



Feb. 2019 Ver. 1.1  
TDK Corporation

## Multilayer Band Pass Filter

For 1880-2025MHz

DEA Series 1.6x0.8mm [EIA 0603] TYPE

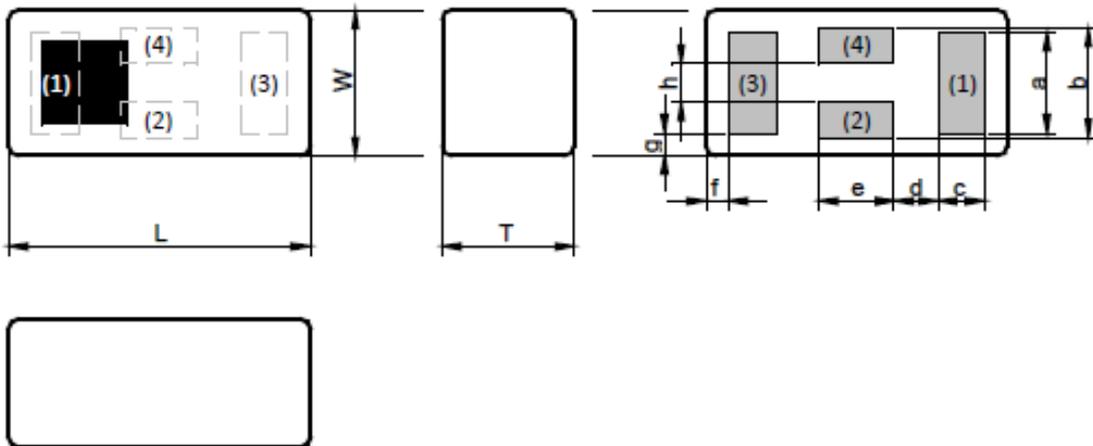
P/N: **DEA161953BT-2303B1-H**

**PRELIMINARY**

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## DEA161953BT-2303B1-H

### ■ SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d	e	f	g	h
1.60	0.80	0.80	0.55	0.60	0.25	0.23	0.40	0.12	0.125	0.21
+/-0.10	+/-0.10	Max	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10

Terminal functions

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

**Note:**

These samples are marked with trial sample identification.

In mass production, this sample marking will be changed to show in the TDK full specification.

**DC Cut**

No. There is NOT a DC Cut between the IN & OUT & GND.

### ■ TERMINATION FINISH

Material
Ag

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TDK Corporation**DEA161953BT-2303B1-H****■ ELECTRICAL CHARACTERISTICS**

( Measurement )

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	1805 to 1880	-	2.10	-
	1880 to 2025	-	1.34	1.80
Insertion Loss (dB) ( -40 to +85 °C )	1880 to 2025	-		2.20
VSWR ( Input Port ) ( Output Port )	1880 to 2025	-	1.37	2.0
	1880 to 2025	-	1.36	2.0
Attenuation (dB)	1545 to 1610	20	25.4	-
	2400 to 2500	18	31.5	-
	5150 to 5850	25	40.4	-
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	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

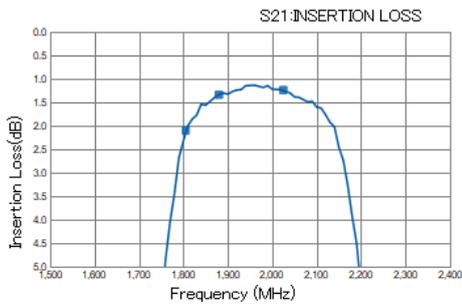
Ambient temperature : +25+/-5°C

**PRELIMINARY**

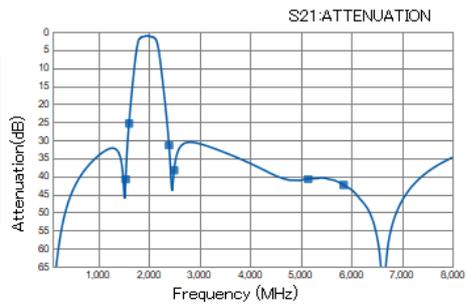
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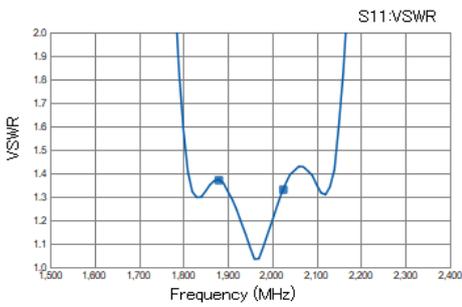
## FREQUENCY CHARACTERISTICS



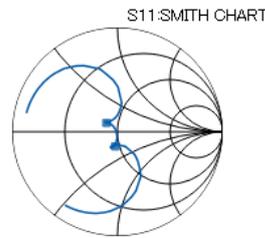
P/N	DEA161953BT-2303B1-H_Ver.1_ON_20180926
Freq	
1805	2.10
1880	1.34
2025	1.24



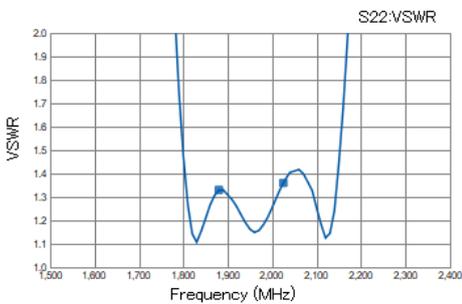
P/N	DEA161953BT-2303B1-H_Ver.1_ON_20180926
Freq	
1546	40.79
1610	25.38
2400	31.46
2500	38.33
5150	40.75
5850	42.39



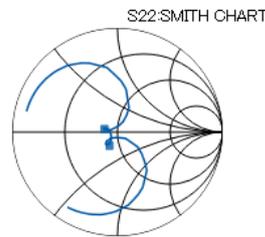
P/N	DEA161953BT-2303B1-H_Ver.1_ON_20180926
Freq	
1880	1.37
2025	1.33



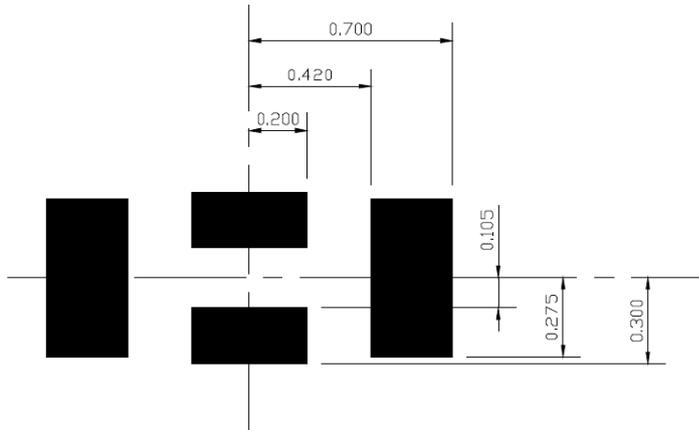
P/N	DEA161953BT-2303B1-H_Ver.1_ON_20180926
Freq	
1880	-0.12 / 0.1
2025	-0.03 / -0.14



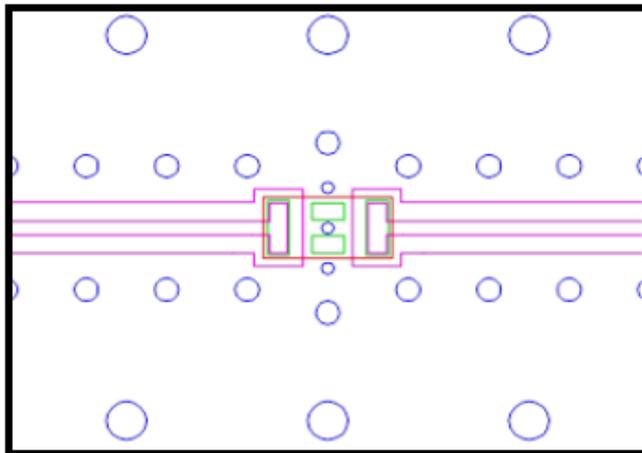
P/N	DEA161953BT-2303B1-H_Ver.1_ON_20180926
Freq	
1880	1.33
2025	1.35



P/N	DEA161953BT-2303B1-H_Ver.1_ON_20180926
Freq	
1880	-0.14 / 0.04
2025	-0.09 / -0.13

**PRELIMINARY**Feb. 2019 Ver. 1.1  
TDK Corporation**DEA161953BT-2303B1-H****RECOMMENDED LAND PATTERN**

Unit : [mm]

**EVALUATION BOARD**

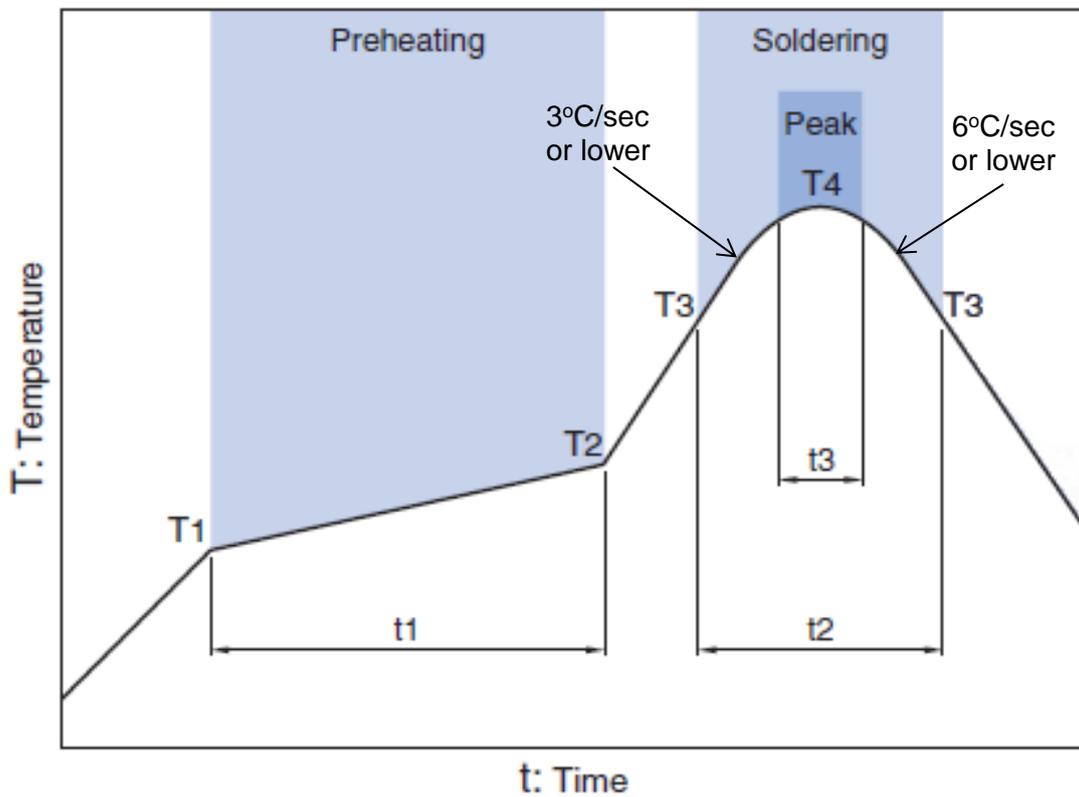
- Thru hole
- Resist
- Surface Pattern
- DUT

Material, Layer	Thickness
Top Resist	Resist
Copper Surface Pattern	0.035mm
FR-4	0.10mm
Copper Inner GND	0.018mm
FR-4	0.30mm
Copper Bottom GND	0.035mm

**ENVIRONMENT INFORMATION**

RoHS Statement  
RoHS Compliance

## 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

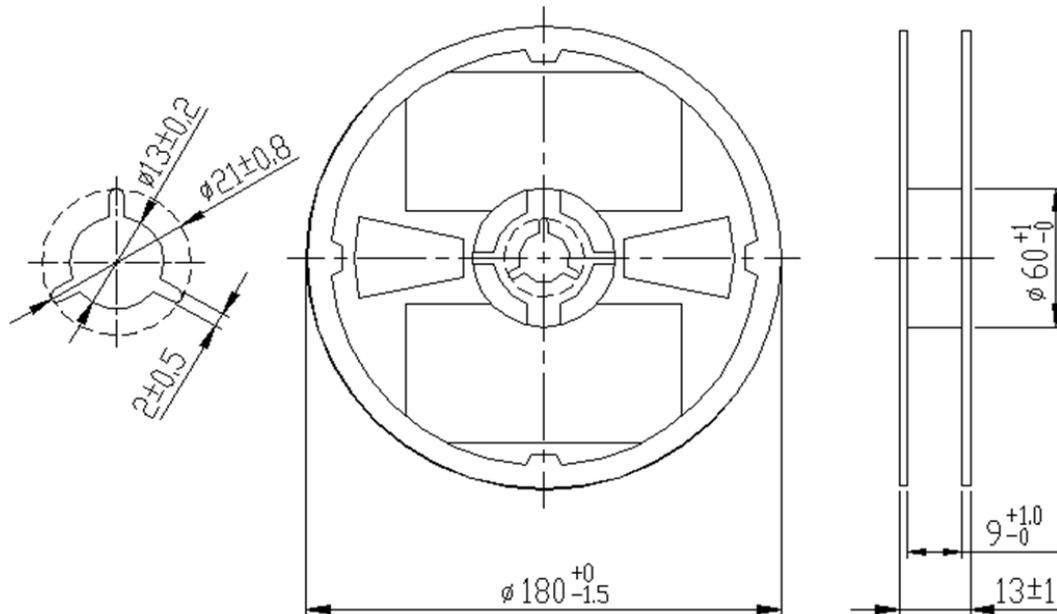
\* t3 : Time within 5°C of actual peak temperature

The maximum number of reflow is 3.

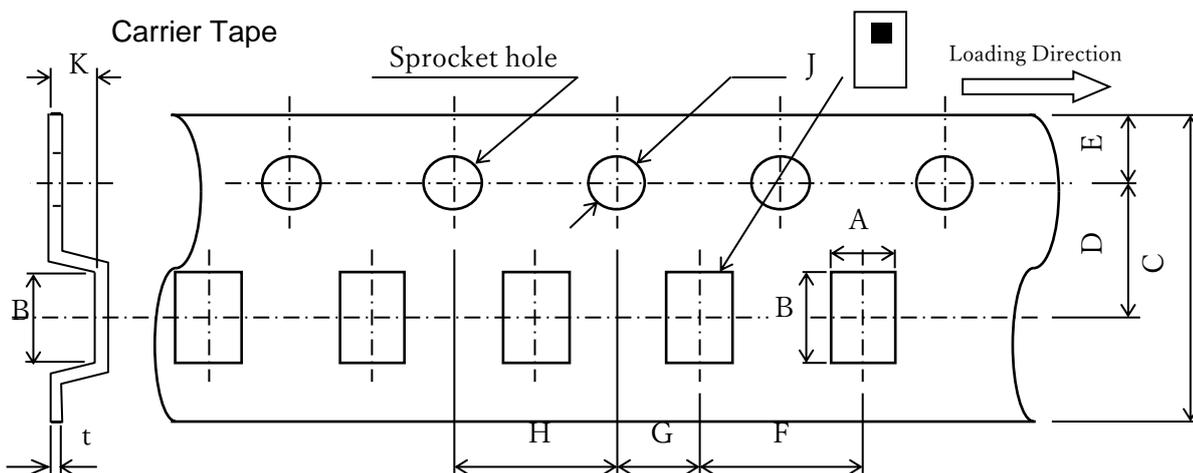
Note: Lead free solder is recommended.  
 Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

**PRELIMINARY**Feb. 2019 Ver. 1.1  
TDK Corporation**DEA161953BT-2303B1-H****PACKAGING STYLE**

Reel Dimensions



Dimensions in mm



Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	t
0.97	1.8	8.0	3.5	1.75	4.0	2.0	4.0	1.5	1	0.25
+/-0.05	+/-0.05	+/-0.2	+/-0.05	+/-0.1	+/-0.1	+/-0.05	+/-0.1	+0.1/-0	MAX	+/-0.05

STANDARD PACKAGE QUANTITY ( pieces/reel )
4,000

All specifications are subject to change without notice.

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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 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.