			200 (Nominal)	
Insertion Loss (dB)	1805 to 2025	—	1.60	1.9
Attenuation (dB)	902.5 to 1012.5	16.5	18.3	—
	2400 to 2500	15	21.0	—
	3610 to 4050	20	22.5	—
	5415 to 6000	13	19.7	—
Amplitude Balance (dB)	1805 to 2025	-1.5	0.96	1.5
Phase Balance (deg.)	1805 to 2025	170	176.4	190

· Ta: +25±5°C

## TEMPERATURE RANGE

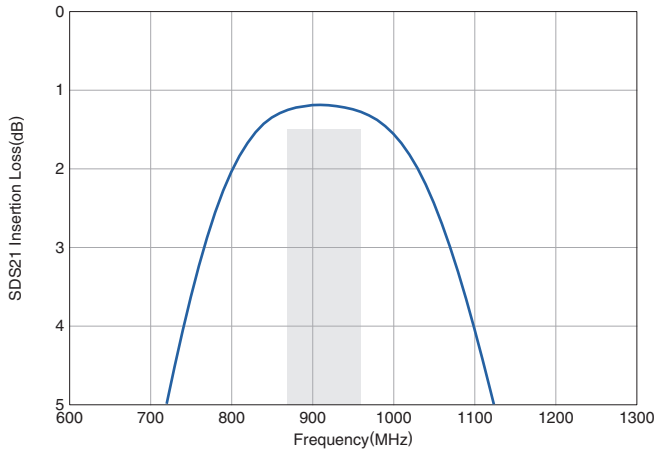
Operating temperature (°C)	Storage temperature (°C)
-40 to +85	-40 to +85

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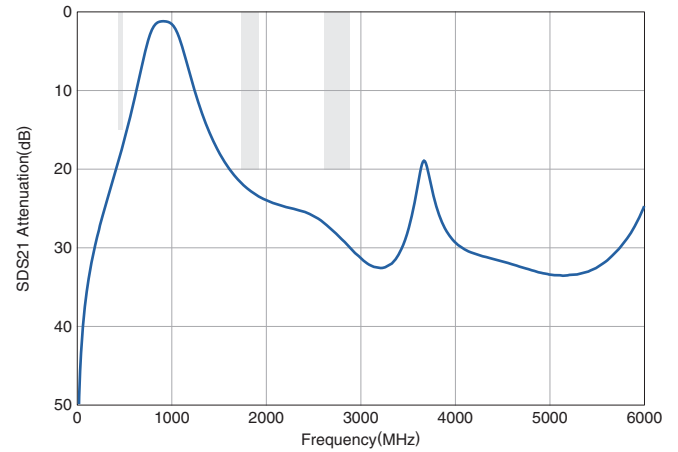
# DEA211898BT-9033B1

## FREQUENCY CHARACTERISTICS (Band1)

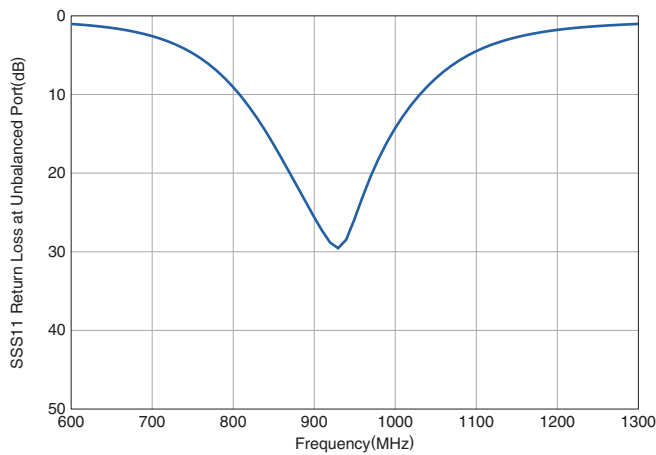
### SDS21 INSERTION LOSS



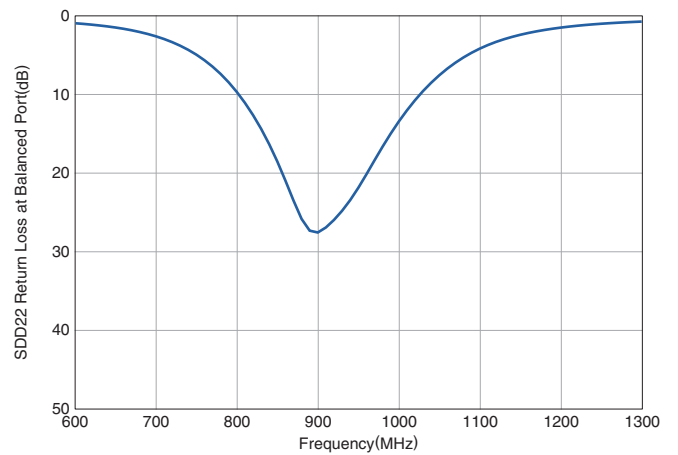
### SDS21 ATTENUATION



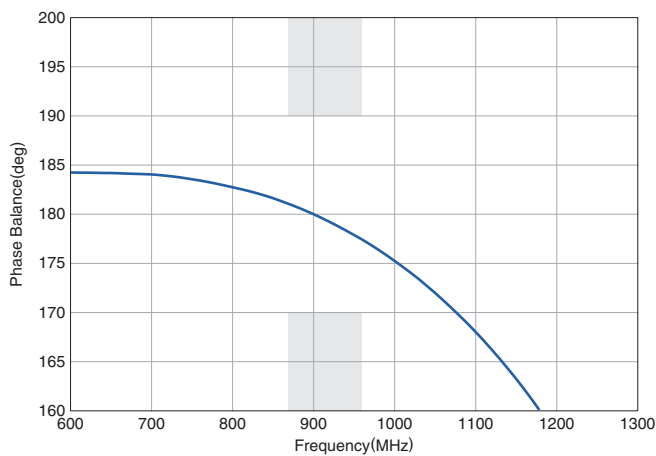
### SSS11 RETURN LOSS at UNBALANCE PORT



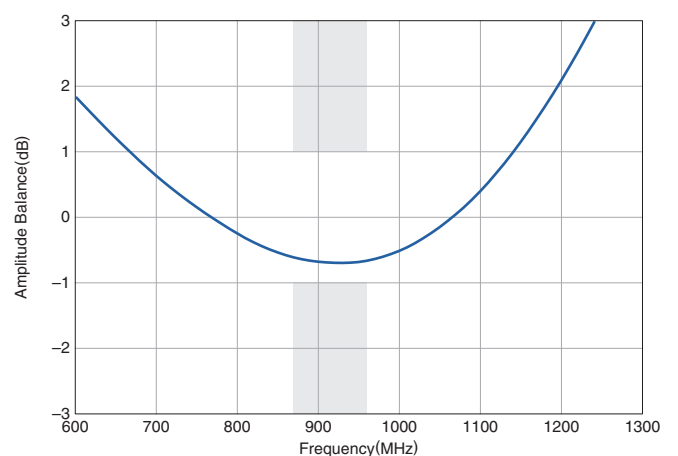
### SDD22 RETURN LOSS at BALANCE PORT



### PHASE BALANCE



### AMPLITUDE BALANCE

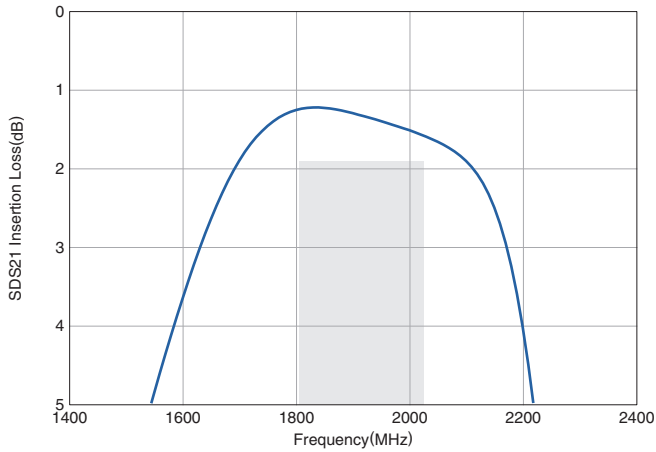


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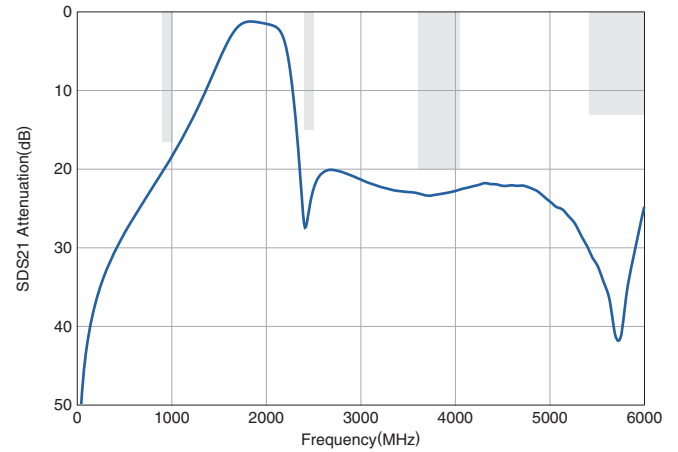
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## FREQUENCY CHARACTERISTICS (Band2)

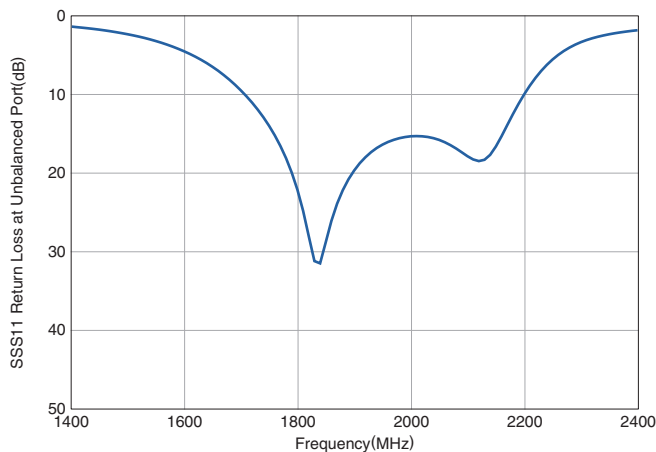
### SDS21 INSERTION LOSS



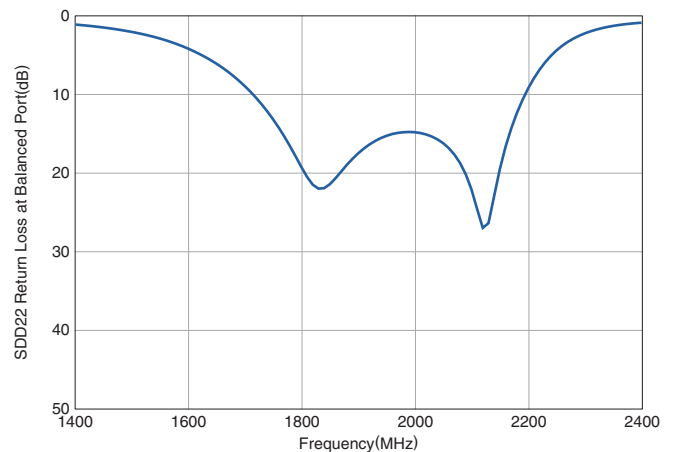
### SDS21 ATTENUATION



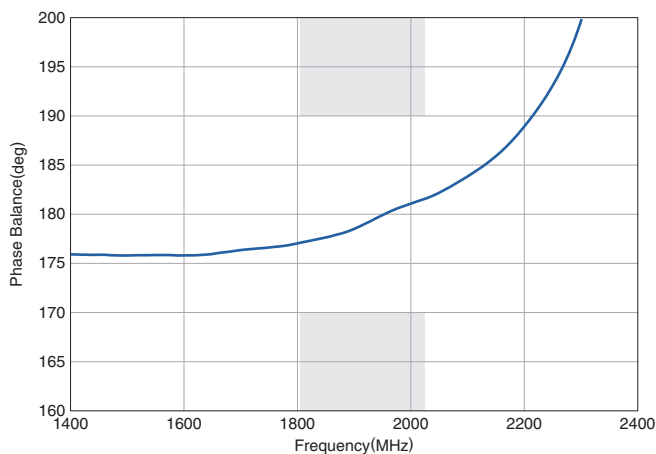
### SSS11 RETURN LOSS at UNBALANCE PORT



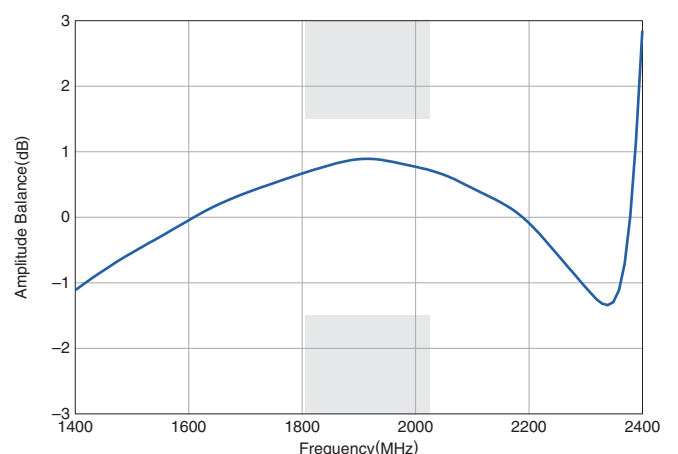
### SDD22 RETURN LOSS at BALANCE PORT



### PHASE BALANCE

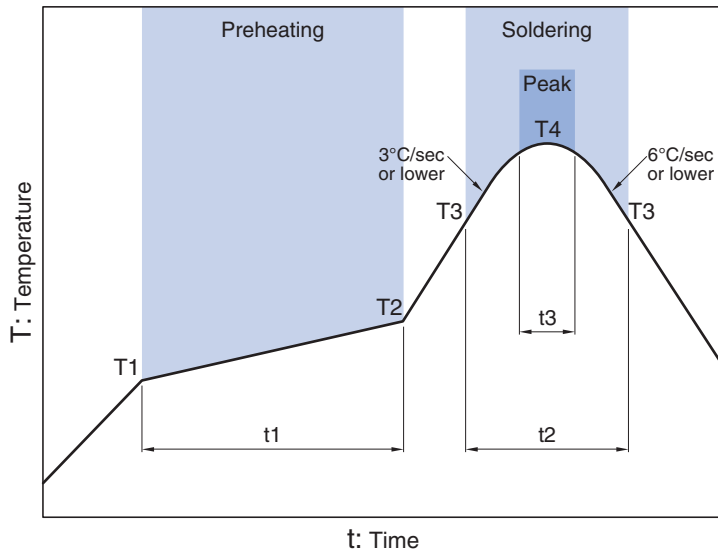


### AMPLITUDE BALANCE



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**RECOMMENDED REFLOW PROFILE**



Preheating			Soldering			
Temp.	Temp.	Time	Critical zone (T3 to T4)		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                                  | (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.

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