SPECIFICATION SHEET

KHZ DIP CERAMIC FILTER GDT TYPE CASE 11070 FB SERIES

SPECIFICATION SHEET NO.	R1010- FB455K0000L116	
ORIGINAL MFG/PART NO	TGS Crystals/CF 455KGW BLH/LTW455KGx	
DATE	Oct. 10, 2024	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	KHz DIP Ceramic Filter, GDT Type, 5 Pins, FB Series Case 11070, Dimension L11.0*W7.0*H8.0mm 455KHz, Insertion Loss. 9.0dB Max.; 6dB Bandwidth: ±4.5KHz Min. Group Delay Time (GDT) Ripple Deviation: 40µSec. Max. within f0 ±3.0KHz Input/Output Impedance: 2000 ohm, Operating Temp. Range -20°C ~+85°C, Package in Bulk REACH/RoHS/RoHS III Compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
Date: Oct. 10, 2024

CUSTOMER APPROVE
Date:

MAIN FEATURE

Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- KHz DIP Ceramic Filter, GDT Type, 5 Pins, Case 1170
- Black case, Dimension L11.0*W7.0*H8.0mm
- Low Cost And Short Shipment
- Group Delay Time (GDT) Ripple Deviation: 40µSec. Max. within f0 ±3.0KHz
- Reflow Profile Condition 260 °C Max.
- Cross Main Competitors Parts CFWL series
- REACH/RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863)

APPLICATION

- Communication Electronics

HOW TO ORDER

- Please follow up part code guide and indicate part code when you order or RFQ.

RFQ
Request For Quotation

PART CODE GUIDE

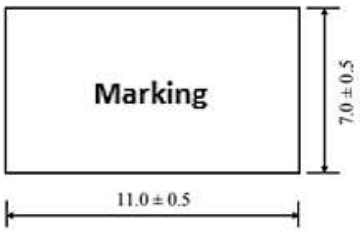
CODE	NAME	KEY SPECIFICATION OPTION
FB	Product Series	KHz DIP Ceramic Filter, 5 Pins, Case 11070 Dimension L11.0*W7.0*H8.0mm
455K	Frequency Range	450: 450KHz; 455K: 455KHz
0000	Internal Control	Letter or Digits (A~Z, a~z or 1~9)
L	DIP Type Package	Package in bulk
116	Special Parametric	Letter or Digits (A~Z, a~z or 1~9)
- XX	Suffix	Blank: N/A XX: Internal Control Code, Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

DIMENSION (Unit: mm)

Case 11070, 5 Pins

L11.0*W7.0*H8.0mm

Top View



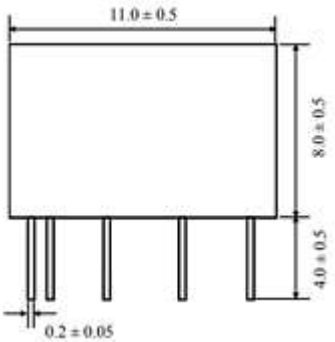
Marking

Line 1: CF or LTW

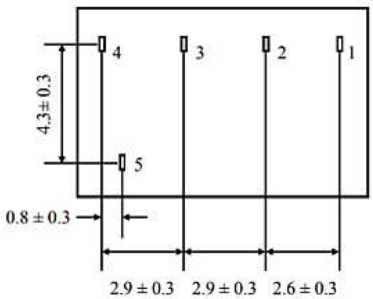
Line 2: Frequency Range

+ Internal Code

Side View



Bottom View



Connection

1: Pin 1: Input

2: Pin 2: Ground

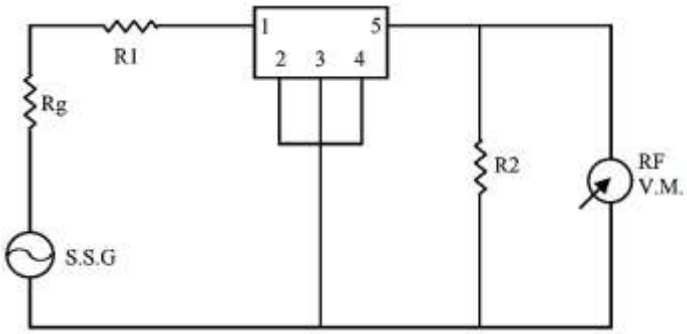
3: Pin 3, Ground

4: Pin 4: Ground

5: Pin 5: Output

MEASUREMENT

- Measurement shall be carried out at the standard temperature of 25±2℃. If no specific requirements, Test can be carried out under 5-35℃.
- Measuring Circuit



Rg+R1=R2=Output/input Impedance

GENERAL ELECTRICAL PARAMETERS

PARAMETER	UNITS	VALUE			CONDITION
		MIN.	TYPICAL	MAX.	
Operation Temperance	°C	-20		+85	
Storage Temperance	°C	-40		+85	
Temperature Stability	%			±0.5	@ -20°C ~+85°C
Stop Band Attenuation	dB	40			@f0±100KHz
Ripple	dB			1.0	@f0 ±3KHz~10KHz
Spurious Response	dB	20			@0.1~1.0MHz
Insulation Resistance	MΩ	100			@DC 25V 1 minute

ELECTRONICAL RIPPLE PARAMETERS – FOR DIFFERENT PART CODE

Part Code	Center Freq. (KHz)	Min. Bandwidth			Max. Insertion Loss @Min. loss point	Max. GDT Ripple Deviation	Input/ Output Impedance
		@3 dB	@6 dB	@50 dB			
		KHz			dB	µsec	Ω
FB450K0000L111	450±1.5	±12.0	±15.0	±30.0	5.0	30 (within f0±10KHz)	1500
FB450K0000L112	450±1.5	±10.0	±12.5	±27.5	6.0	30 (within f0±10KHz)	1500
FB450K0000L113	450±1.0	±8.0	±10.0	±25.0	7.0	30 (within f0±7KHz)	1500
FB450K0000L114	450±1.0	±5.0	±7.50	±20.0	8.0	30 (within f0±5KHz)	1500
FB450K0000L115	450±1.0	±4.5	±6.0	±17.5	8.0	40 (within f0±4.5KHz)	2000
FB450K0000L116	450±1.0	±3.0	±4.5	±15.0	9.0	40 (within f0±3KHz)	2000
FB455K0000L111	455±1.5	±12.0	±15.0	±30.0	5.0	30 (within f0±10KHz)	1500
FB455K0000L112	455±1.5	±10.0	±12.5	±27.5	6.0	30 (within f0±10KHz)	1500
FB455K0000L113	455±1.0	±8.0	±10.0	±25.0	7.0	30 (within f0±7KHz)	1500
FB455K000LG114	455±1.0	±5.0	±7.50	±20.0	8.0	30 (within f0±5KHz)	1500
FB455K0000L115	455±1.0	±4.5	±6.0	±17.5	8.0	40 (within f0±4.5KHz)	2000
FB455K0000L116	455±1.0	±3.0	±4.5	±15.0	9.0	40 (within f0±3KHz)	2000

Note

1. Center Frequency f0 is @Center of 6dB Bandwidth.
2. Specification is subject to changed without notice, please contact us for any update
3. The Parameters in the above table are all general specifications. If you need other Parameters, please contact us.

PHYSICAL CHARACTERISTICS

TEST ITEMS	MEASUREMENT CONDITION	REQUIREMENT
Random Drop	Filter shall be measured after 3 times random drops from the height of 30cm on concrete floor	No visible damage and it meet Table at Page 4~5
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 damage and it meet Table at Page 4~5
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.
Substrate Bending Test	Apply pressure in the direction of arrow at a rate of about 0.5mm per second until it reaches a bend of 3mm and hold for 30s.	No damage, no cut-off and it meet Table at Page 4~5
Adhesion	A static load of 20N to the direction of the arrow shall be applied on the core of the component and hold for 10 seconds. Filter shall be soldered correctly and tightly to PCB.	No damage, no cut-off and it meet Table at Page 4~5
Reflow Soldering	Put on the solder paste on the printed wiring board the samples shall be mounted and soldered under the condition, then it shall be subjected to the room atmosphere for 24 hours prior to the measurement.	No damage, no cut-off and it meet Table at Page 4~5

ENVIRONMENTAL CHARACTERISTICS

TEST ITEMS	MEASUREMENT CONDITION	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 at Page 4~5
Resistance to Solder Heat	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 at Page 4~5
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 at Page 4~5
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 at Page 4~5
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 at Page 4~5

IMPORTANT NOTES AND DISCLAIMER

1. ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.

2. REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.

3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

4. NextGen Component, Inc (*NextGen*) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

5. *NextGen* makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does *NextGen* assume any liability for application assistance or customer product design.

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