



Jan. 2022 Ver.2.0
TDK Corporation

Multilayer Band Pass Filter

For 4400-5000MHz

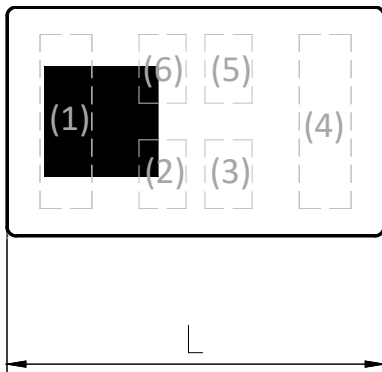
DEA Series 2.0x1.25mm [EIA 0805] TYPE

P/N: **DEA204700BT-2307A1**

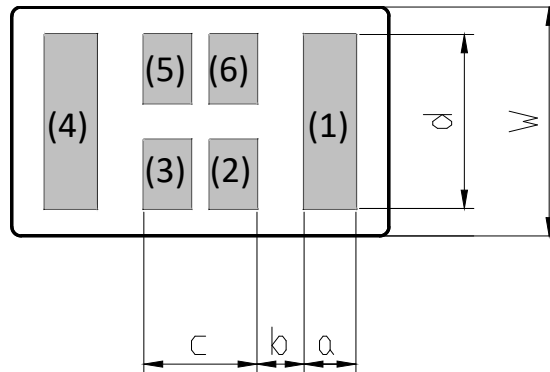
DEA204700BT-2307A1

■ SHAPES AND DIMENSIONS

[Top View]



[Bottom View]



Dimensions (mm)

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

Terminal functions

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

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

■ TERMINATION FINISH

Material
Ag

DEA204700BT-2307A1**ELECTRICAL CHARACTERISTICS**

(Measurement)

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	4400 to 5000	-	0.64	0.85
Insertion Loss (dB) (-40 to +90 °C)	4400 to 5000 to	-	-	1.08
Return Loss (dB) (Input / Output Port)	4400 to 5000 to	10	21.0	-
Attenuation (dB)	500 to 1606	20	22.6	-
	1606 to 2400	23	27.2	-
	2400 to 2500	23	37.2	-
	2500 to 2690	21	27.0	-
	2700 to 3150	5	24.5	-
	3300 to 3800	13	17.0	-
	3800 to 4200	0.7	1.5	-
	8800 to 10000 13200 to 15000	15 15	23.4 18.0	- -
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

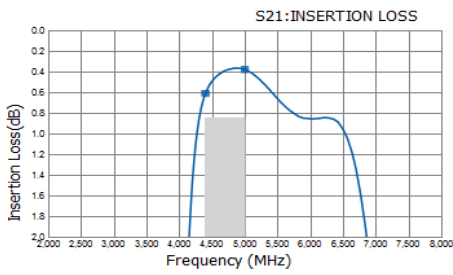
MAXIMUM RATINGS

Parameter		TDK Spec	Conditions
Operating temperature (°C)		-40 to +90 °C	
Storage temperature (°C)		-40 to +90 °C	
Power Handling (W) *1	Frequency (MHz)		
	4400 to 5000	2	CW
Human Body Model : HBM	@Each Port (V)	+/-1000	100pF / 1500ohm
Machine Model : MM	@Each Port (V)	+/-150	200pF / 0ohm
Charged Device Model : CDM	@Each Port (V)	+/-500	Humidity : 60%RH max

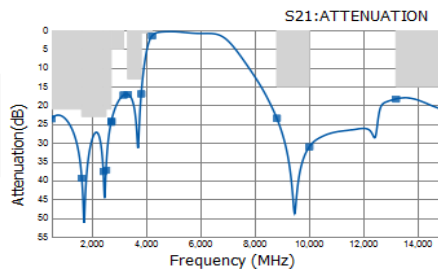
*1 : Refer to 3GPP TS 38.101-1 V15.2.0

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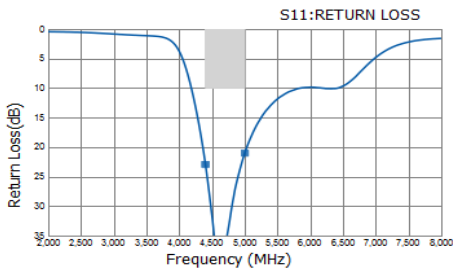
FREQUENCY CHARACTERISTICS



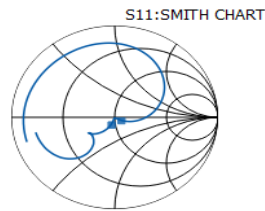
P/N	DEA204700BT-
Freq	2307A1_ver1.0N_Feb282018
4400	0.61
5000	0.38



P/N	DEA204700BT-
Freq	2307A1_ver1.0N_Feb282018
500	23.56
1606	39.35
2400	37.59
2500	37.21
2690	24.48
2700	24.15
3150	17.25
3300	17.04
3800	16.95
4200	1.47
8800	23.42
10000	31.07
13200	18.29
15000	21.21



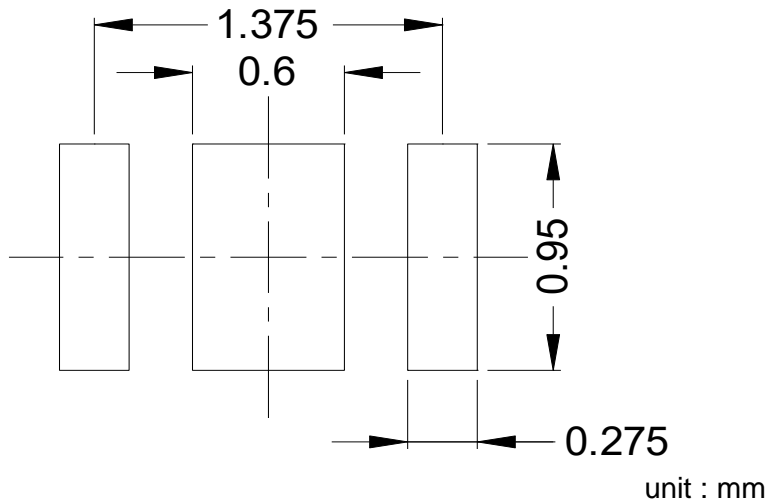
P/N	DEA204700BT-
Freq	2307A1_ver1.0N_Feb282018
4400	22.93
5000	21.00



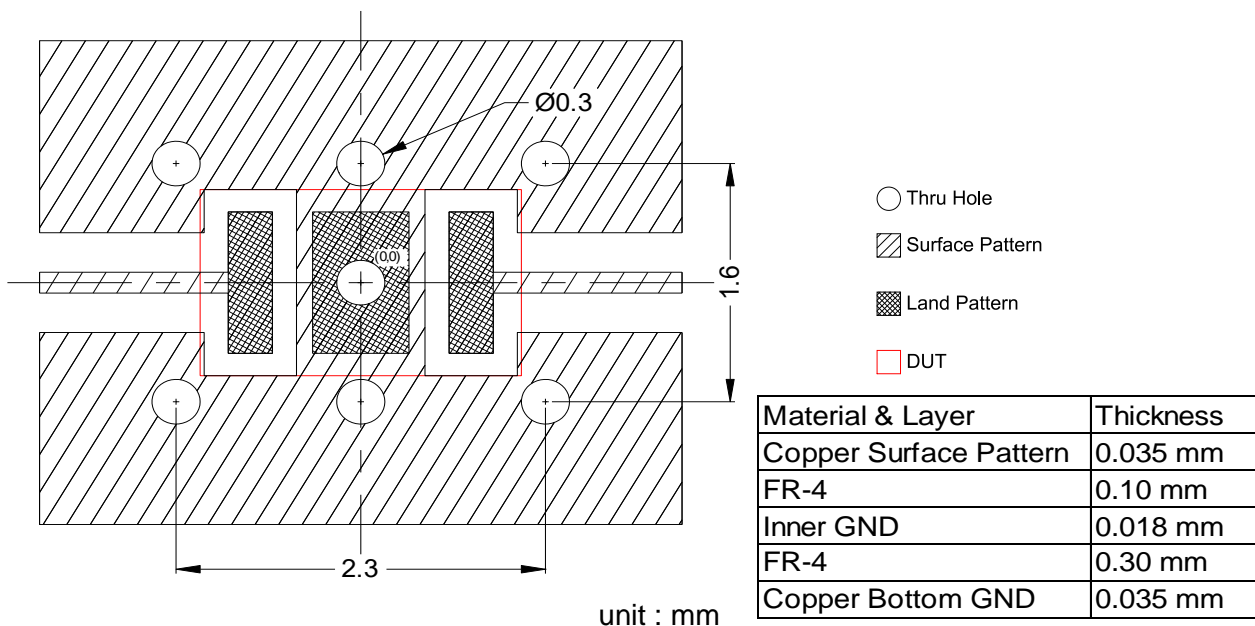
P/N	DEA204700BT-
Freq	2307A1_ver1.0N_Feb282018
4400	0.06 / -0.03
5000	-0.04 / -0.08

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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.

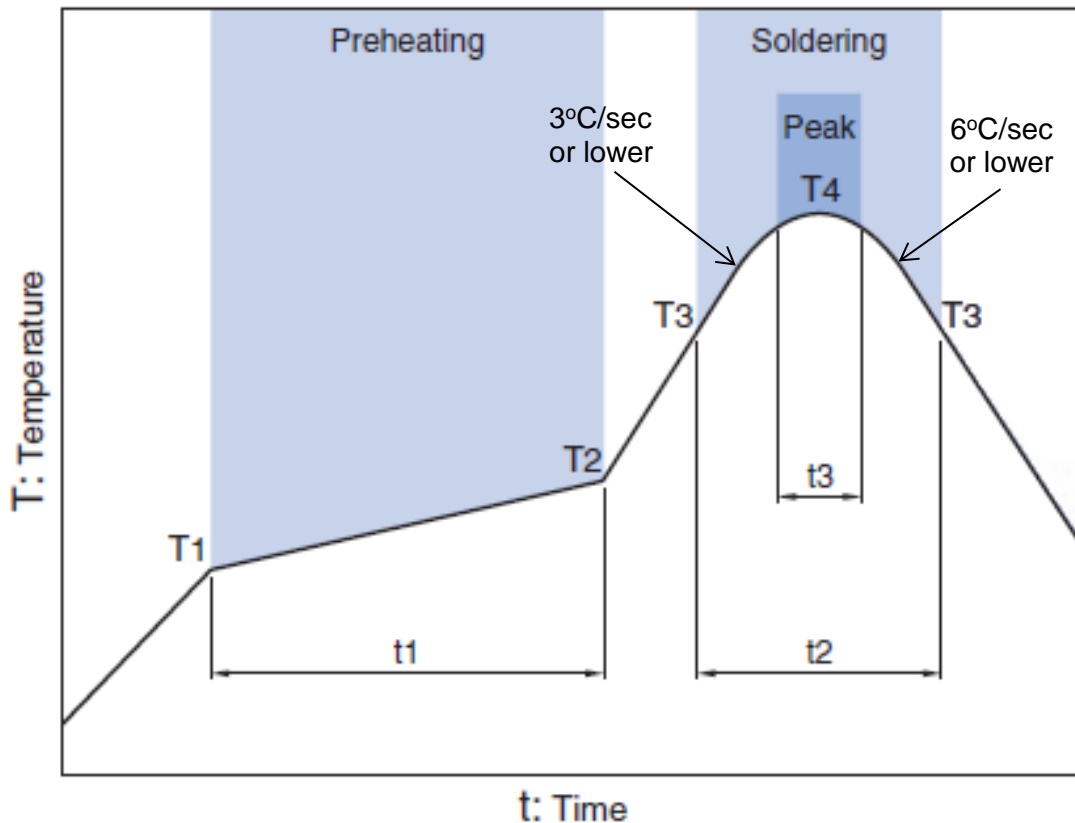
ENVIRONMENT INFORMATION

RoHS Statement
RoHS Compliance

All specifications are subject to change without notice.
Before using these products, be sure to request the delivery specifications.

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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	30 sec Max

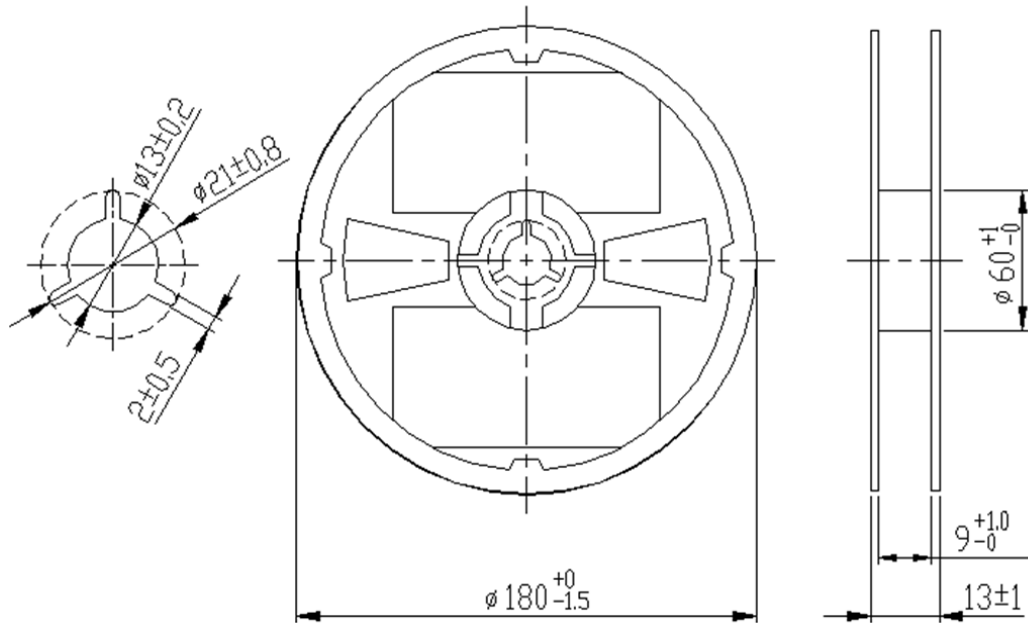
* t3 : Time within 5°C of actual peak temperature

The maximum number of reflow is 3.

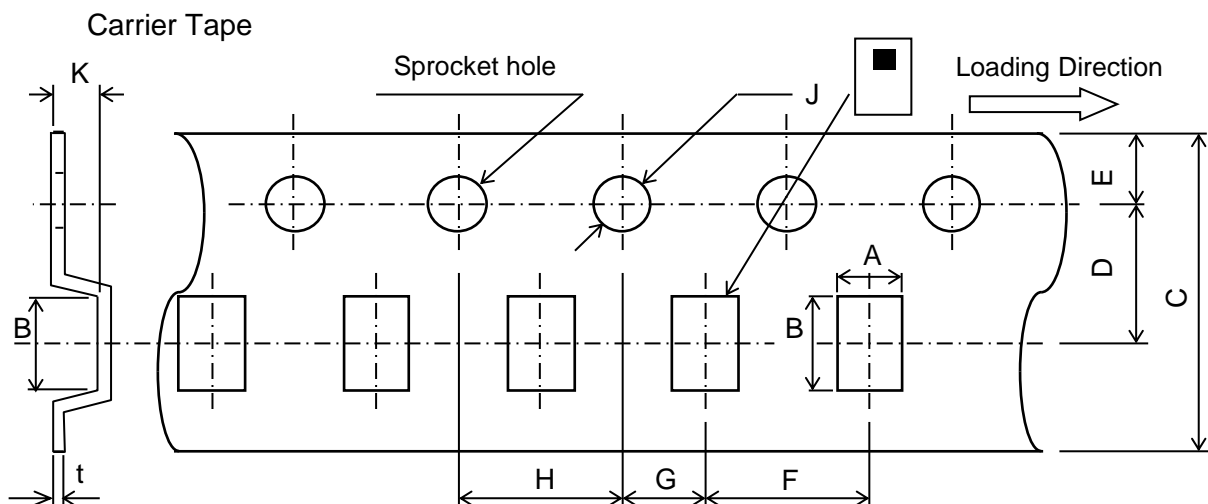
Note: Lead free solder is recommended.
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

DEA204700BT-2307A1**PACKAGING STYLE**

Reel Dimensions



Dimensions in mm



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

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.