



Jun. 2021 Ver.1.1N  
TDK Corporation

## Multilayer Band Pass Filter

For LTE

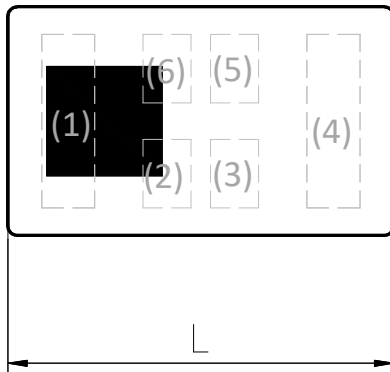
DEA Series 2.0x1.25mm [EIA 0805] TYPE

P/N: **DEA203550BT-2224A4-H**

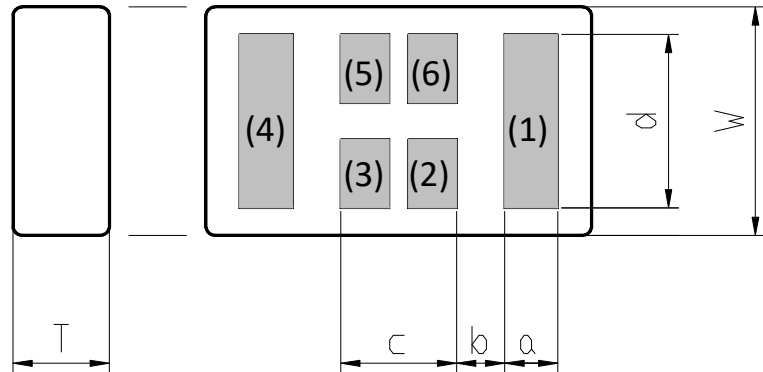
## DEA203550BT-2224A4-H

### ■ 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

**DEA203550BT-2224A4-H****ELECTRICAL CHARACTERISTICS**

( Measurement )

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	3300 to 3400	-	1.04	1.25
	3400 to 3800	-	0.94	1.15
Insertion Loss (dB) (-40 to +90 °C)	3300 to 3400	-	-	1.45
	3400 to 3800	-	-	1.25
Return Loss (dB)	3300 to 3400	10	22.3	-
	3400 to 3800	10	21.9	-
Attenuation (dB) (-40 to +90 °C)	500 to 2170	40	44.1	-
	880 to 960	40	45.9	-
	1710 to 1785	40	44.1	-
	2300 to 2700	32	34.9	-
	2800	7	42.7	-
	2700 to 3150	-	1.5	-
	4100 to 4300	-	4.1	-
	4400	7	17.3	-
	4800 to 4900	25	35.6	-
	4900 to 5150	30	42.0	-
	5150 to 5850	35	41.5	-
	6250 to 6550	35	42.8	-
	6800 to 7200	35	46.4	-
7200 to 9000	35	50.0	-	
10200 to 10800	35	45.0	-	
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

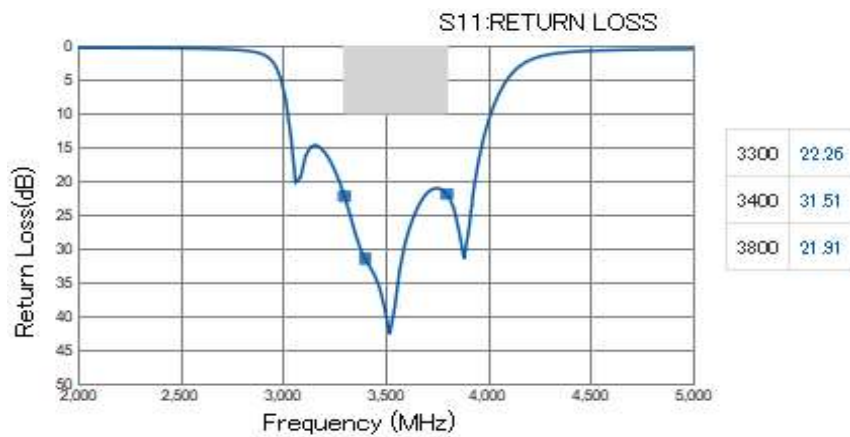
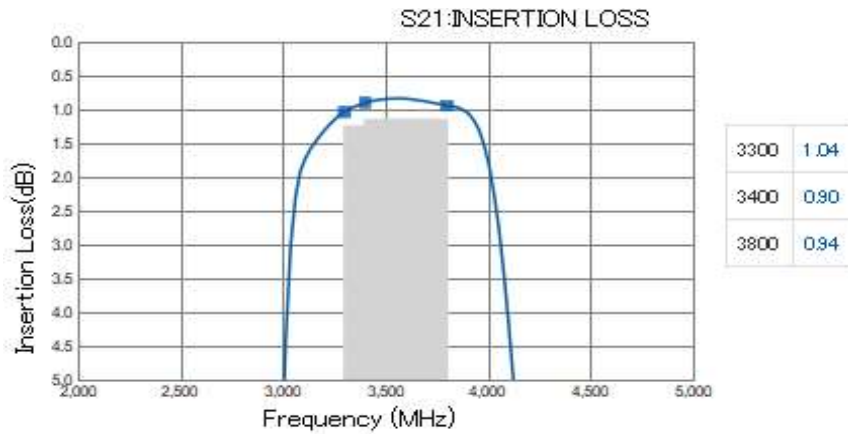
**MAXIMUM RATINGS**

Parameter	TDK Spec		Conditions
	Min.	Max.	
Operating temperature (°C)	-40 to +90 °C		
Storage temperature (°C)	-40 to +90 °C		
Power Handling (W) <sup>*1</sup>	-	2	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

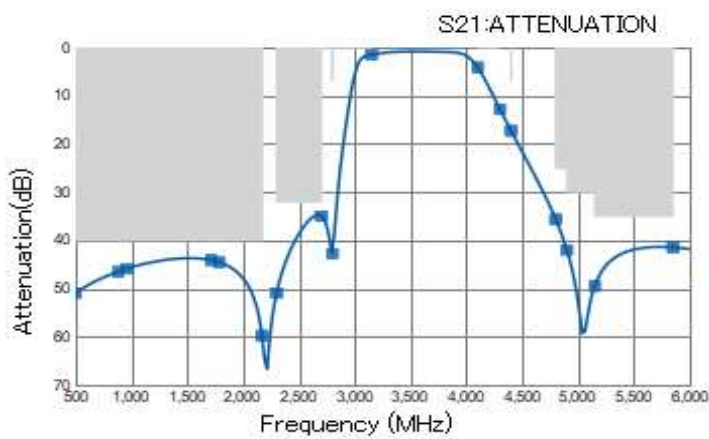
## DEA203550BT-2224A4-H

### ■ FREQUENCY CHARACTERISTICS

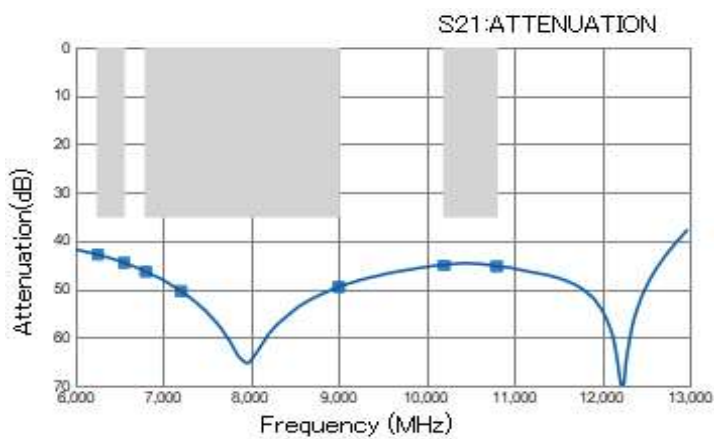


## DEA203550BT-2224A4-H

### ■ FREQUENCY CHARACTERISTICS



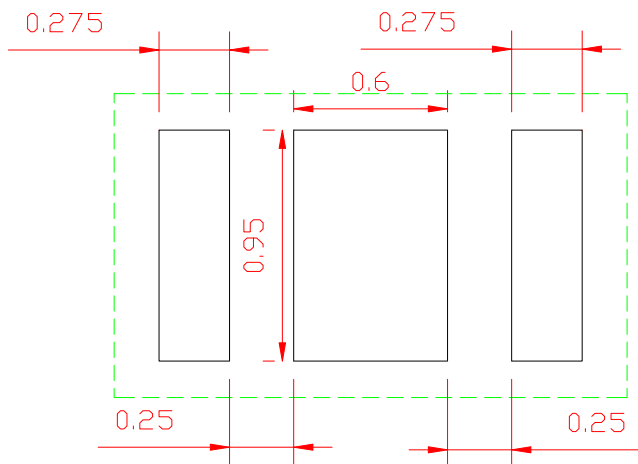
500	50.95
880	46.51
960	45.87
1710	44.11
1785	44.55
2170	59.77
2300	50.87
2700	34.91
2800	42.72
3150	1.50
4100	41.3
4300	12.76
4400	17.28
4800	35.63
4900	42.01
5150	49.48
5850	41.48



6250	42.84
6550	44.55
6800	46.40
7200	50.43
9000	49.55
10200	45.02
10800	45.29

## DEA203550BT-2224A4-H

### ■ RECOMMENDED LAND PATTERN



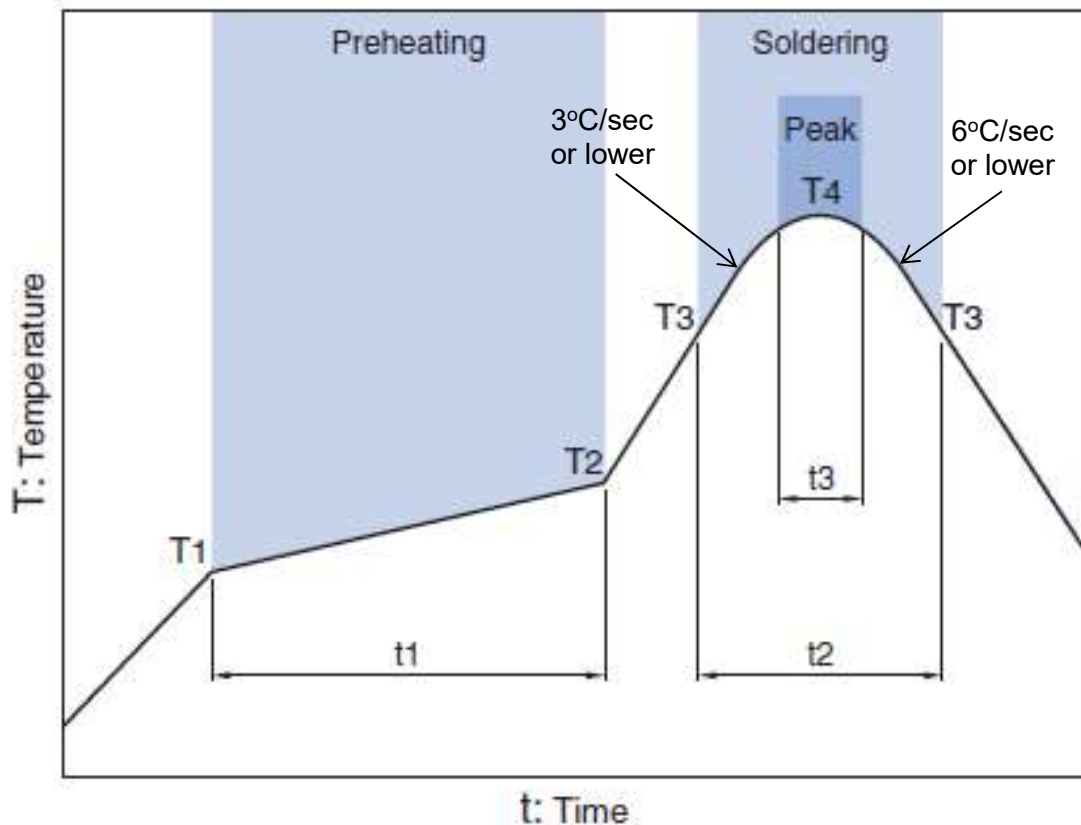
Unit : mm

### ■ ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

## DEA203550BT-2224A4-H

### 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.

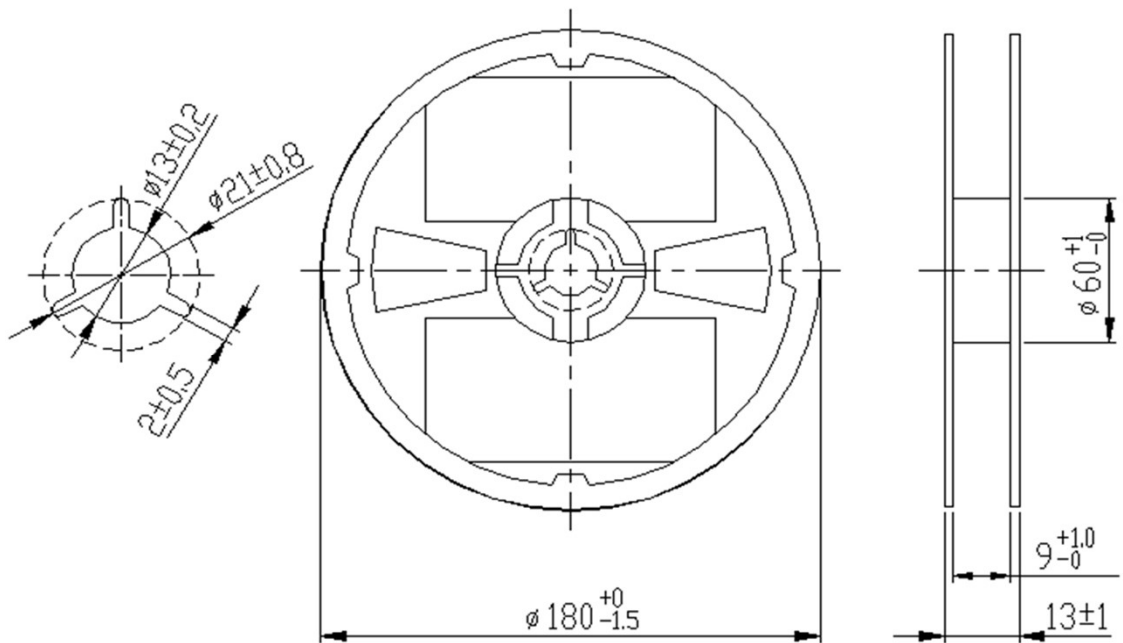
Note: Lead free solder is recommended.  
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

### GENERAL TECHNICAL INFORMATION

[https://product.tdk.com/en/system/files?file=dam/doc/product/rf/rf/diplexer/general\\_tech\\_info/rf\\_general-technical-info\\_02\\_en.pdf](https://product.tdk.com/en/system/files?file=dam/doc/product/rf/rf/diplexer/general_tech_info/rf_general-technical-info_02_en.pdf)

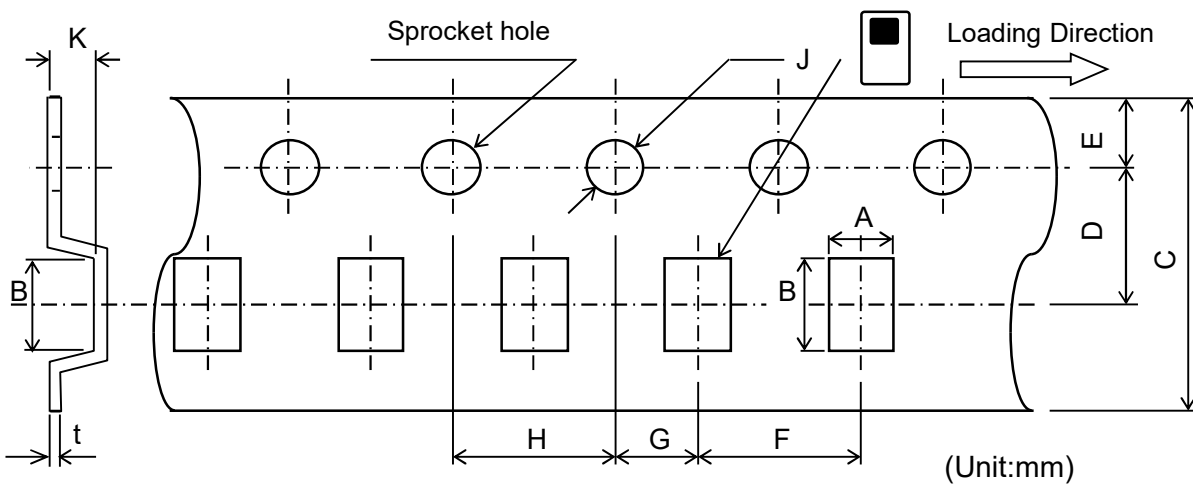
**DEA203550BT-2224A4-H****PACKAGING STYLE**

## Reel Dimensions



Dimensions in mm

## Carrier Tape



(Unit: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.

 <b>REMINDERS</b>
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The products listed on this specification sheet 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 specification sheet.

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.