



May. 2022 Ver.2.0
TDK Corporation

Multilayer Band Pass Filter

For 3300-4200MHz

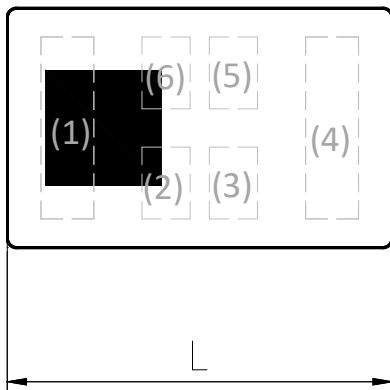
DEA Series 2.0x1.25mm [EIA 0805] TYPE

P/N: **DEA203750BT-2292A1-H**

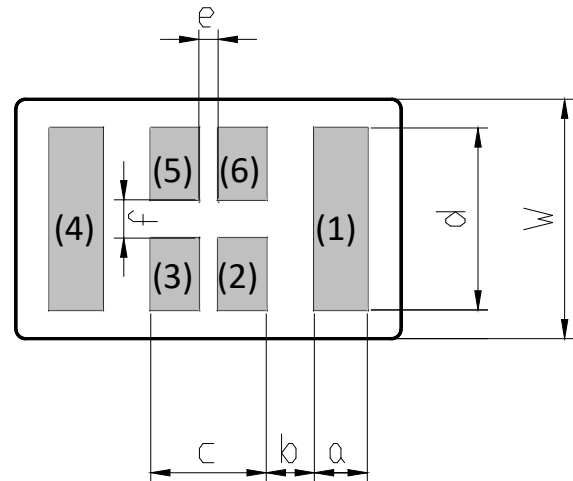
DEA203750BT-2292A1-H

■ SHAPES AND DIMENSIONS

[Top View]



[Bottom View]



Dimensions (mm)

L	W	T	a	b	c	d	e	f
2.00	1.25	0.65	0.275	0.25	0.60	0.95	0.10	0.20
+/-0.15	+/-0.10	Max	+/-0.10	+/-0.10	+/-0.10	+/-0.15	+/-0.05	+/-0.05

Terminal functions

(1)	Input Port
(2)	GND
(3)	GND

(4)	Output Port
(5)	GND
(6)	GND

DC Cut

YES. IN and OUT are isolated at DC.

■ TERMINATION FINISH

Material
Ag

All specifications are subject to change without notice.

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■ ELECTRICAL CHARACTERISTICS

(Measurement)

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	3300 to 4200	-	1.48	2.1
Insertion Loss (dB) (-40 to +85 °C)	3300 to 4200	-	-	2.3
VSWR (Input / Output Port)	3300 to 4200	-	1.5	2.1
Attenuation (dB)	100 to 915	43	47.1	-
	1427 to 1467	43	52.8	-
	1627 to 1661	45	69.9	-
	1695 to 1785	40	55.4	-
	1850 to 2025	40	45.3	-
	2300 to 2400	35	39.3	-
	2400 to 2495	35	39.3	-
	2496 to 2690	28	39.7	-
	2700 to 3050	1	6.1	-
	4450 to 4900	4	12.6	-
	4900 to 5925	33	39.3	-
	6600 to 8400	33	39.1	-
9900 to 12600	33	44.3	-	
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

■ MAXIMUM RATINGS

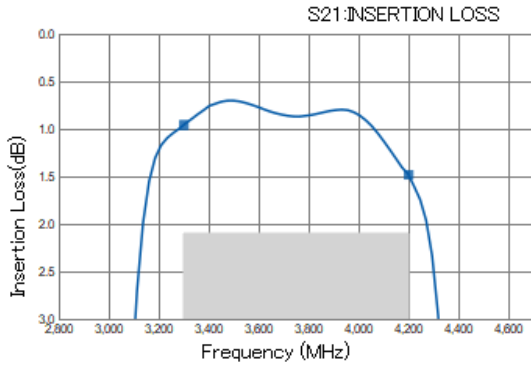
Parameter	TDK Spec		Conditions
	Min.	Max.	
Operating temperature (°C)	-40 to +85 °C		
Storage temperature (°C)	-40 to +85 °C		
Power Handling (W) ^{*1}	-	1	CW
Human Body Model : HBM @Each Port (V)	-1000	1000	100pF / 1500ohm
Machine Model : MM @Each Port (V)	-150	150	200pF / 0ohm
Charged Device Model : CDM @Each Port (V)	-500	500	Relative humidity : 60%RH max

^{*1} : Refer to 3GPP TS 38.101-1 V15.2.0

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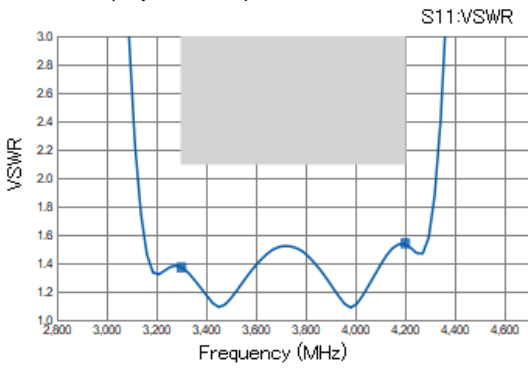
FREQUENCY CHARACTERISTICS

Insertion Loss



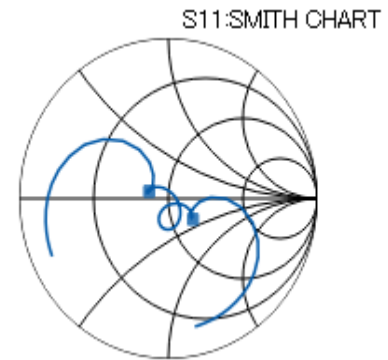
P/N	DEA203750BT-2292A1
Freq	
3300	0.96
4200	1.48

VSWR (Input Port)

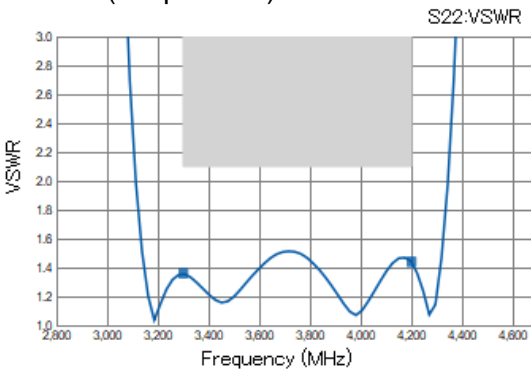


P/N	DEA203750BT-2292A1
Freq	
3300	1.37
4200	1.54

Smith Chart (Input Port)

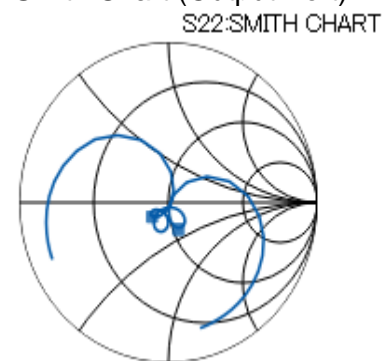


VSWR (Output Port)



P/N	DEA203750BT-2292A1
Freq	
3300	1.36
4200	1.44

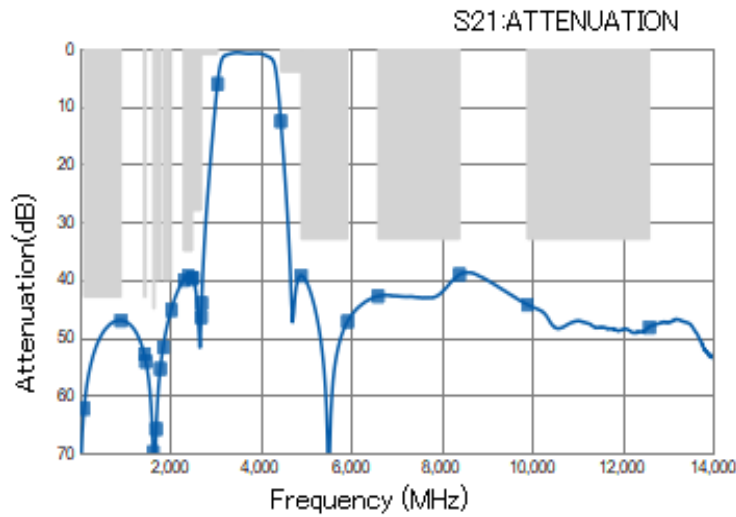
Smith Chart (Output Port)



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■ FREQUENCY CHARACTERISTICS

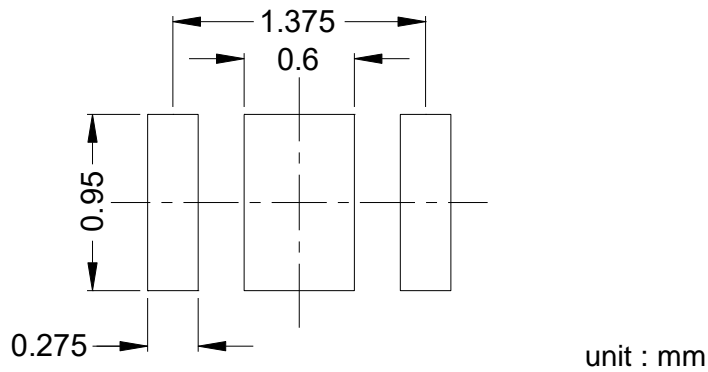
Attenuation



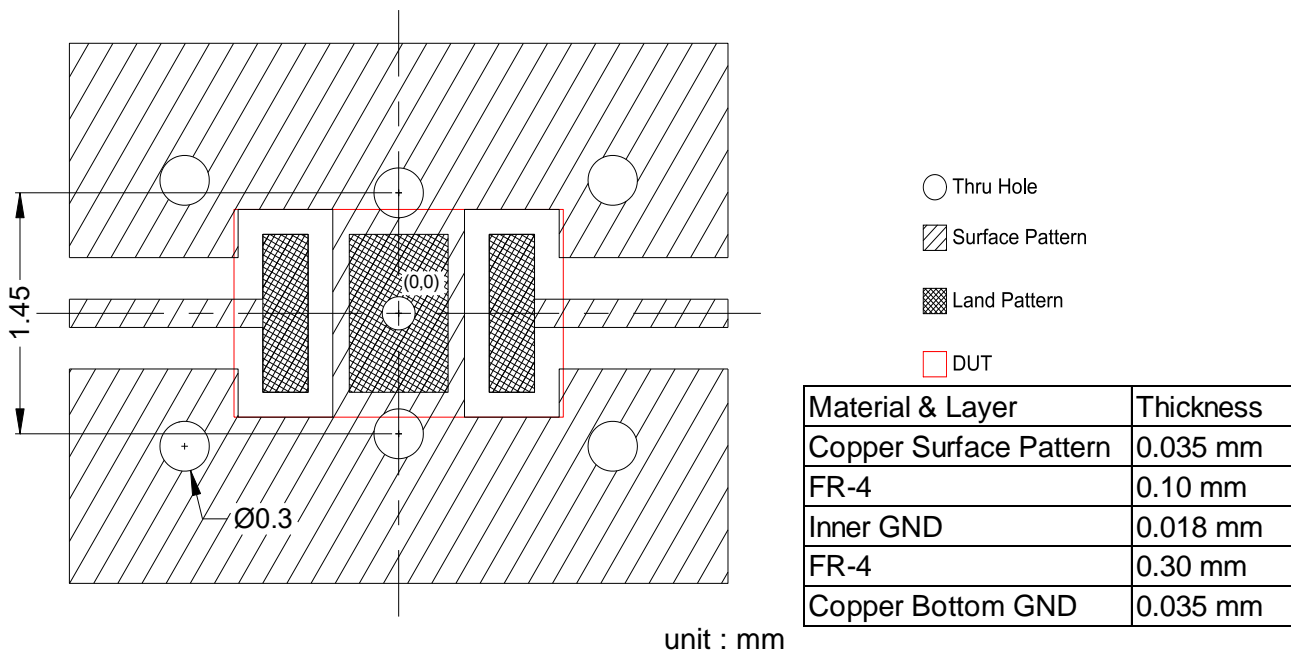
P/N	DEA203750BT- 2292A1		
100	62.34	3050	6.11
915	47.06	4450	12.56
1427	52.80	4900	39.28
1467	54.18	5925	47.25
1626.5	69.30	6600	42.86
1660.5	78.66	8400	39.10
1695	65.88	9900	44.30
1785	55.44	12600	48.23
1850	51.65		
2025	45.27		
2300	40.06		
2400	39.30		
2495	39.73		
2496	39.74		
2690	46.50		
2700	44.07		

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RECOMMENDED LAND PATTERN



EVALUATION BOARD



* Line width should be designed to match 50 ohm characteristic impedance depending on PCB material and thickness.

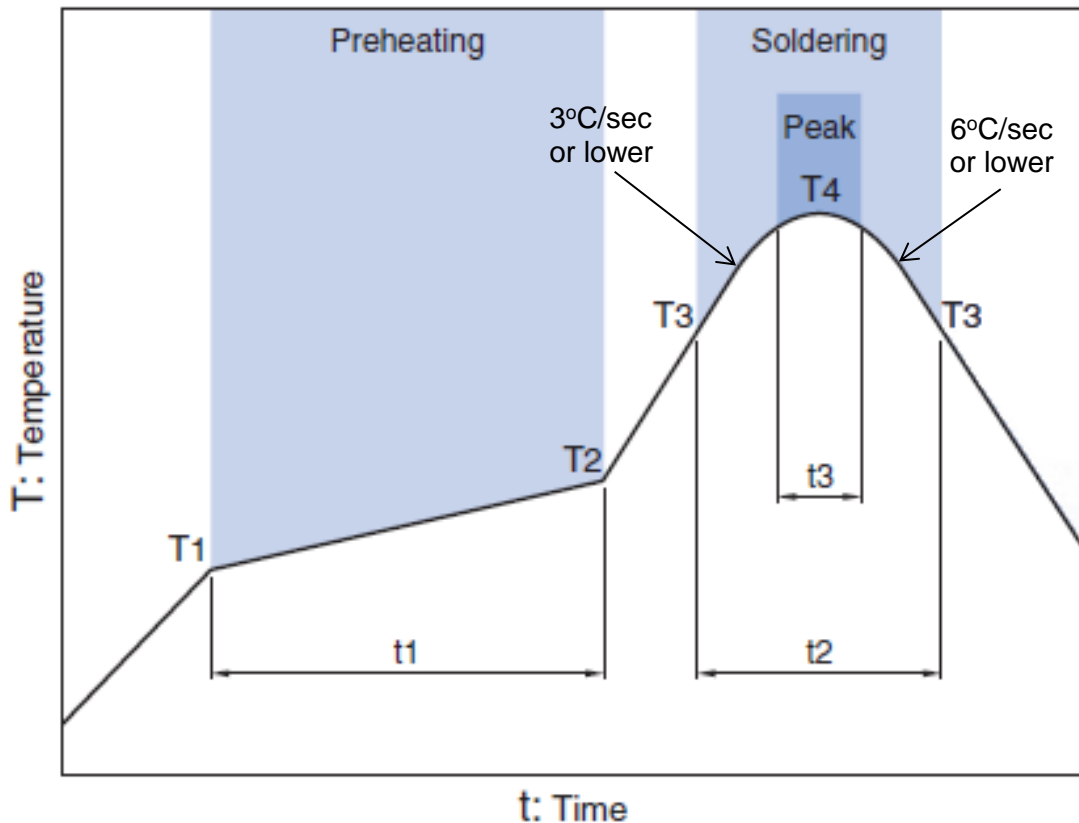
** The position of the through hole which have possibility of influence to the performance are indicated by dimension line.

ENVIRONMENT INFORMATION

RoHS Statement
RoHS Compliance

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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	30 sec Max

* t3 : Time within 5°C of actual peak temperature

The maximum number of reflow is 3.

Note: Lead free solder is recommended.
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

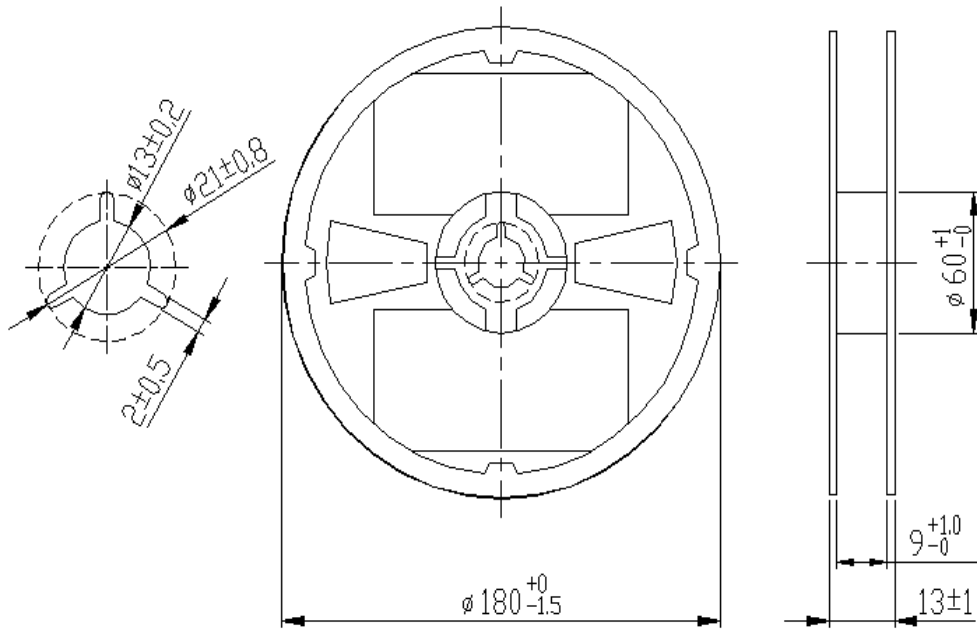
GENERAL TECHNICAL INFORMATION

https://product.tdk.com/en/system/files?file=dam/doc/product/rt/rt/diplexer/general_tech_info/rt_general-technical-info_02_en.pdf

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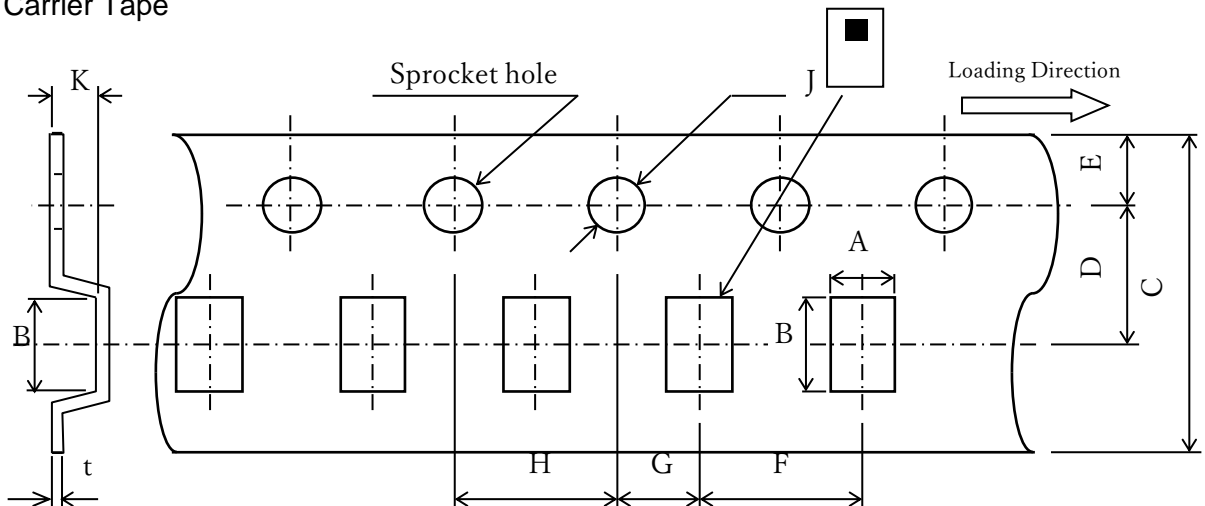
PACKAGING STYLE

Reel Dimensions



Dimensions in mm

Carrier Tape



Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	t
1.45	2.2	8.0	3.5	1.75	4.0	2.0	4.0	1.5	0.8	0.25
+/-0.05	+/-0.05	+0.3/-0.1	+/-0.05	+/-0.1	+/-0.1	+/-0.05	+/-0.1	+0.1/-0	MAX	+/-0.05

STANDARD PACKAGE QUANTITY (pieces/reel)
2,000

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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 | (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.