



Jul. 2019 Ver.3.2  
TDK Corporation

## Multilayer High Pass Filter

For LTE

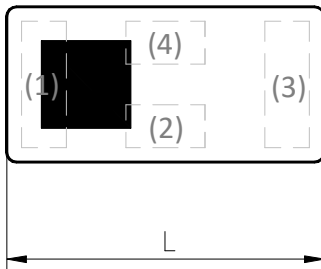
DEA Series 1.6x0.8mm [EIA 0603] TYPE

P/N: **DEA162300HT-8045A1**

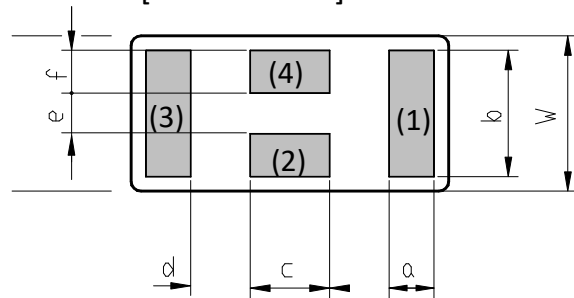
## DEA162300HT-8045A1

### SHAPES AND DIMENSIONS

[Top View]



[Bottom View]



Dimensions (mm)

L	W	T	a	b	c	d	e	f
1.60	0.80	0.65	0.225	0.65	0.40	0.30	0.21	0.22
+/-0.10	+/-0.10	Max	+/-0.05	+/-0.05	+/-0.05	+/-0.05	+/-0.05	+/-0.05

Terminal functions

(1)	Input Port
(2)	GND

(3)	Output Port
(4)	GND

### TERMINATION FINISH

Material
Ag

## DEA162300HT-8045A1

### ■ ELECTRICAL CHARACTERISTICS

( Measurement )

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	2300 to 2400	-	0.92	1.10
	2496 to 2690	-	0.45	0.60
	2500 to 2690	-	0.44	0.60
Insertion Loss (dB) (-40 to +85 °C)	2300 to 2400	-		1.30
	2496 to 2690	-		0.80
	2500 to 2690	-		0.80
VSWR	2300 to 2400	-	1.31	2.00
	2496 to 2690	-	1.22	2.00
	2500 to 2690	-	1.22	2.00
Attenuation (dB)	1710 to 1995	25	27	-
	1995 to 2010	25	30	-
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

### ■ MAXIMUM RATINGS

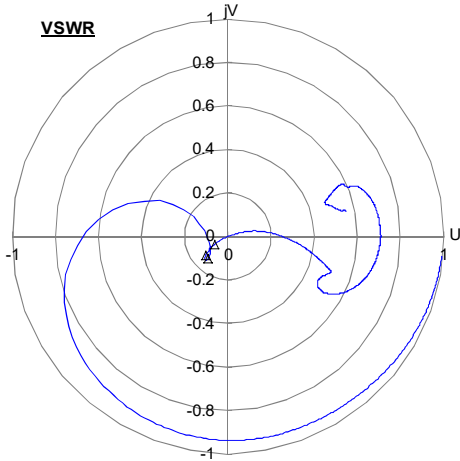
Parameter	TDK Spec		Conditions
	Min.	Max.	
Operating temperature (°C)	-40 to +85 °C		
Storage temperature (°C)	-40 to +85 °C		
Power Handling (W)	-	1	CW
Human Body Model : HBM @Each Port (V)	-1000	1000	100pF / 1500ohm
Machine Model : MM @Each Port (V)	-150	150	200pF / 0ohm
Charged Device Model : CDM @Each Port (V)	-500	500	Relative humidity : 51%RH max

Ambient temperature : +25+/-5°C

# DEA162300HT-8045A1

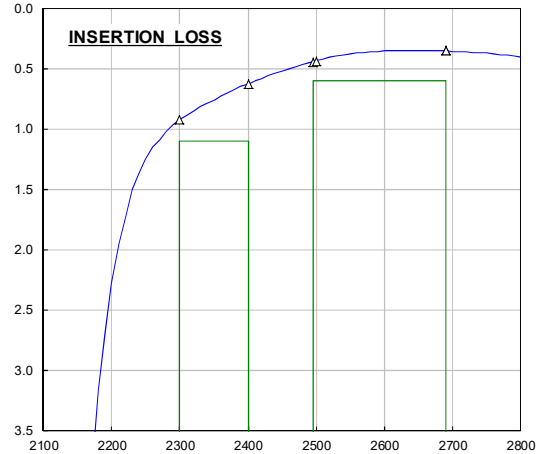
## FREQUENCY CHARACTERISTICS

S11 POLA REF 1.0 U SCALE 1.0U FS



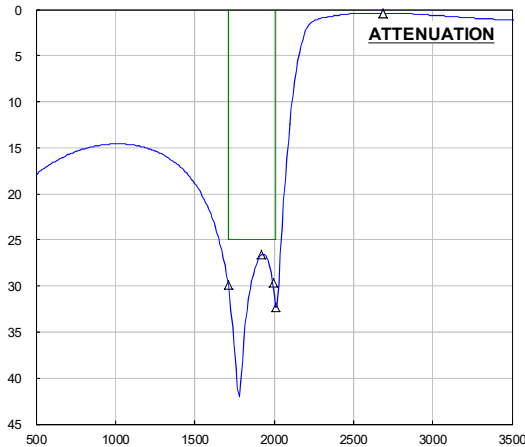
MARKER	Freq (MHz)	VSWR
MARKER 1	2300.0	1.31
MARKER 2	2400.0	1.31
MARKER 3	2496.0	1.16
MARKER 4	2500.0	1.14
MARKER 5	2690.0	1.22

S21 Log MAG REF 0.0dB SCALE 1dB/



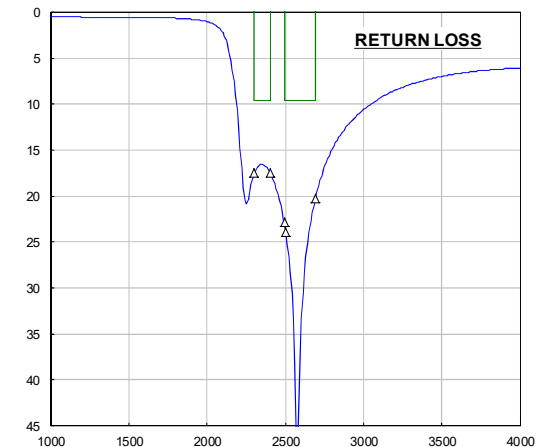
MARKER	Freq (MHz)	Loss (dB)
MARKER 1	2300.0	0.92
MARKER 2	2400.0	0.63
MARKER 3	2496.0	0.45
MARKER 4	2500.0	0.44
MARKER 5	2690.0	0.36

S21 Log MAG REF 0.0dB SCALE 5.0dB/



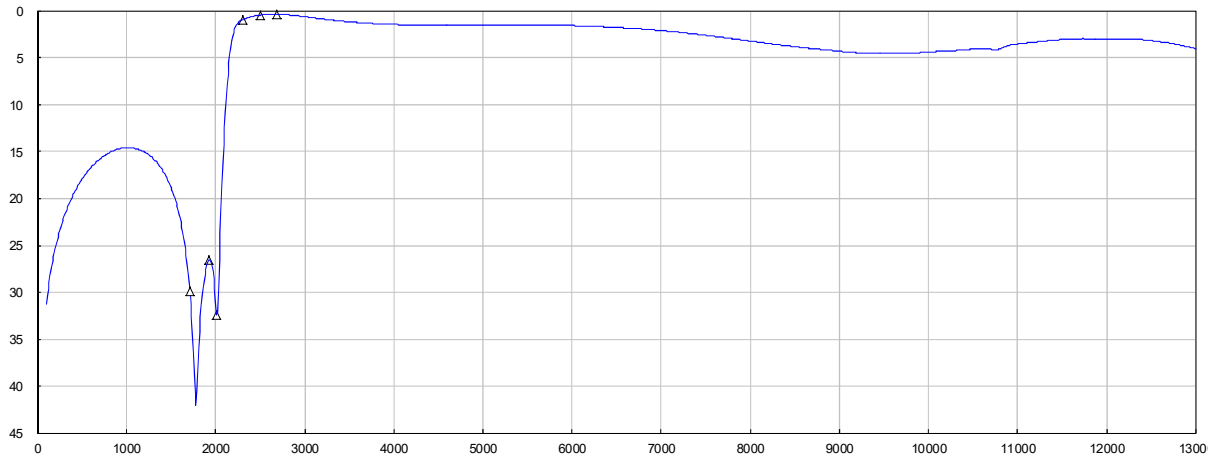
MARKER	Freq (MHz)	Attenuation (dB)
MARKER 1	1710.0	29.9
MARKER 2	1920.0	26.6
MARKER 3	1995.0	29.6
MARKER 4	2010.0	32.3

S11 Log MAG REF 0.0dB SCALE 5.0dB/



MARKER	Freq (MHz)	Return Loss (dB)
MARKER 1	2300.0	17.5
MARKER 2	2400.0	17.4
MARKER 3	2496.0	22.9
MARKER 4	2500.0	23.9
MARKER 5	2690.0	20.2

S21 Log MAG REF 0.0dB SCALE 5.0dB/

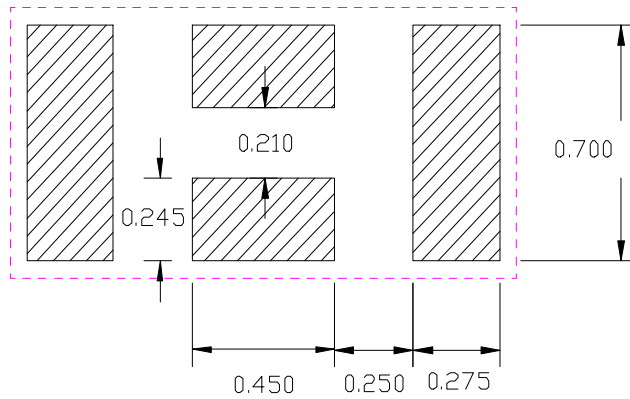


MARKER	Freq (MHz)	Loss (dB)
MARKER 1	1710.0	29.9
MARKER 2	1920.0	26.6
MARKER 3	2010.0	32.35
MARKER 4	2300.0	0.92
MARKER 5	2496.0	0.45
MARKER 6	2690.0	0.36

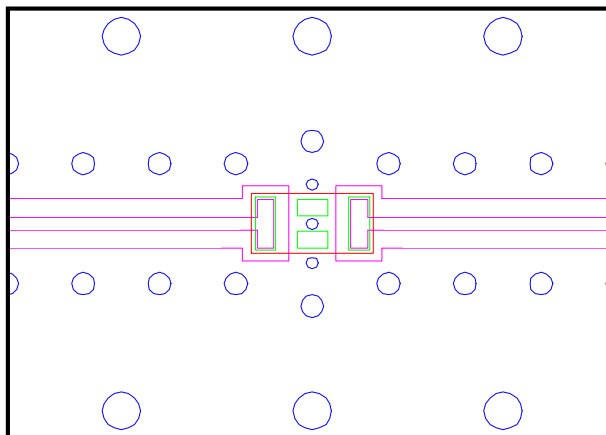
All specifications are subject to change without notice.

## DEA162300HT-8045A1

### RECOMMENDED LAND PATTERN



### EVALUATION BOARD



- Thru hole
- Resist
- Surface Pattern
- DUT

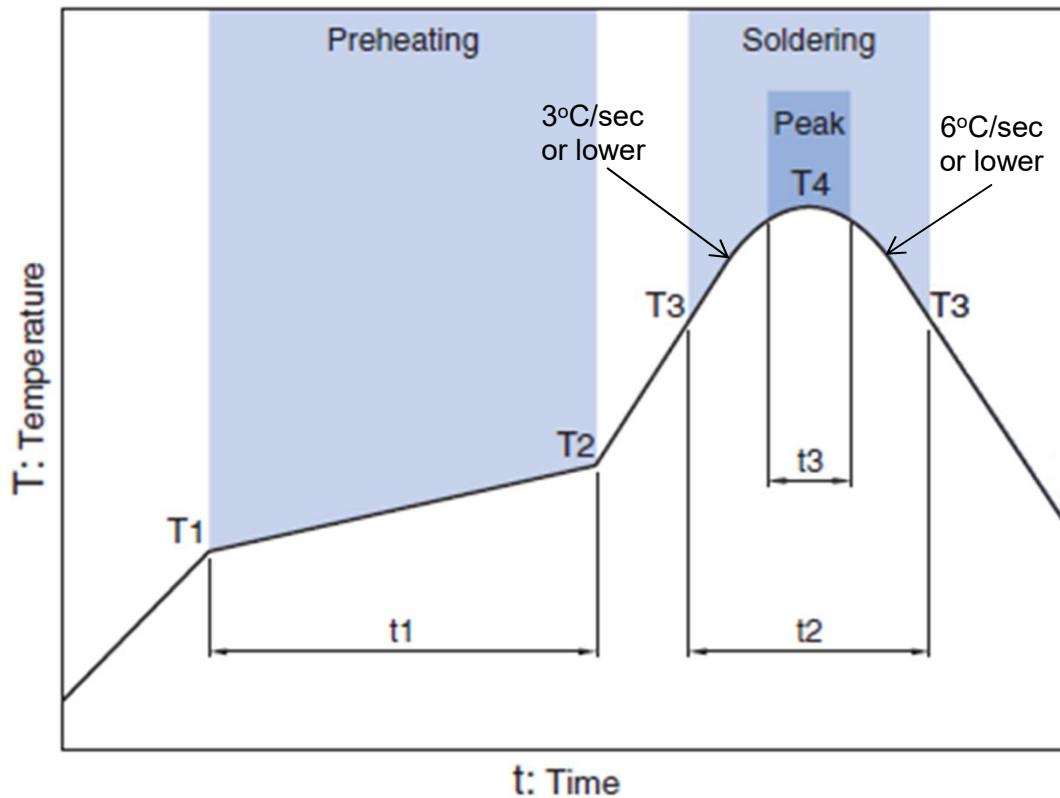
Material, Layer	Thickness
Top Resist	Resist
Copper Surface Pattern	0.035mm
FR-4	0.10mm
Copper Inner GND	0.018mm
FR-4	0.30mm
Copper Bottom GND	0.035mm

### ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

## DEA162300HT-8045A1

### 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

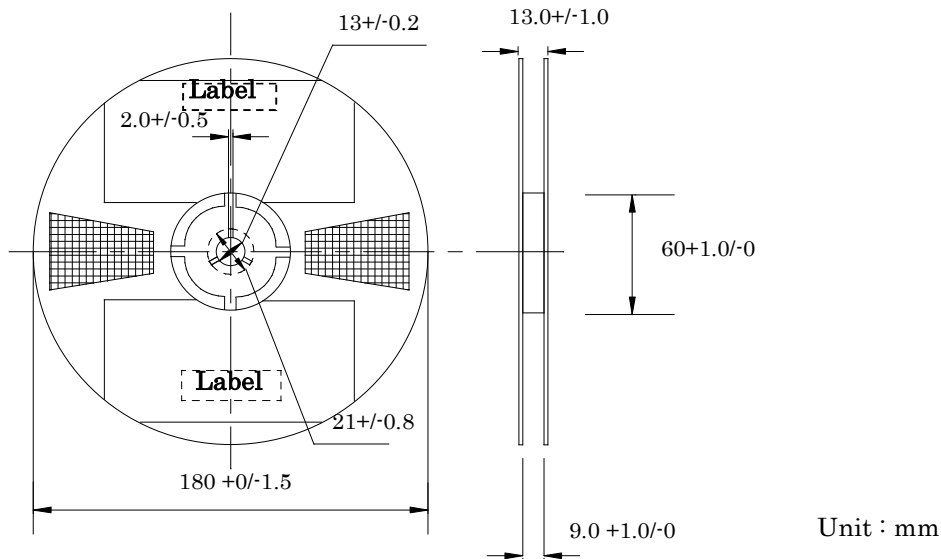
The maximum number of reflow is 3.

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

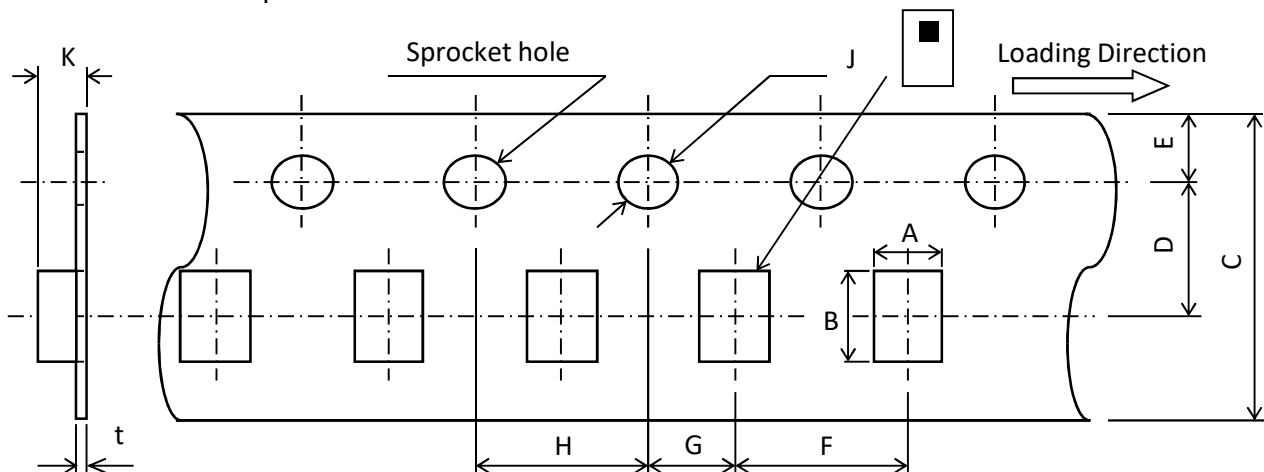
## DEA162300HT-8045A1

### PACKAGING STYLE

Reel Dimensions



Carrier Tape



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	0.8	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.

 <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.



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