SPECIFICATION SHEET

MHZ THRU-HOLE CERAMIC FILTER FG SERIES

SPECIFICATION SHEET NO.	R1010- FG10M70000L100	
ORIGINAL MFG/PART NO	TGS Crystals/CF 10.7MS3 BLH/LT10.7MS3/LT10.7MS3UAC0-B0	
DATE	Oct. 10, 2024	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	MHz Thru-Hole Ceramic Filter, 3 Pins, FG Series, Dimension L7.0*W4.0*H7.0mm 10.7MHz, Insertion Loss. 7.0dB Max. 3dB Band Width kHz (Min.) 180±40KHz; Input/Output Impedance: 330Ω, Operating Temp. Range -40°C ~+80°C; Package in Bulk, 500pcs/Bag 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

- MHz Thru-Hole Ceramic Filter, 3 pins,
- Dimension L7.0*W4.0*H7.0mm
- Low Cost And Short Shipment
- Cross Main Competitors Parts SFELE10M7F series
- REACH/RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863)

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

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

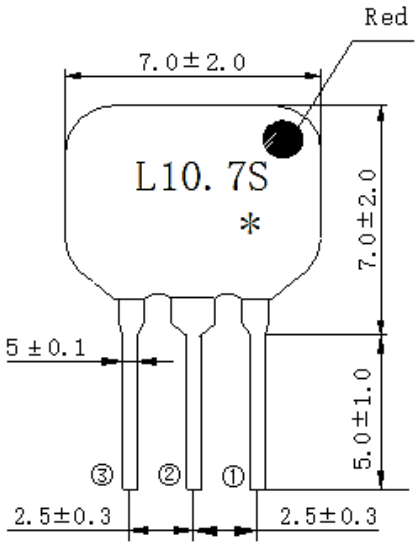
CODE	NAME	KEY SPECIFICATION OPTION
FG	Product Series	MHz Thru-Hole Ceramic Filter, 3 pins, Dimension L7.0*W4.0*H7.0mm
10M7	Frequency Range	10M7: 10.7000MHz
0000	Internal Control	Letter or Digits (A~Z, a~z or 1~9)
L	Thru-Hole Type Package	Packed in Bulk
001	Special Parametric	Letter or Digits (A~Z, a~z 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)

Thru-Hole Type, 3 Pins

L7.0*W4.0*H7.0mm

Top View

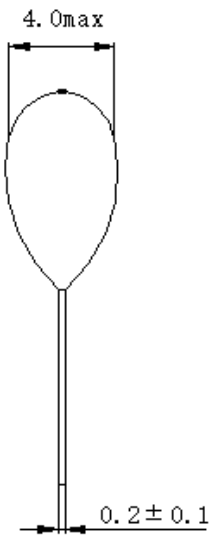


Marking:

L10.7S + QC Code

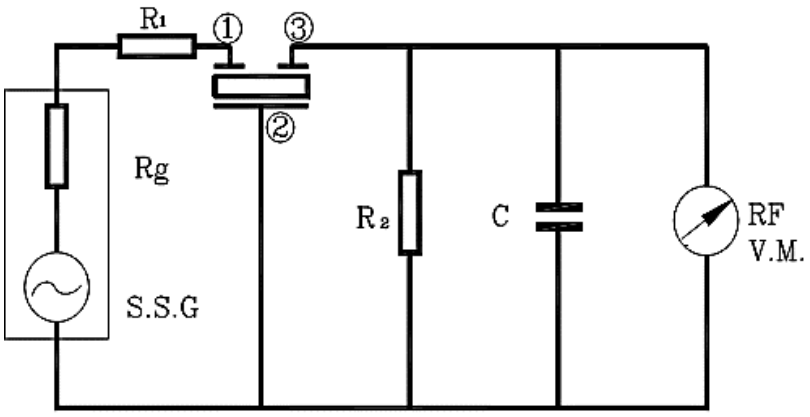
Connection: ① Input ② Ground ③ Output

Side View



MEASUREMENT

- Parts shall be tested under the condition (Temp.: 20±15℃,Humidity 65±20% R.H.) unless the standard condition (Temp.: 25±3 ℃, Humidity : 65±10% R.H.)is regulated to measure.
- Measuring Circuit



C=10pF(Including stray capacitance and input capacitance of RF voltmeter)

ELECTRICAL SPECIFICATIONS - Rating

PARAMETER	CONDITION	SYMBOLS	VALUE	UNITS
Withstanding Voltage Max.	@DC, 1 min.	-	50	V
Insulation Resistance Min.	@10V, 1 min.	R_i	100	mΩ
Operating Junction e Temp. Range		T_J	-40 to +85	℃
Storage Temperature Range		T_{STG}	-40 to +85	℃

MAIN ELECTRICAL SPECIFICATIONS

PARAMETER	CONDITION	SYMBOLS	VALUE	UNITS
Center Frequency		f0	10.700±0.030	MHz
3dB Bandwidth			180±40	kHz
20dB Bandwidth			520 Max.	kHz
Insertion Loss			7.0 Max.	dB
Ripple	within 3dB bandwidth		1.0 Max.	dB
Spurious Attenuation	@9~ 12MHz		40 Min.	dB
Input/Output Impedance			330	Ω
Temperature Coefficient of Frequency	@ Center Frequency drift, -40 ~ 85℃		±50 Max.	ppm/℃

ENVIRONMENTAL TEST

TEST ITEMS	TEST METHOD AND CONDITIONS	REQUIREMENT
Humidity	Subject the filter at 60±2℃ and 90%-95% R.H. for 1000h, Filter shall be measured after being placed in natural conditions for 1h.	It shall meet Specification
High Temperature	Subject the filter to 85±2℃ for 1000h, Filter shall be measured after being placed in natural conditions for 1h.	It shall meet Specification
Low Temperature	Subject the filter to -40±2℃ for 1000h, Filter shall be measured after being placed in natural conditions for 1h.	It shall meet Specification
Temperature Cycling	After temperature cycling of blow table was performed 5 times, Filter shall be measured after being placed in natural conditions for 1h. Temp.: –40±3℃, Time: 30±3 min ; Temp.: –85±3℃, Time: 30±3 min.	It shall meet Specification
Vibration	Subject the filter to vibration for 2h.Each in x y and z axis with the amplitude of 1.5mm, The frequency shall be varied uniformly between the limits of 10Hz-55Hz-10Hz and then filter shall be measured.	It shall meet Specification
Mechanical Shock	Filter shall be measured after 3 times random dropping from the height of 1m on the wooden plate.	It shall meet Specification
Resistance to Soldering Heat	1）Lead terminals are immersed up to 2 mm from filter's body in soldering bath of 260±5℃ for 10±1s and then filter shall be measured after being placed in natural conditions for 1h. 2）Lead terminals is directly contacted with the tip of soldering iron of 350±5℃ for 5.0±0.5s and then filter shall be measured after being placed in natural conditions for 1h.	It shall meet Specification
Solderability	Lead terminals are immersed up to 2mm from filter's body in soldering bath of 250±5℃ for 3±0.5s.	More than 95% of the terminal surface of the filter shall be covered with fresh solder.

ENVIRONMENTAL TEST

TEST ITEMS	TEST METHOD AND CONDITIONS	REQUIREMENT
Terminal Strength Terminal Pulling Terminal Bending	Force of 5N is applied to each lead in axial direction for 10s±1s. When force of 5N is applied to each lead in axial direction, the lead shall folded up 90°from the axial direction and folded back to the axial direction. The speed of folding shall be each 3s	No visible damage and it shall fulfill Table 1.

Table 1

TEST ITEMS	CHARACTERISTICS AFTER TEST	
	VALUE	UNITS
Center Frequency Drift	±30 Max.	kHz
Insertion Loss Drift	±2.0 Max.	dB
3dB Bandwidth Drift	±20 Max.	kHz
20dB Bandwidth Drift	±30 Max.	kHz
Spurious Response	38 Min.	dB
Note: The limits in the above table are referenced to the initial measurements.		

CAUTION

- Don’t apply excess mechanical stress to the component and terminals at soldering. Do not use this product with bend.
- Do not clean or wash the component for it is not hermetically sealed.
- Do not use strong acidity flux, more than 0.2wt% chlorine content, in flow soldering.
- Don’t be close to fire.
- This specification mentions the quality of the component as a single unit. Please insure the component is thoroughly evaluated in your application circuit
- Expire date (Shelf life) of the products is 12 months after delivery under the conditions of a sealed and an unopened package. Please use the products within 12 months after delivery. If you store the products for a long time (more than 12 months), use carefully because the products may be degraded in the solder-ability or rusty. Please confirm solder-ability and characteristics for the products regularly.
- Exposure components under soldering condition that is exceeding our recommendation will increase the failure dangerous.
- Please contact us before using the product as automobile electronic component.
- Please return one of these specifications after your signature of acceptance.
- When something gets doubtful with this specifications, we shall jointly work to get an agreement.
- For questions on technology, prices and delivery, please contact our sales offices or e-mail: sales@NextGenComponent.com .

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.

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