



Jan. 2016 Ver.1.0  
TDK Corporation

## Thin-Film Low Pass Filter

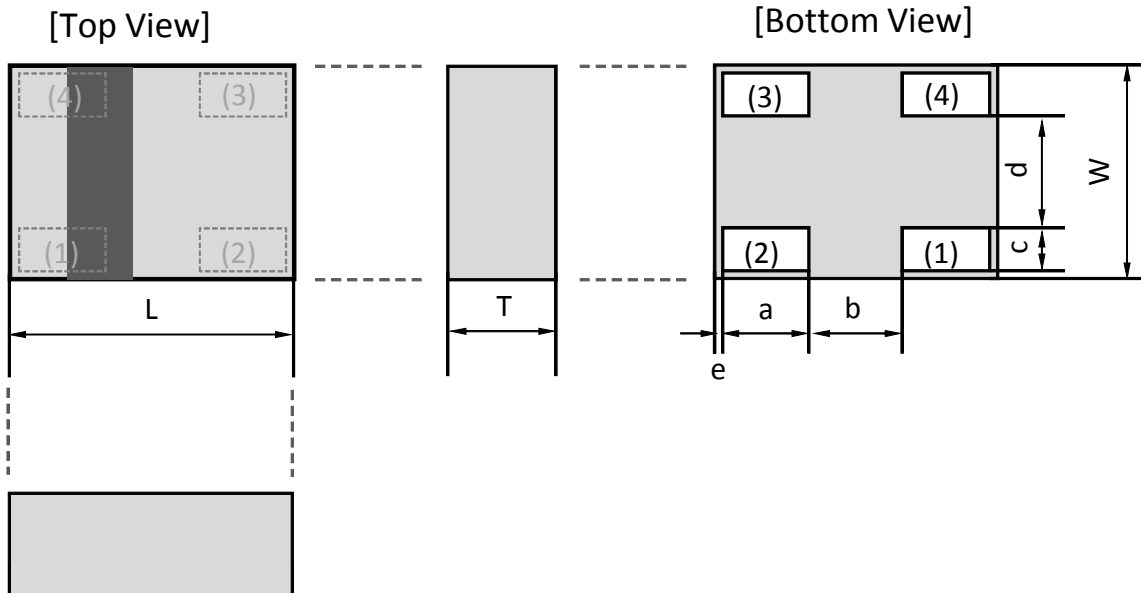
For LTE

TFS Series                      06505 TYPE

P/N: **TFSL06050915-4108B1X**

## TFSL06050915-4108B1X

### SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d	e
0.65	0.50	0.25	0.20	0.20	0.10	0.25	0.025
+/-0.04	+/-0.04	+/-0.05	+/-0.04	+/-0.04	+/-0.04	+/-0.04	+/-0.025

Terminal functions

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

### TEMPERATURE RANGE

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

## TFSL06050915-4108B1X

### ■ ELECTRICAL CHARACTERISTICS

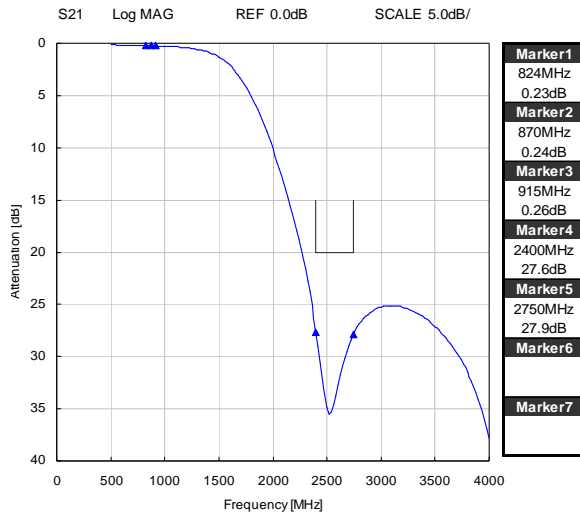
Parameter	Frequency (MHz)	Specification		
		Min.	Typ.	Max.
Insertion Loss (dB)	824 to 915	-	0.26	0.50
Insertion Loss (dB) (-40 to +85 °C)	824 to 915	-	-	0.60
Return Loss (dB)	824 to 915	14	23.4	-
Attenuation (dB)	2400 to 2750	20	27.7	-
Power Handling (W)	824 to 915	-	-	3
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

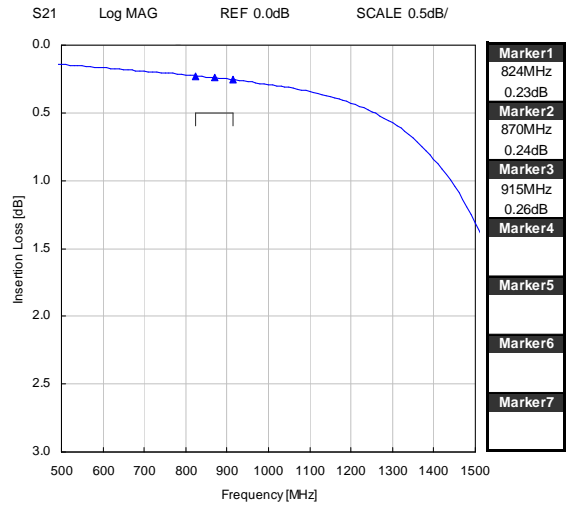
# TFSL06050915-4108B1X

## FREQUENCY CHARACTERISTICS

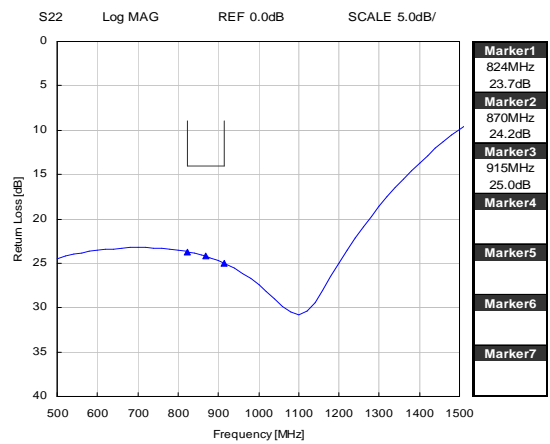
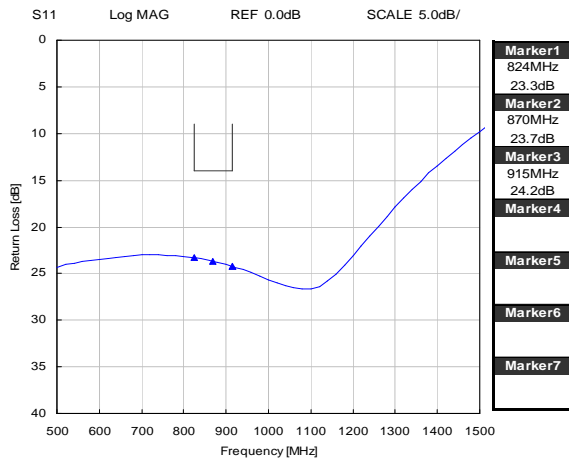
Attenuation



Insertion Loss

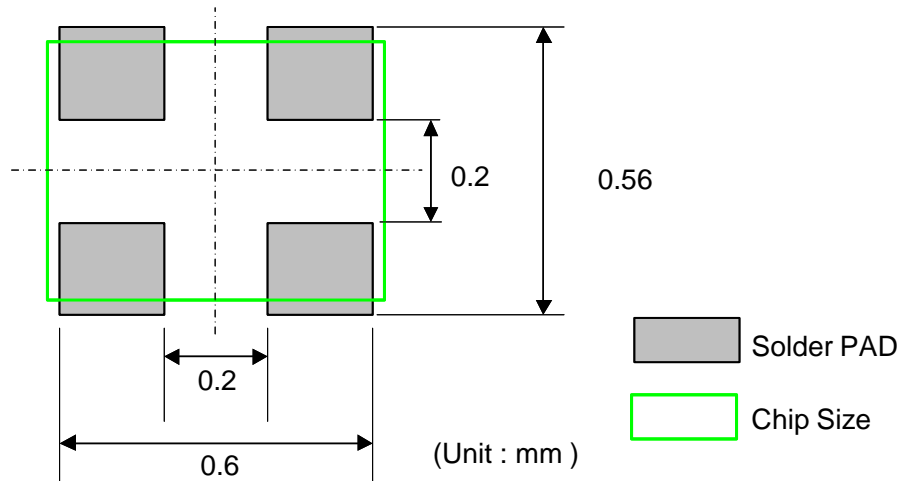


Return Loss



## TFSL06050915-4108B1X

### RECOMMENDED LAND PATTERN



### ENVIRONMENT INFORMATION

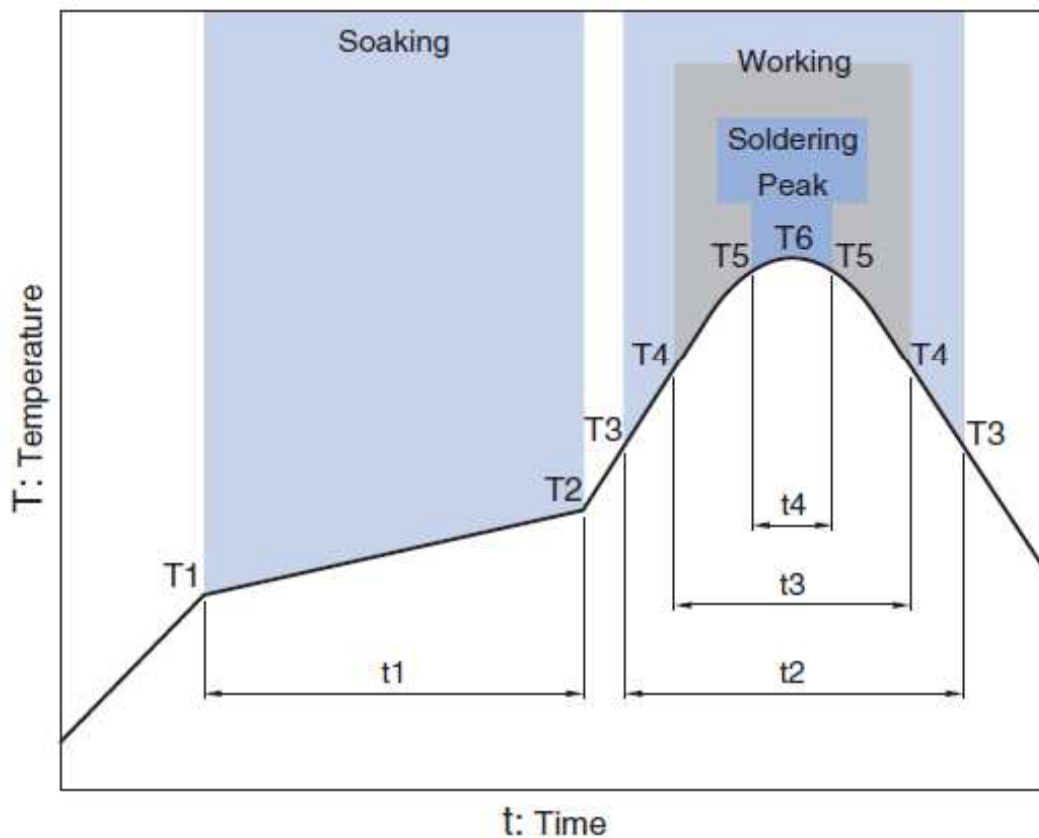
RoHS Statement  
RoHS Compliance

Moisture Sensitivity Level (MSL) : 1

## TFSL06050915-4108B1X

### ■ RECOMMENDED REFLOW PROFILE

In this product, the recommended soldering condition is 'reflow'.  
The recommended temperature profile is shown in below.  
Lead Free Reflow Soldering (Sn-3Ag-0.5Cu)  
Reflow Soldering : Maximum 2 times



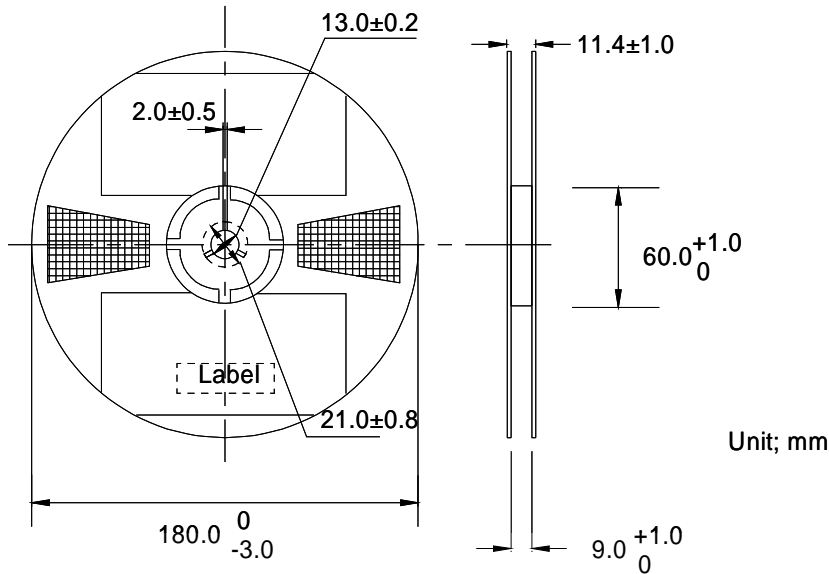
Soaking			Working			
Temp.		Time	Temp.		Time	
T1	T2	t1	T3	T4	t2	t3
150°C	180°C	60 to 120sec	217°C	230°C	60 to 150sec	more than 45sec

Soldering		Peak
Temp.	Time	Temp.
T5	t4	T6
247 to 253°C	within 10sec	260°C Max.

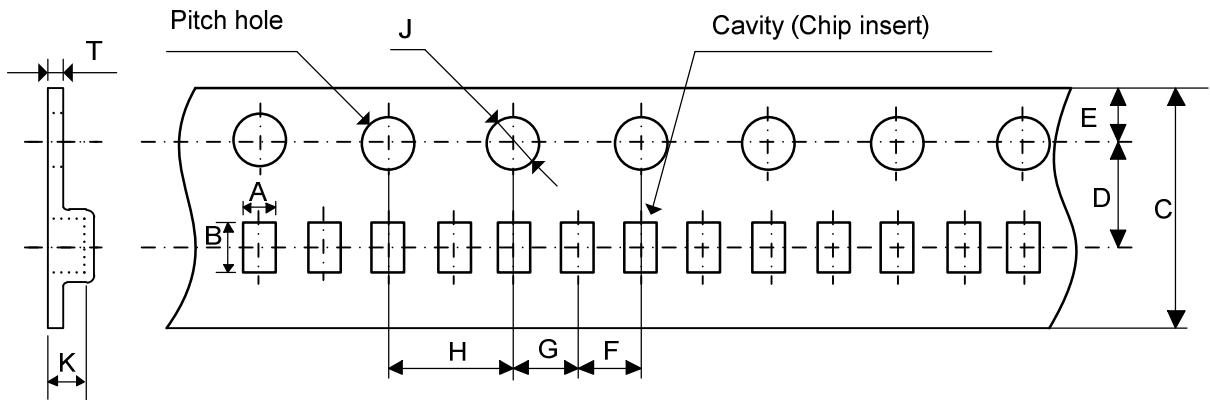
# TFSL06050915-4108B1X

## PACKAGING STYLE

Reel Dimensions



Carrier Tape



Symbol	A	B	C	D	E	F
Dimension	0.63 ± 0.03	0.81 ± 0.03	8.0 ± 0.2	3.5 ± 0.05	1.75 ± 0.1	2.0 ± 0.05
Symbol	G	H	J	K	T	
Dimension	2.0 ± 0.05	4.0 ± 0.1	φ 1.5 <sup>+0.1</sup> / <sub>0</sub>	0.34 ± 0.03	0.20 ± 0.05	(Unit : mm)

<b>STANDARD PACKAGE QUANTITY</b> ( 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.



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