Murata CFUKF455KA2X-R0 alternatives

SPECIFICATION SHEET

PART CODE: FL455K0000S109

SPECIFICATION SHEET NO.	N0413-FL455K0000S109
DATE	April 13, 2021
REVISION	A0
DESCRIPITION	KHz SMD Ceramic Filter 6560 Type L6.5*W6.0*H4.2mm 3 Pads CFTC U Series 455.0KHz, Impedance, 1.0KOhm, Insertion Loss. 4.0dB Max. Operating Temp. Range -20°C ~+80°C. Group Delay Time: 15µSec Max. Reflow Profile Condition 260 °C Max. Tape/Reel, RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	CFUKF455KA2XR0
ORIGINAL PART NUMBER	TGS CFTC 455KA UTLFDC
PART CODE	FL455K0000S109

VENDOR APPROVE
Issued/Checked/Approved
DATE: Apr. 13, 2021

CUSTOMER APPROVE
DATE:

Murata CFUKF455KA2X-R0 alternatives

KHZ SMD CERAMIC FILTER 6560 TYPE 3 PADS

MAIN FEATURE

- KHz SMD Ceramic Filter 6560 Type 3 pads
- White case, L6.5*W6.0*H4.2mm
- Group Delay Time
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant

PART CODE: FL455K0000S109

APPLICATION

- Bluetooth, wireless communication set
- Communication Electronics

PART CODE GUIDE

FL	455K0000	S	109
1	2	3	4

1) FL: Part family Code for KHz SMD Ceramic Filter 6560 Type L6.5*W6.0*H4.2mm 3 Pads CFTC U Series

2) 455K0000: Frequency range code for 455.0000KHz

3) S: SMD type, Package Tape/Reel, 1000pcs/Reel

4) 109: Specification code for original part No.: **TGS CFTC 455KA UTLFDC**

MORE FREQUENCY RANGE AVAILABLE (KHz)

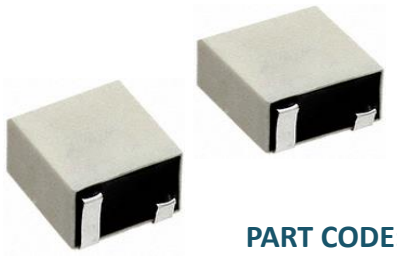
450.00	455.00								

Murata CFUKF455KA2X-R0 alternatives

KHZ SMD CERAMIC FILTER 6560 TYPE 3 PADS

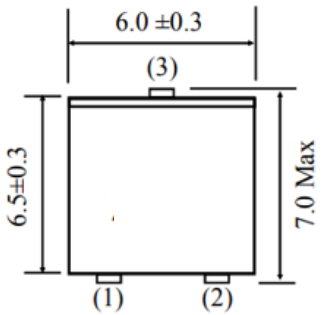
DIMENSION (Unit: mm, Tol. +/-0.15mm)

Image for reference

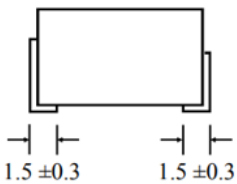


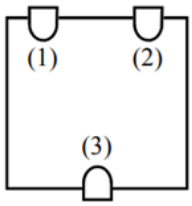
PART CODE: FL455K0000S109

CFTC U

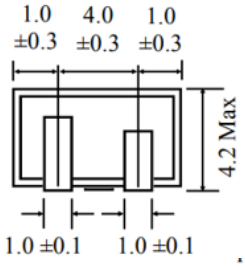


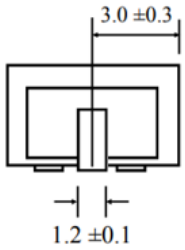
Marking
Line 1: Series Code
Line 2: Frequency Range
+Internal Code



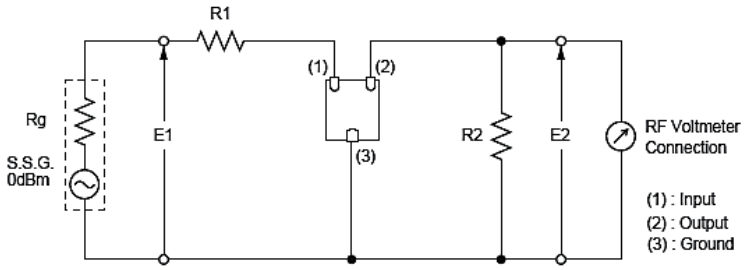


Connection
Pin 1: Input
Pin 2: Output
Pin3: Ground





Measuring Circuit



Rg+R1=R2=Output/input Impedance

Murata CFUKF455KA2X-R0 alternatives

KHZ SMD CERAMIC FILTER 6560 TYPE 3 PADS

ELECTRICAL PARAMETERS

PART CODE: FL455K0000S109

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		CFTC	KHz SMD Ceramic Filter L6.5*W6.0*H4.2mm 3 Pads				
Frequency Range		455	KHz	455.000			
Temperature Stability			%			±0.5	@ - 20℃ ~ +80℃
Operation Temperance			℃	-20		+80	
Storage Temperance			℃	-40		+85	
Group Delay Time Ripple		K	μSec			15	@fo±100KHz
Stop Band Attenuation			dB	25			@fo±100KHz
Bandwidth		A	KHz	±12.0			@3 dB
			KHz	±17.5			@6 dB
			KHz	±40.0			@40 dB
Insertion Loss (At minimum loss point)			dB			4.0	
Spurious Response			dB	20			@0.1~1.0MHz
Input/Output Impedance			Ω	1000			
Insulation Resistance			MΩ	100			@DC 25V 1 minute)
Pads Code		U		3 pads			
Other	**Package**	T	Tape/Reel, 1000pcs/Reel				
	RoHS Status	LF	RoHS III compliant				
	Add Value		N/A				
	Internal Control Code	DC					

Note: Original Part Number: **TGS CFTC 455KA UTLFDC**

Murata CFUKF455KA2X-R0 alternatives

KHZ SMD CERAMIC FILTER 6560 TYPE 3 PADS

RELIABILITY

Test Items	Test Method And Conditions	Requirement
Humidity	After being placed in a chamber with 90-95% R.H. at 40±2℃ for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.
High Temperature	After being placed in a chamber with 80±2 ℃,for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.
Low Temperature	After being placed in a chamber with -20±2 ℃,for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.
Heat Shock	After being kept at room temperature, filter shall be placed at temperature of –55 ℃ , for 30 minutes, then be placed at temperature. 85 ℃, for 30 minutes. After that returned to –55 ℃ again. Repeated above cycle for 5 times. After being kept in room temp. for 1 hour, filter shall be measured	It shall meet Table 1.
Resistance to Solder Heat	Lead terminals are immersed up to 1.5mm from filter's body in soldering bath of 350± 10℃, for 3±0.5 sec. And then filter shall be measured after being placed in room temperature for 1 hour.	It shall meet Table 1.
Solderability	Lead terminals are immersed in aide solder for 5 sec and then immersed in soldering bath of 230±5℃, for 3±0.5 sec.	At least 95% lead terminals shall be covered with solder.
Drop Test	Filter shall be measured after 3 times random drops from the height of 30 cm on concrete floor	No visible damage and it meet Table 1
Adhesion	A static load of 20N to the direction of the arrow (see Fig. 4) shall be applied on the core of the Component and hold for 10 seconds. Filter shall be soldered correctly and tightly to PCB.	It shall meet Table 1.
Vibration	Filter shall be measured after being applied vibration of amplitude of 1.5mm with 10-55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours	No visible damage and it meet Table 1
Substrate Bending Test	Apply pressure in the direction of arrow (see Fig. 3) at a rate of about 0.5mm per second until it reaches a bend of 3mm and hold for 30 seconds.	It shall meet Table 1.

Table1

Item	Center Frequency	Band width (6dB)	Selectivity (40dB)	Stop Band Attenuation (fo±100KHz)	Ripple	Insertion Loss
Specification	455±2.0KHz Max.	±17.5KHz Min.	±40.0KHz Max.	25 dB Min.	1.0dB Max	4.0dB Max

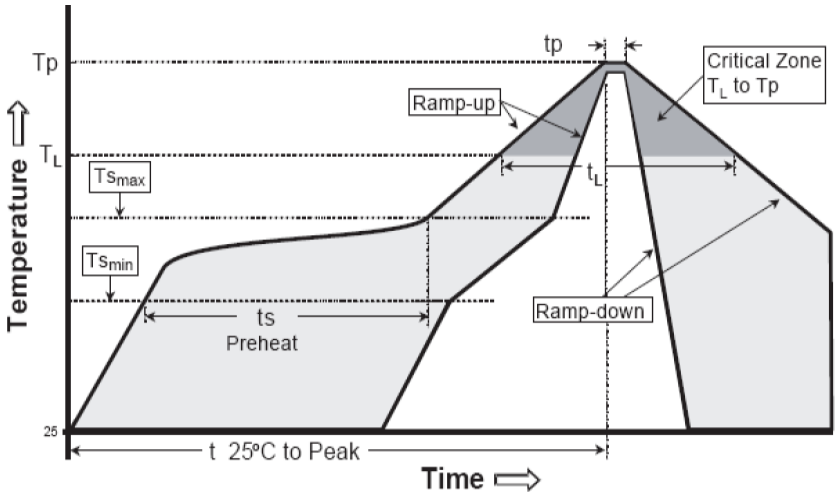
Murata CFUKF455KA2X-R0 alternatives

KHZ SMD CERAMIC FILTER 6560 TYPE 3 PADS

SUGGESTED REFLOW PROFILE (For Reference Only)

Total time: 200 Sec. Max. Solder melting point: 220℃

PART CODE: FL455K0000S109



Profile Feature		Pb-Free Assembly
Average Ramp-up Rate (Ts Max to Tp)		3℃/second Max
Preheat	**Temperature Min (Ts Min.)**	125℃
	Temperature Max (Ts Max.)	200℃
	Time (ts Min. to ts Max.)	60 ~ 180 seconds
Time maintained above	**Temperature (TL)**	217℃
	Time (tL)	60 ~ 150 seconds
Peak/Classification Temperature (Tp)		260 ℃
Time within 5℃ of actual Peak Temperature (tp)		20 ~ 40 seconds
Ramp-down rate		6 ℃ /Second Max.
Time 25 ℃ to Peak Temperature		8 minutes Max.
Suggest reflow times		3 Times Max.

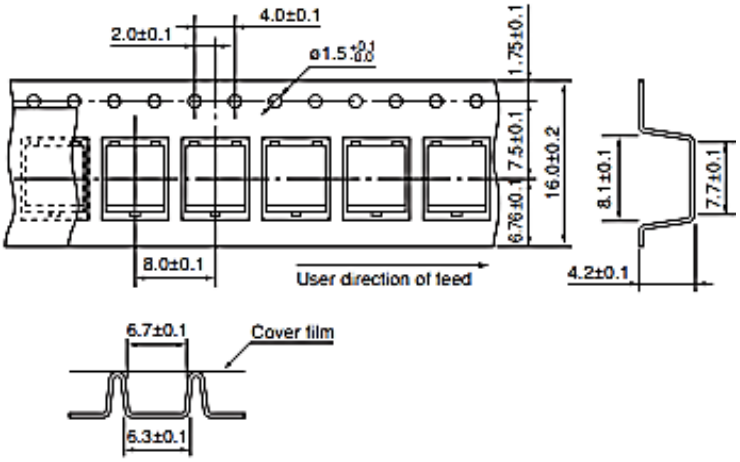
Murata CFUKF455KA2X-R0 alternatives

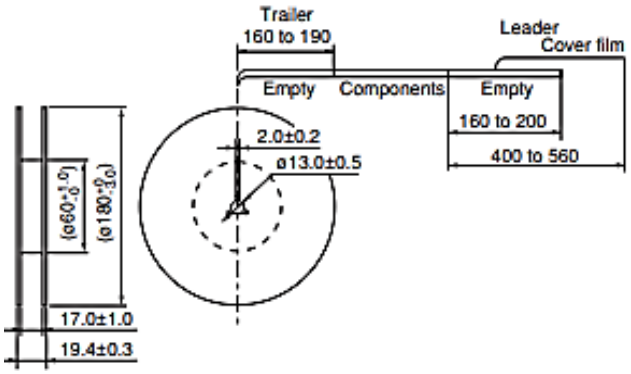
KHZ SMD CERAMIC FILTER 6560 TYPE 3 PADS

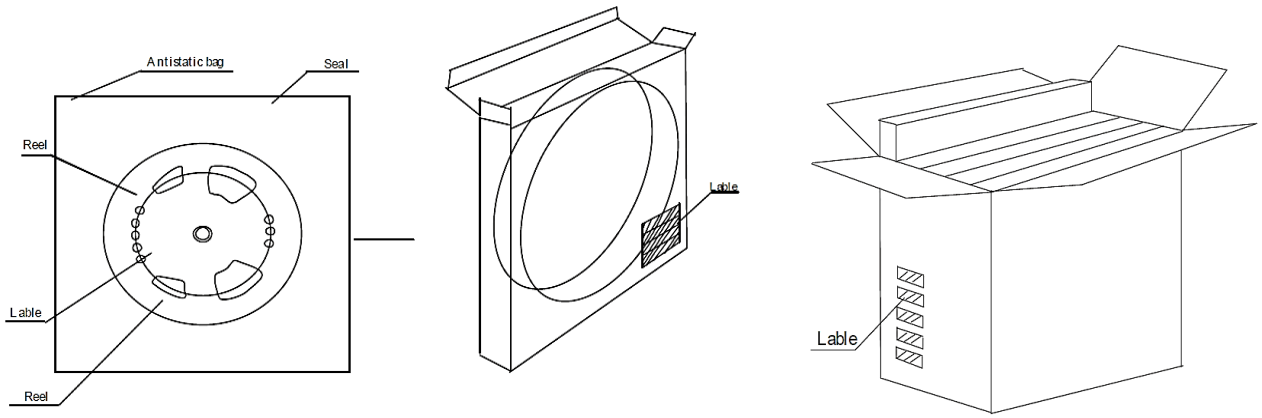
TAPE/REEL (Unit: mm)

PART CODE: FL455K0000S109

All Devices are packed in accordance with EIA standard RS-481-2 and specifications, 1000pcs/Reel







DISCLAIMER

NextGen Components, Inc. reserves the right to make changes to the product(s) and or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information