



Jan. 2022 Ver.4.0  
TDK Corporation

## Multilayer Low Pass Filter

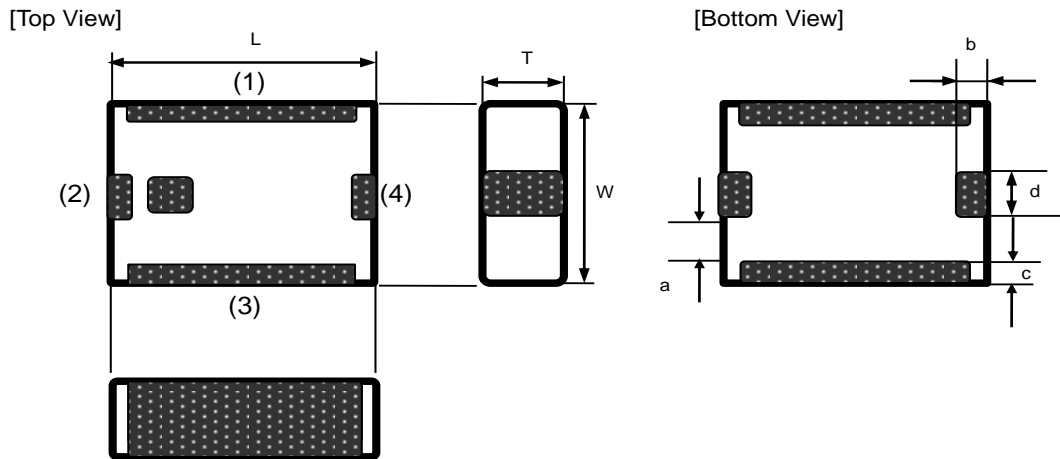
For 5-1002MHz

DEA Series 2.5x2.0mm [EIA 1008] TYPE

P/N: **DEA251002LT-5048A1**

## DEA251002LT-5048A1

### ■ SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d
2.50	2.00	1.00	0.30	0.25	0.25	0.50
+/-0.20	+/-0.20	Max	Min	+/-0.15	+/-0.15	+/-0.20

Terminal functions

(1)	GND
(2)	Input Port

(3)	GND
(4)	Output Port

### ■ TERMINATION FINISH

Material
Sn plate

## DEA251002LT-5048A1

### ■ ELECTRICAL CHARACTERISTICS

( Measurement )

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	5 to 1002	-	1.77	2.40
Insertion Loss (dB) ( -40 to +105 °C )	5 to 1002	-	-	2.63
VSWR	5 to 1002	-	1.74	-
Attenuation (dB)	1125 to 1675	28	33	-
Characteristic Impedance (ohm)		75 (Nominal)		

 $T_a = +25 \pm 5^\circ\text{C}$ 

Single ended port characteristic impedance : 75 Ohm

### ■ MAXIMUM RATINGS

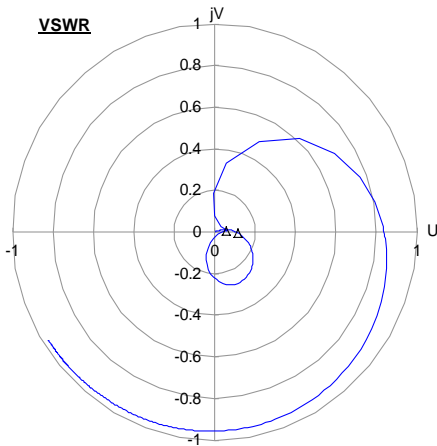
Parameter	TDK Spec	Conditions
Operating temperature (°C)	-40 to +105 °C	
Storage temperature (°C)	-40 to +105 °C	
Power Handling (W) *1	Frequency (MHz)	
	5 to 1002	1 CW
Human Body Model : HBM @Each Port (V)	+/-1000	100pF / 1500ohm
Machine Model : MM @Each Port (V)	+/-150	200pF / 0ohm
Charged Device Model : CDM @Each Port (V)	+/-500	Humidity : 60%RH max

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

# DEA251002LT-5048A1

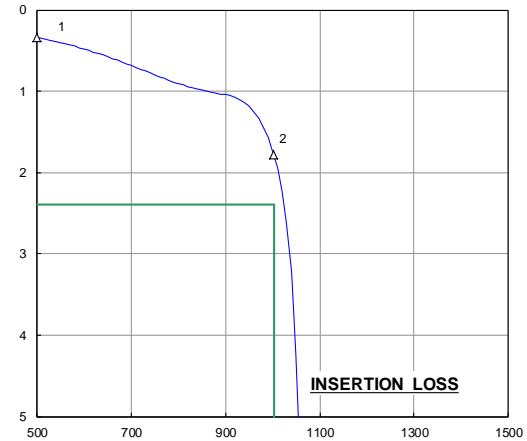
## FREQUENCY CHARACTERISTICS

S11 POLA REF 1.0 U SCALE 1.0U FS



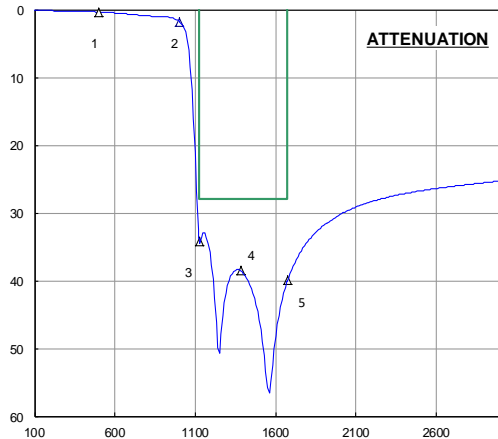
S21 Log MAG REF 0.0dB SCALE 1dB/

MARKER 1	500 MHz	1.26
MARKER 2	1002 MHz	1.12
MARKER 3	MHz	
MARKER 4	MHz	
MARKER 5	MHz	
MARKER 6	MHz	



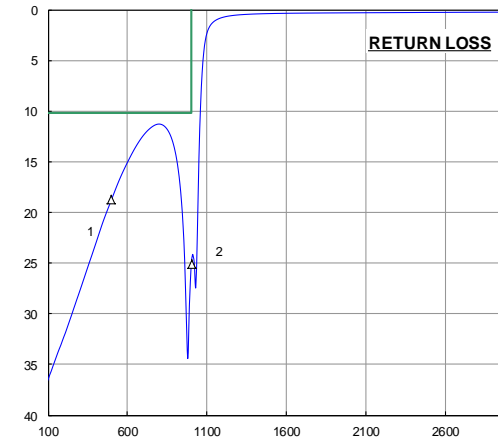
MARKER 1	500 MHz	0.34 dB
MARKER 2	1002 MHz	1.77 dB
MARKER 3	MHz	dB
MARKER 4	MHz	dB
MARKER 5	MHz	dB
MARKER 6	MHz	dB

S21 Log MAG REF 0.0dB SCALE 5.0dB/



MARKER 1	500 MHz	0.3 dB
MARKER 2	1002 MHz	1.8 dB
MARKER 3	1125 MHz	34.2 dB
MARKER 4	1385 MHz	38.5 dB
MARKER 5	1675 MHz	39.9 dB
MARKER 6	MHz	dB

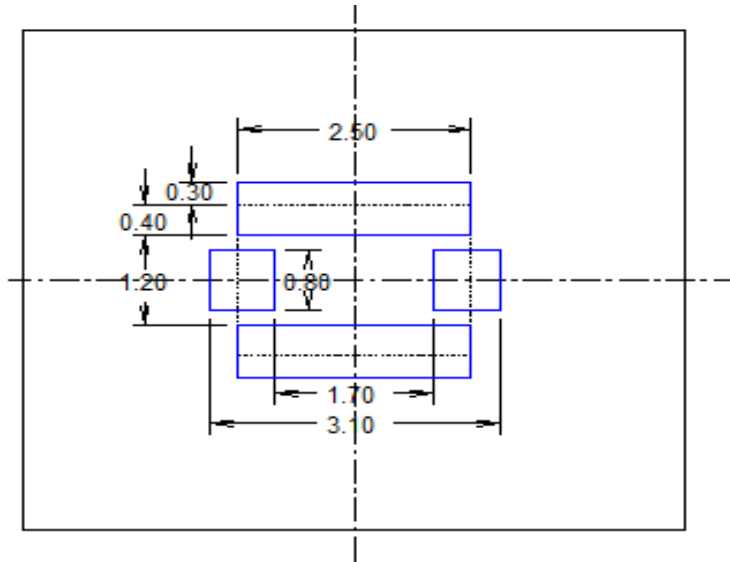
S11 Log MAG REF -10.0dB SCALE 5.0dB/



MARKER 1	500 MHz	18.7 dB
MARKER 2	1002 MHz	25.1 dB
MARKER 3	MHz	dB
MARKER 4	MHz	dB
MARKER 5	MHz	dB
MARKER 6	MHz	dB

## DEA251002LT-5048A1

### ■ RECOMMENDED LAND PATTERN



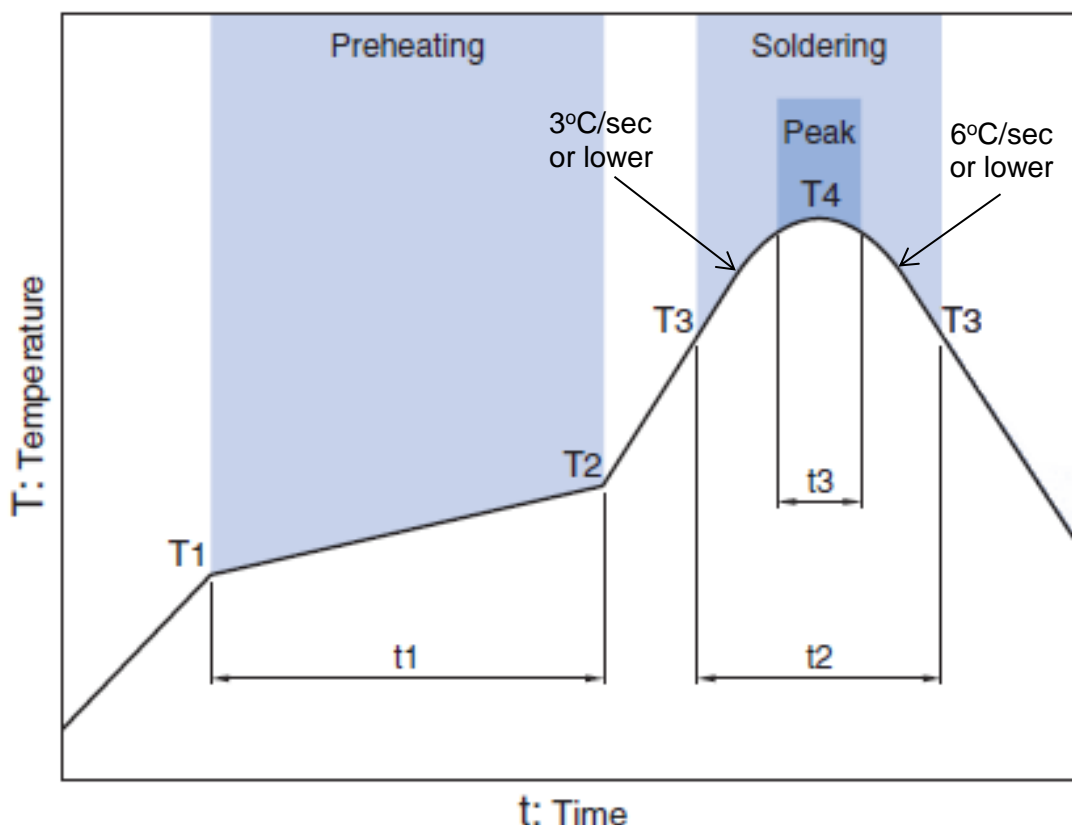
Unit : [ mm ]

### ■ ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

## DEA251002LT-5048A1

### RECOMMENDED REFLOW PROFILE



Preheating			Soldering			
			Critical zone (T3 to T4)		Peak	
Temp.	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.

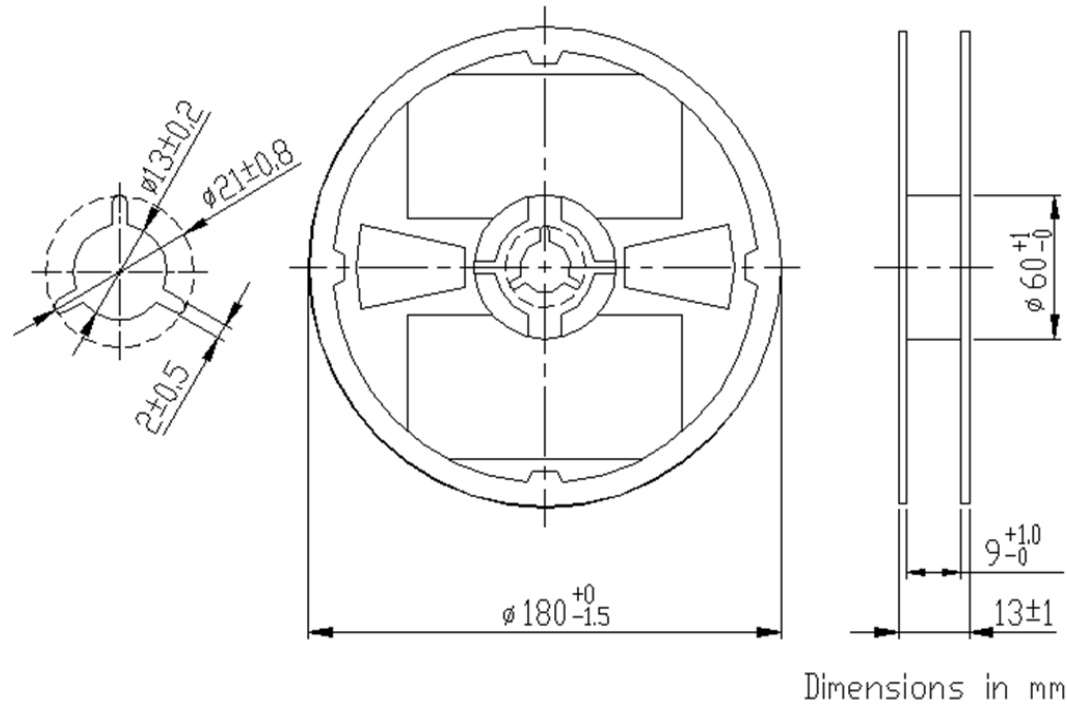
Note: Lead free solder is recommended.  
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

### GENERAL TECHNICAL INFORMATION

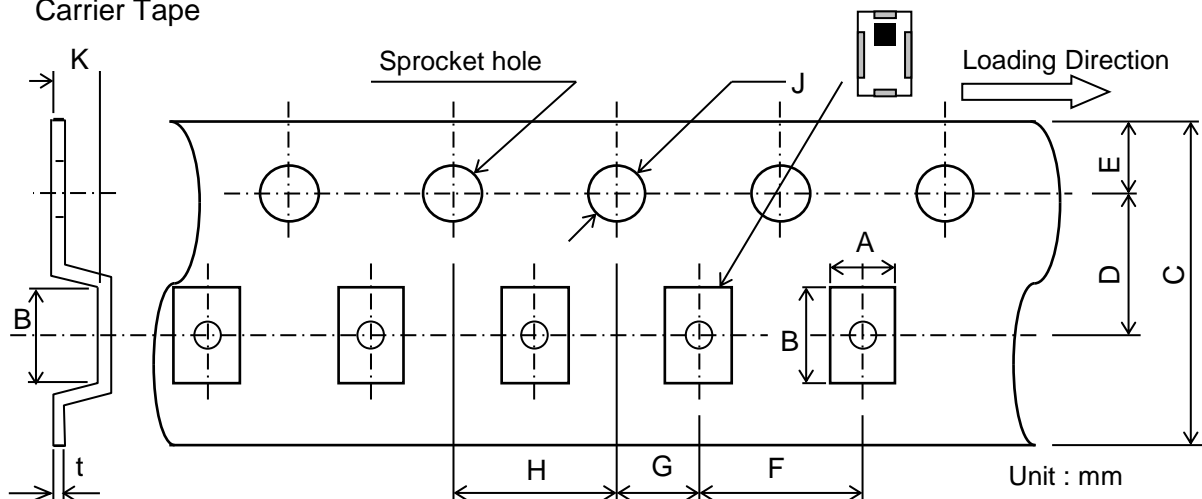
[https://product.tdk.com/en/system/files?file=dam/doc/product/rf/rf/filter/general\\_tech\\_info/rf\\_general-technical-info\\_02\\_en.pdf](https://product.tdk.com/en/system/files?file=dam/doc/product/rf/rf/filter/general_tech_info/rf_general-technical-info_02_en.pdf)

**DEA251002LT-5048A1****PACKAGING STYLE**

## Reel Dimensions



## Carrier Tape



## Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	t
2.4	2.9	8.0	3.5	1.75	4.0	2.0	4.0	1.5	1.25	0.25
+/-0.1	+/-0.1	+/-0.2	+/-0.05	+/-0.1	+/-0.1	+/-0.05	+/-0.1	+0.1/-0	MAX	+/-0.05

**STANDARD PACKAGE QUANTITY  
( pieces/reel )**

2,000

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 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.