



Nov. 2014 Ver.3.0  
TDK-EPC Corporation

## Multilayer Low Pass Filter

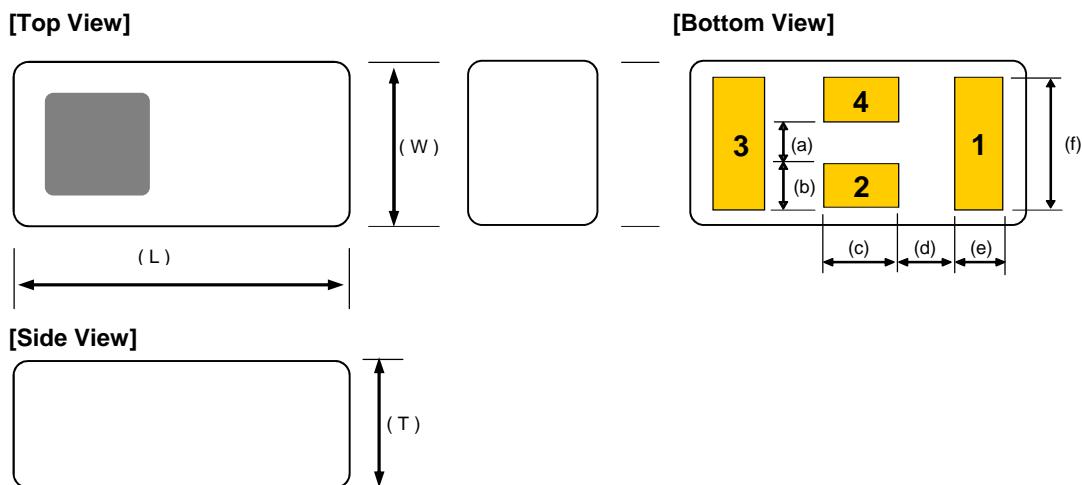
For LTE

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

P/N: **DEA162690LT-5051B1**

## DEA162690LT-5051B1

### ■ SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d	e	f
1.60	0.80	0.60	0.21	0.22	0.40	0.30	0.225	0.65
+/-0.10	+/-0.10	+/-0.10	+/-0.05	+/-0.05	+/-0.05	+/-0.05	+/-0.05	+/-0.05

Terminal functions

(1)	In/Out Port	
(2)	GND	
(3)	Out/In Port	
(4)	GND	

### ■ TEMPERATURE RANGE

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

## DEA162690LT-5051B1

### ■ ELECTRICAL CHARACTERISTICS

( Measurement )

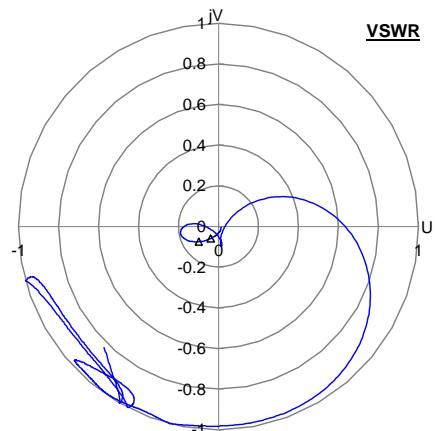
Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	673 to 2690	-	0.37	0.50
Insertion Loss (dB) ( -40 to +85 °C )	673 to 2690	-	-	0.60
Ripple (dB) (Over any 200 MHz range)	673 to 2690	-	0.07	0.20
G.D.Ripple (ns) (Over any 20 MHz range)	673 to 2690	-	0.01	-
VSWR	673 to 2690	-	1.5	2.0
Attenuation (dB)	4950 to 6000	35	42	-
	6000 to 12750	45	49	-
Power Handling (dBm)		-	-	35
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

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### ■ FREQUENCY CHARACTERISTICS

S11 POLA REF 1.0 U SCALE 1.0U FS



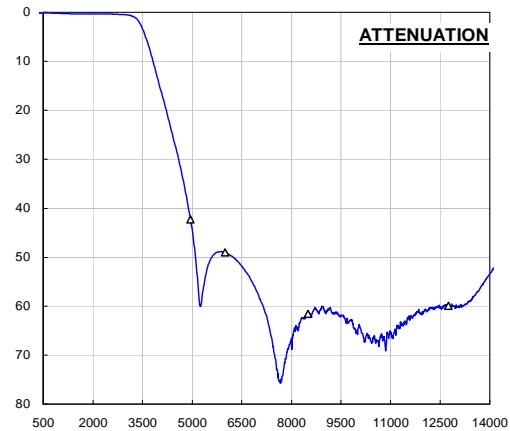
MARKER 1	
673 MHz	0.096 dB
MARKER 2	
960 MHz	0.160 dB
MARKER 3	
1710 MHz	0.305 dB
MARKER 4	
2170 MHz	0.263 dB
MARKER 5	
2300 MHz	0.264 dB
MARKER 6	
2690 MHz	0.368 dB

S21 Log MAG REF 0.0dB SCALE 0.5dB/



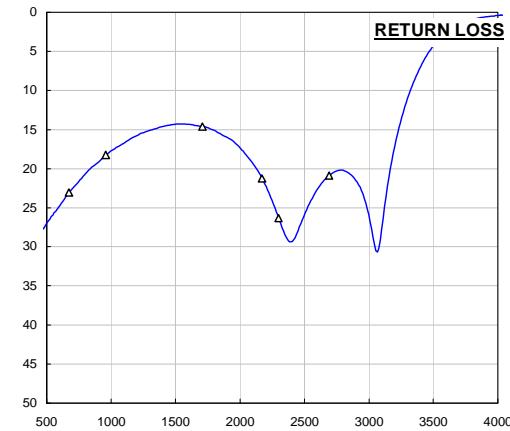
MARKER 1	
673 MHz	0.096 dB
MARKER 2	
960 MHz	0.160 dB
MARKER 3	
1710 MHz	0.305 dB
MARKER 4	
2170 MHz	0.263 dB
MARKER 5	
2300 MHz	0.264 dB
MARKER 6	
2690 MHz	0.368 dB

S21 Log MAG REF 0.0dB SCALE 10.0dB/



MARKER 1	
4950 MHz	42.3 dB
MARKER 2	
6000 MHz	49.0 dB
MARKER 3	
8500 MHz	61.5 dB
MARKER 4	
12750 MHz	60.0 dB

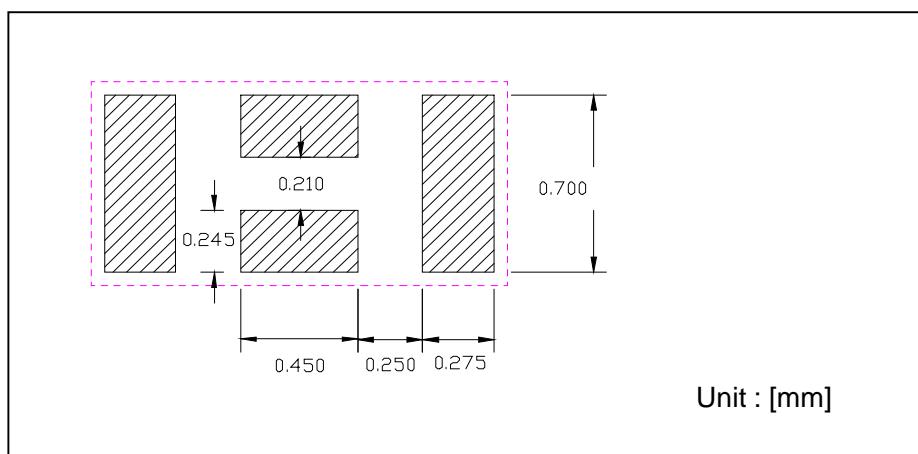
S11 Log MAG REF 0.0dB SCALE 5.0dB/



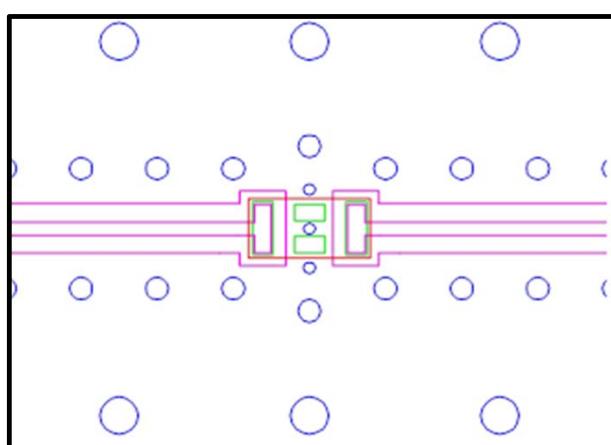
MARKER 1	
673 MHz	23.1 dB
MARKER 2	
960 MHz	18.3 dB
MARKER 3	
1710 MHz	14.6 dB
MARKER 4	
2170 MHz	21.2 dB
MARKER 5	
2300 MHz	26.3 dB
MARKER 6	
2690 MHz	20.9 dB

## DEA162690LT-5051B1

### ■ RECOMMENDED LAND PATTERN



### ■ EVALUATION BOARD



- Thru hole
- Resist
- Surface Pattern
- DUT (LPF)

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

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

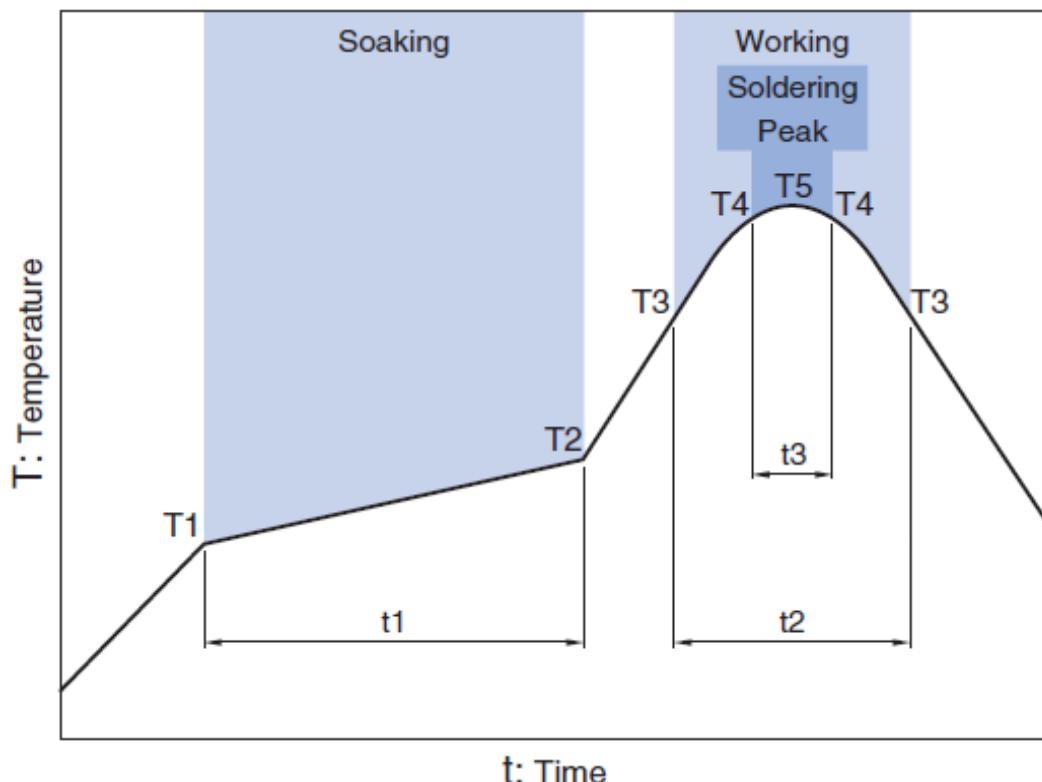
### ■ ENVIRONMENT INFORMATION

RoHS Statement  
RoHS Compliance

## DEA162690LT-5051B1

### ■ RECOMMENDED REFLOW PROFILE

Pb free solder

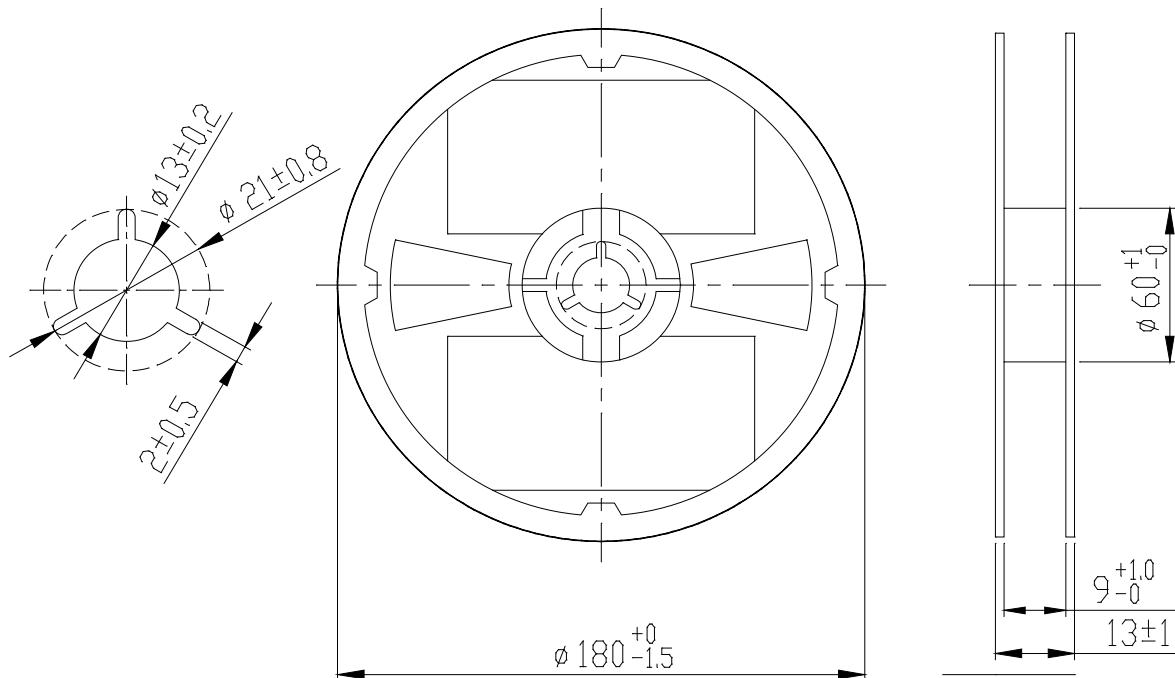


Soaking		Working		Soldering		Peak	
Temp.	Time	Temp.	Time	Temp.	Time	Temp.	
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.

## DEA162690LT-5051B1

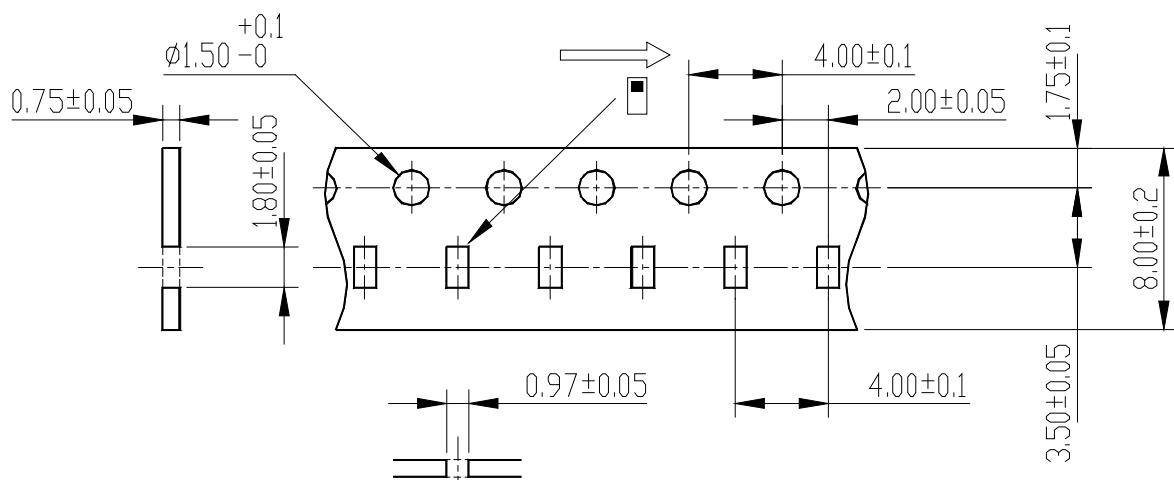
### ■ PACKAGING STYLE

Reel Dimensions



Dimensions in mm

Carrier Tape



STANDARD PACKAGE QUANTITY ( pieces/reel )
4,000

# 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.