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TDK Corporation

Multilayer High Pass Filter

5GHz W-LAN

DEA Series 1.0x0.5mm [EIA 0402] TYPE

P/N: **DEA105150HT-8044A1**

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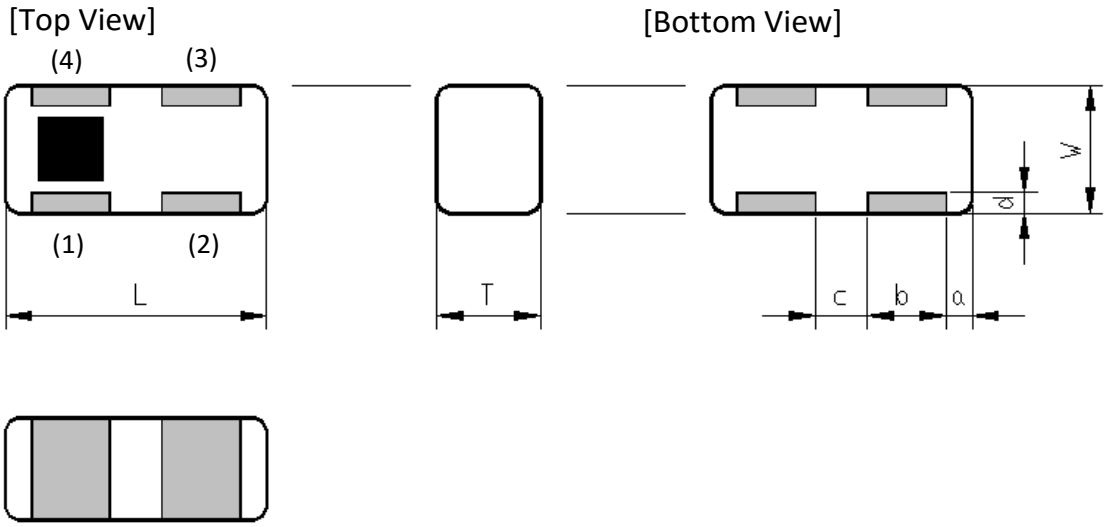
SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d
1.00 +/-0.05	0.50 +/-0.05	0.42 Max	0.10 +/-0.10	0.30 +/-0.10	0.20 +/-0.10	0.12 +/-0.07

Terminal functions

(1)	In/Out Port
(2)	GND

(3)	GND
(4)	Out/In Port

TEMPERATURE RANGE

Operating temperature	Storage temperature
–40 to +85 °C	–40 to +85 °C

TERMINATION FINISH

Material
Sn plate

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■ ELECTRICAL CHARACTERISTICS

(Measurement)

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	5150 to 5250	-	3.93	6.00
	5250 to 5350	-	2.05	3.00
	5500 to 5950	-	0.82	1.10
Return Loss (dB)	5150 to 5250	5	10	-
	5250 to 5350	10	18	-
	5500 to 5950	10	22	-
Attenuation (dB)	4800 to 4960	10	15	-
Power Handling (W)	5150 to 5950	-		0.8
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

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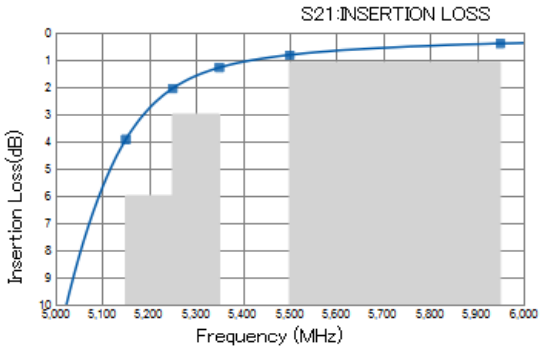
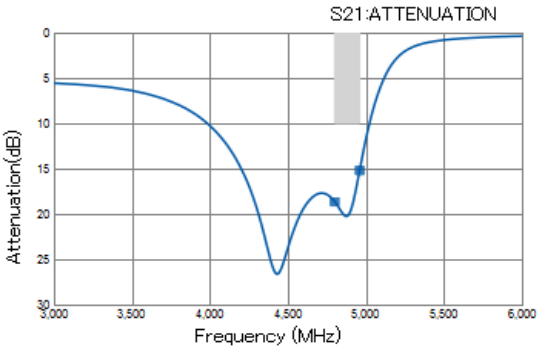
■ FREQUENCY CHARACTERISTICS

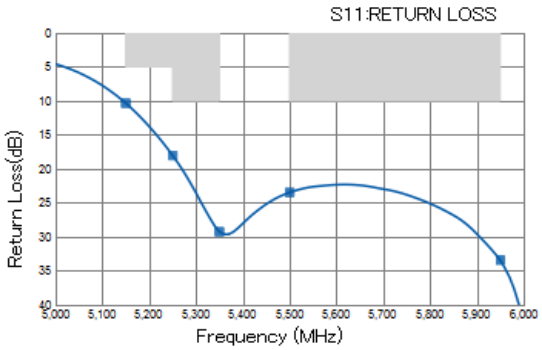
(Measurement)



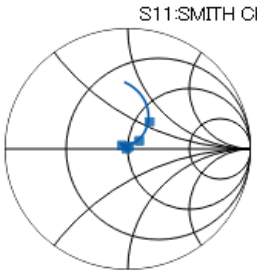
MHz	1
5150	3.93
5250	2.05
5350	1.28
5500	0.82
5950	0.40



MHz	1
4800	18.64
4950	15.21



MHz	1
5150	10.33
5250	18.02
5350	29.24
5500	23.46
5950	33.40



–	1
MHz	Re / Im
5150	0.18 / 0.25
5250	0.09 / 0.08
5350	0 / 0.03
5500	−0.06 / 0.04
5950	−0.02 / 0.01

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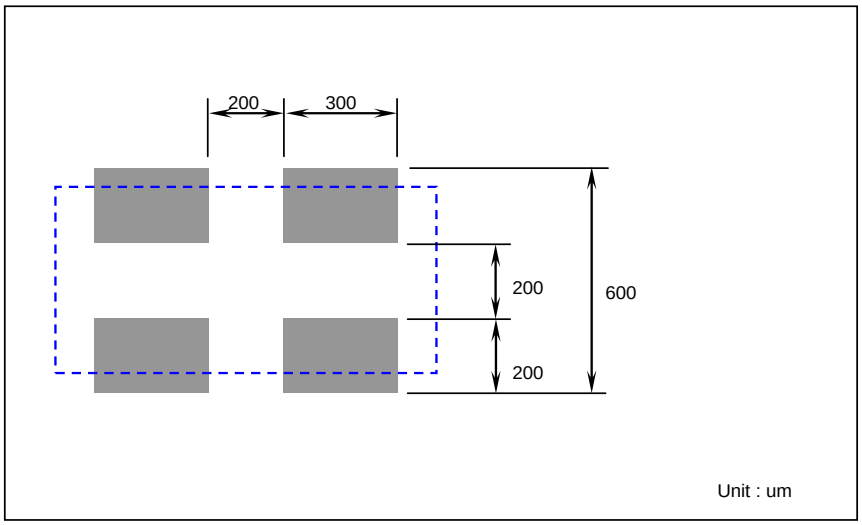
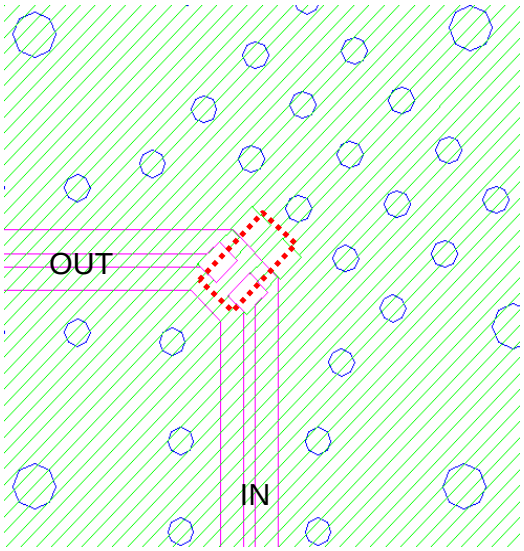
RECOMMENDED LAND PATTERN



EVALUATION BOARD



- Metal (Cu)
- Thru-Hole
- Land
- DUT

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

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

ENVIROMENT INFORMATION

RoHS Statement
RoHS Compliance

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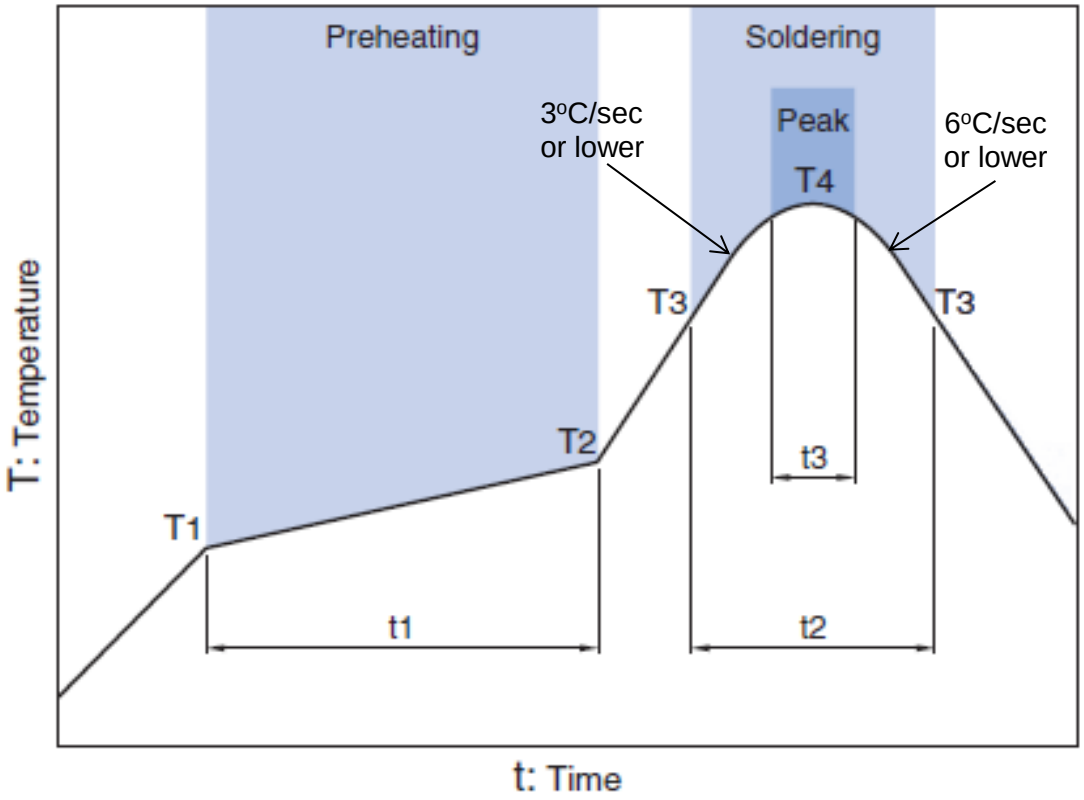
RECOMMENDED REFLOW PROFILE



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)

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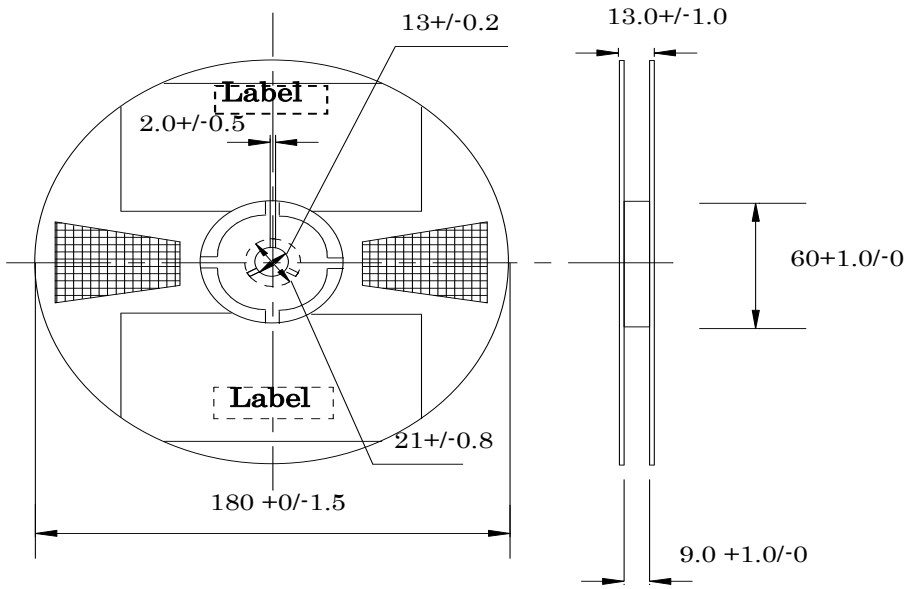
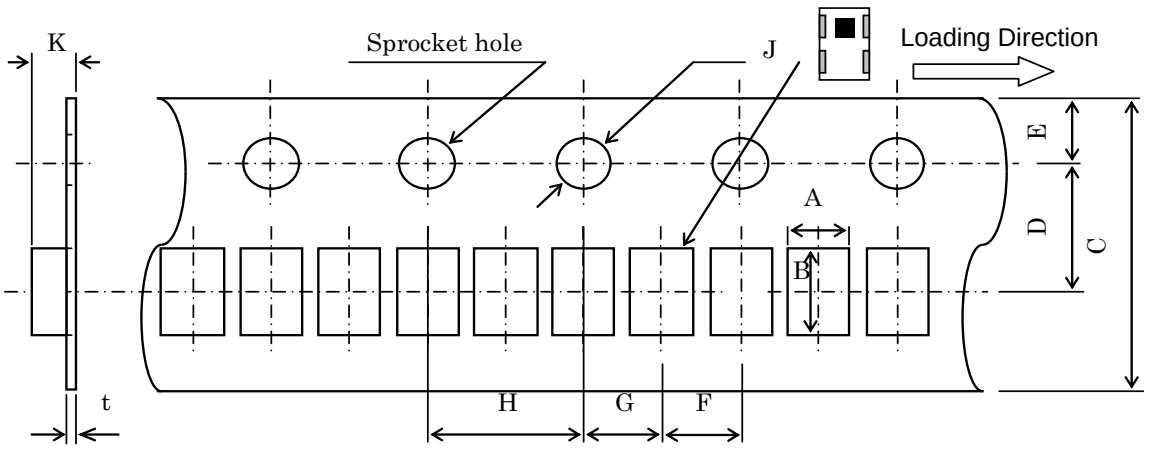
■ PACKAGING STYLE

Reel Dimensions



Unit : mm

Carrier Tape



Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	t
0.62 +/-0.05	1.12 +/-0.05	8.0 +/-0.2	3.5 +/-0.05	1.75 +/-0.1	2.0 +/-0.05	2.0 +/-0.05	4.0 +/-0.05	1.5 +0.1/-0	0.48 MAX	0.25 +/-0.05

STANDARD PACKAGE QUANTITY (pieces/reel)
10,000

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 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.