Mar. 2023 Ver.1.4a
TDK Corporation

Multilayer Band Pass Filter

2.5 × 2.0 mm TYPE

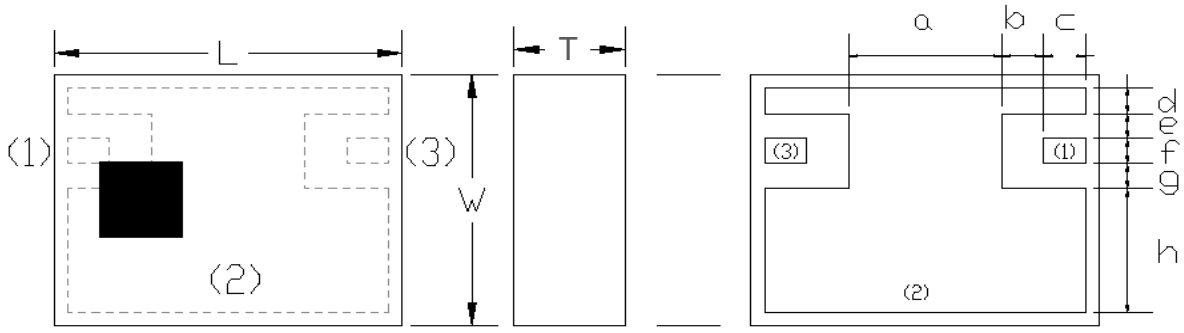
P/N: **MMCB2527G6T-0040A1**

Mar. 2023 Ver.1.4a
TDK Corporation

MMCB2527G6T-0040A1

■ SHAPES AND DIMENSIONS

[Top View] [Bottom View]



Dimensions (mm)

L	W	T	a	b	c	d	e	f	g	h
2.50 +/-0.15	2.00 +/-0.15	0.90 Max	1.10 +/-0.10	0.30 +/-0.10	0.30 +/-0.10	0.21 +0.1/-0.05	0.20 +0.1/-0.05	0.20 +0.1/-0.05	0.20 +0.1/-0.05	0.99 +/-0.10

Terminal functions

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

■ TEMPERATURE RANGE

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

Mar. 2023 Ver.1.4a
TDK Corporation

MMCB2527G6T-0040A1

■ ELECTRICAL CHARACTERISTICS

(Measurement)

Parameter	Frequency (GHz)	TDK Spec.		
		Min.		Max.
Insertion Loss (dB)	27 to 27.8	-	1.69	3.00
Insertion Loss (dB) (–40 to +85 °C)	27 to 27.8	-		3.00
Average of insertion Loss (dB)	27 to 27.8	-	1.69	-
VSWR	27 to 27.8	-	1.5	1.92
VSWR (–40 to +85 °C)	27 to 27.8	-		1.92
Attenuation (dB)	0.1 to 24	20	34	-
	24 to 25.7	10	27	-
	28.7 to 31.3	10	18	-
	31.3 to 33.9	15	22	-
Attenuation (dB) (–40 to +85 °C)	0.1 to 24	20		-
	24 to 25.7	10		-
	28.7 to 31.3	4		-
	31.3 to 33.9	15		-
Group delay (ns)	27 to 27.8	-	0.34	1.00
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

■ MAXIMUM RATINGS

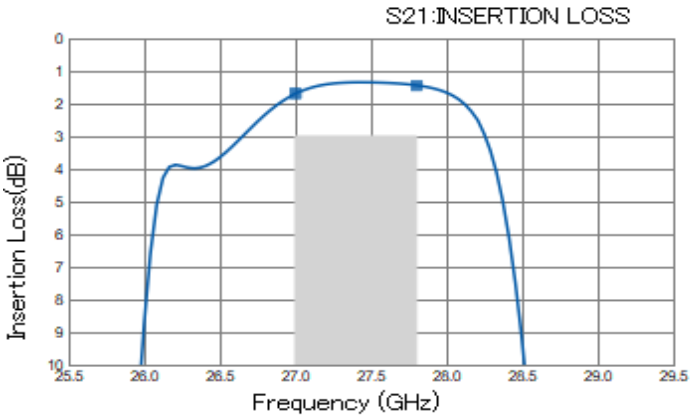
Parameter	TDK Spec		Conditions
	Min.	Max.	
Operating temperature (°C)	–40 to +85 °C		
Storage temperature (°C)	–40 to +85 °C		
Power Handling (W)	-	1	duty ratiio =1

Ambient temperature : +25+/-5°C

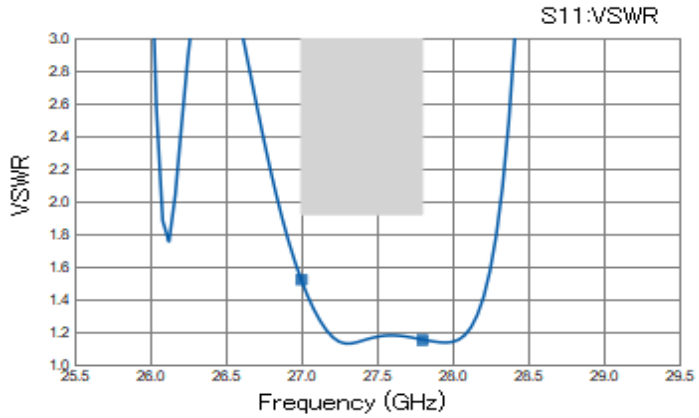
Mar. 2023 Ver.1.4a
TDK Corporation

MMCB2527G6T-0040A1

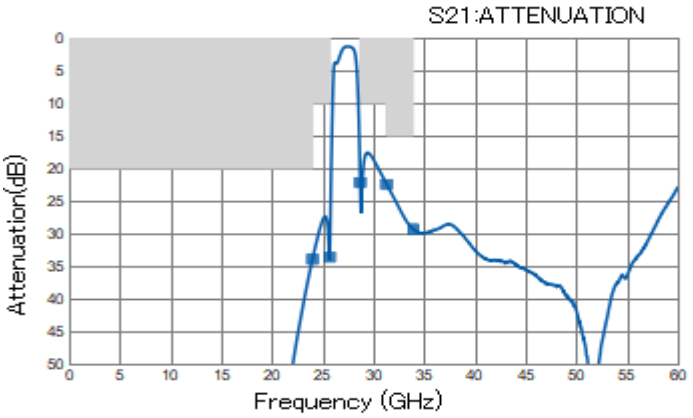
FREQUENCY CHARACTERISTICS



P/N Freq	Ver.1_3_N
27–27.8	1.69
27	1.69
27.8	1.44



P/N Freq	Ver.1_3_N
27–27.8	1.52
27	1.52
27.8	1.15

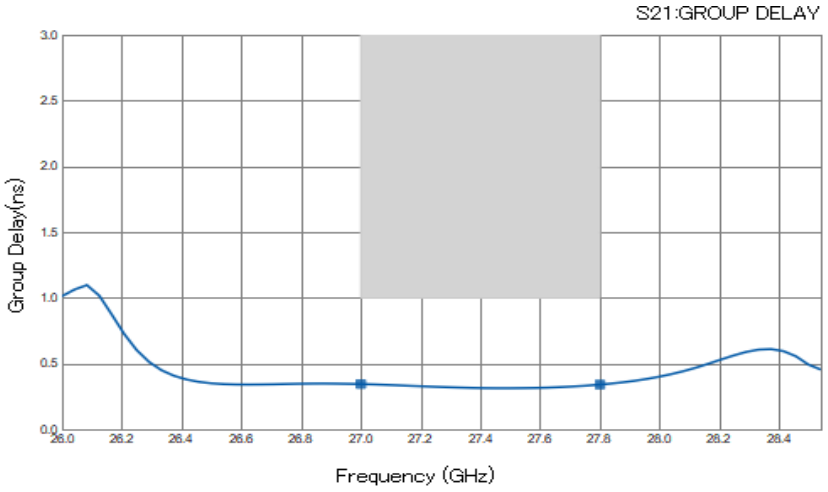


P/N Freq	Ver.1_3_N
0.1–24	33.94
24–25.7	27.41
28.7–31.3	17.63
31.3–33.9	22.45
0.1	108.47
24	33.94
25.7	33.61
28.7	22.16
31.3	22.45
33.9	29.35

Mar. 2023 Ver.1.4a
TDK Corporation

MMCB2527G6T-0040A1

FREQUENCY CHARACTERISTICS

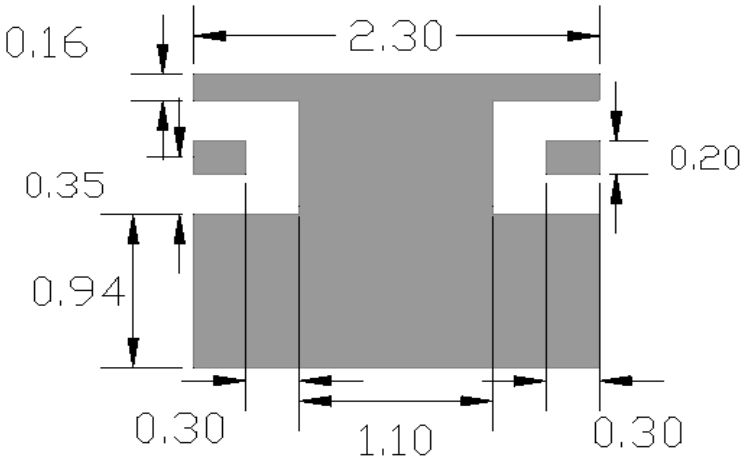


P/N Freq	Ver.1_3_N
27–27.8	max:0.344 min:0.312
27	0.344
27.8	0.34

Mar. 2023 Ver.1.4a
TDK Corporation

MMCB2527G6T-0040A1

RECOMMENDED LAND PATTERN

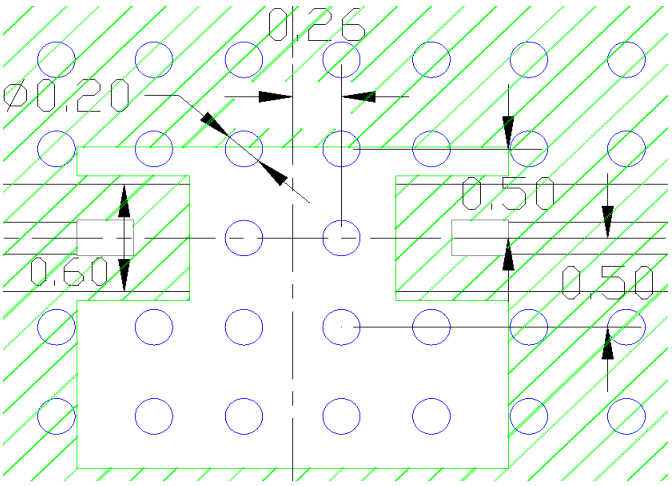


Land

Tolerance:+/-0.05mm

Unit[mm]

EVALUATION BOARD



Thru Hole

Resist

Material & Layer	Thickness
Top Resist	-
Copper Surface Pattern	0.035 mm
Megtron6(R-5775)	0.1 mm
Copper inner GND	0.035 mm
Megtron6(R-5770)	0.3 mm
Megtron6(R-5775)	
Copper Bottom GND	0.035 mm

Tolerance:+/-0.05mm

Please make sure to place Thru hole to connect under layer GND at your PCB similar with TDK EVB drawing.
If you have any concern about your PCB design, please do not hesitate to contact TDK.

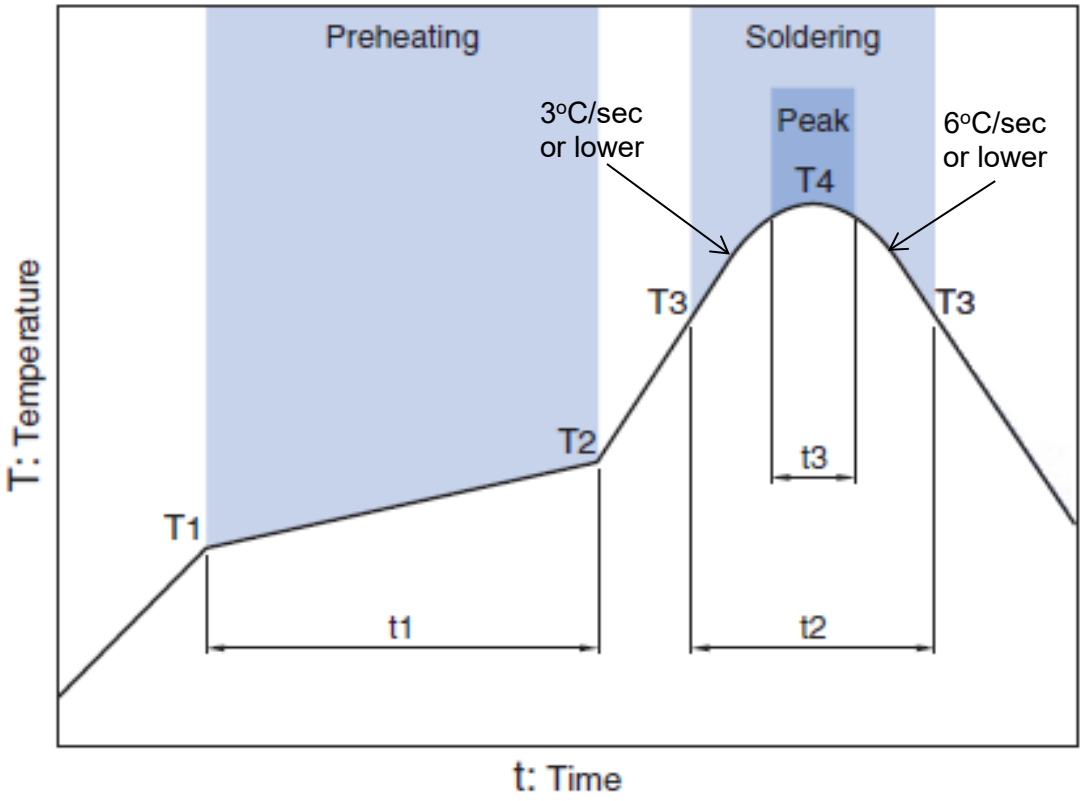
ENVIRONMENT INFORMATION

RoHS Statement
RoHS Compliance

Mar. 2023 Ver.1.4a
TDK Corporation

MMCB2527G6T-0040A1

■ 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)

Mar. 2023 Ver.1.4a
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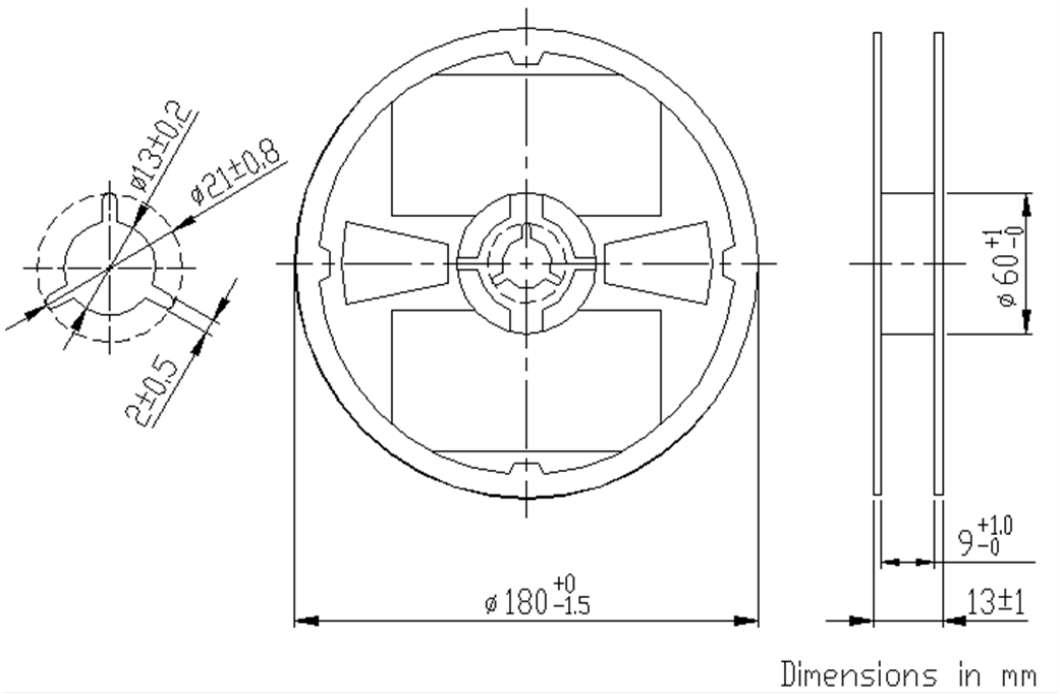
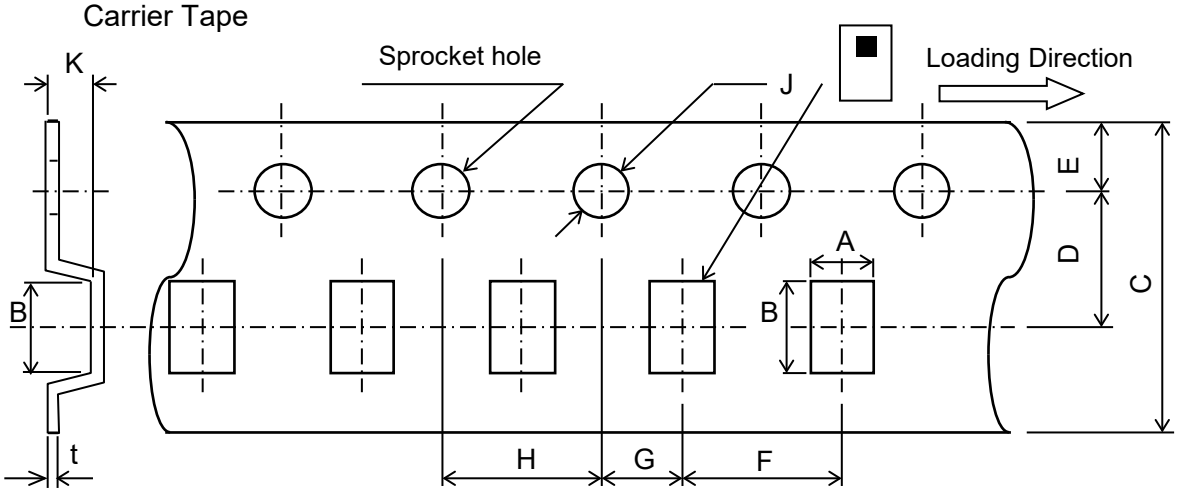
■ PACKAGING STYLE

Reel Dimensions



Carrier Tape



Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	t
2.2 +/-0.05	2.7 +/-0.05	8.0 +0.3/-0.1	3.5 +/-0.05	1.75 +/-0.1	4.0 +/-0.1	2.0 +/-0.05	4.0 +/-0.1	1.5 +0.1/-0	1.15 MAX	0.25 +/-0.05

STANDARD PACKAGE QUANTITY (pieces/reel)
2,000

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.