




SPECIFICATION SHEET

| | | |
|---|---|-------------------------------|
| SPECIFICATION SHEET NO. | R0627- FK10M70000SVS2 | |
| DATE | June 27, 2024 | |
| REVISION | A3 | Updated With Most Recent Data |
| DESCRIPTION AND MAIN PARAMETRICS | <p>SMD MHz Ceramic Filter, L7.0*W3.0*H1.5mm, 3 Pads, FK Series 10.700MHz, 3dB Bandwidth kHz (Min.) 230±50KHz Insertion Loss: 3.5±2.0dB Input/Output Impedance: 330Ω Operating Temp. Range -20°C ~+80°C Packed in Tape/Reel RoHS III/REACH Compliant</p> | |
| CUSTOMER | | |
| CUSTOMER PART NO. | | |
| CROSS REF. PART NO. | | |
| ORIGINAL MFG/PART NO. | TGS/CF73 10.7MVS2 TLH/LTCV10.7MS2/LTCV10.7MS2UAC0-R1 | |
| PART CODE | FK10M70000SVS2 | |

| | | |
|-------------------------|---|---|
| VENDOR APPROVE | | |
| Issued/Checked/Approved |  |  |
| | |  |
| DATE: June 27 2024 | | |

| | |
|-------------------------|--|
| CUSTOMER APPROVE | |
| | |
| DATE: | |

SMD MHZ CERAMIC FILTER 10.7MHZ FK SERIES

MAIN FEATURE

- SMD MHz Ceramic Filter, L7.0*W3.0*H1.5mm, 3 Pads
- Low Cost & Short Lead Time.
- REACH/RoHS III Complaint
- Cross Main Competitor Parts in Market



APPLICATION

- Communication Electronics and more

ELECTRICAL CHARACTERISTICS

- See Page 5~Page 6 For Different Part Code

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HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate Pat Code When You Order Or RFQ For Custom Specification

[RFQ](#)
Request For Quotation

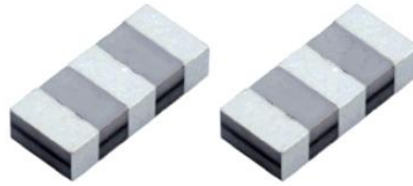
PART CODE GUIDE

| CODE | NAME | KEY SPECIFICATION OPTION |
|-------|----------------------------|--|
| FK | Product Series Code | SMD MHz Ceramic Filter, L7.0*W3.0*H1.5mm, 3 Pads |
| 10M7 | Frequency Range Code | 10M7: 10.7000MHz |
| 0000S | Internal Control Code | Custom letter A~Z, a-z or Digits (0-9) |
| VS2 | Main Specification Code | OAJ: 3dB Bandwidth kHz (Min.) 150±40KHz, Insertion Loss:10.0dB Max. OVJ: 3dB Bandwidth kHz (Min.) 150±40KHz, Insertion Loss:5.5±2.0dB AS3: 3dB Bandwidth kHz (Min.) 180±40KHz, Insertion Loss:7.0dB Max. VS3: 3dB Bandwidth kHz (Min.) 180±40KHz, Insertion Loss:4.0±2.0dB AS2: 3dB Bandwidth kHz (Min.) 230±50KHz, Insertion Loss:6.0dB Max. VS2: 3dB Bandwidth kHz (Min.) 230±50KHz, Insertion Loss:3.5±2.0dB AA5: 3dB Bandwidth kHz (Min.) 280±50KHz, Insertion Loss:6.0dB Max. VA5: 3dB Bandwidth kHz (Min.) 280±50KHz, Insertion Loss:3.0±2.0dB VA20: 3dB Bandwidth kHz (Min.) 330±50KHz, Insertion Loss:4.0±2.0dB VA19: 3dB Bandwidth kHz (Min.) Fn±175KHz, Insertion Loss:3.0±2.0dB OHY: 3dB Bandwidth kHz (Min.) 110±30KHz, Insertion Loss:6.0±2.0dB |

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DIMENSION (Unit: mm)

Image for reference

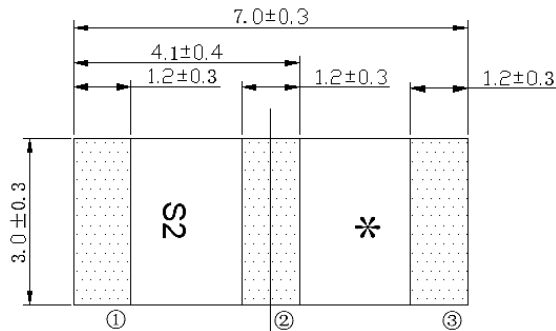


Marking:

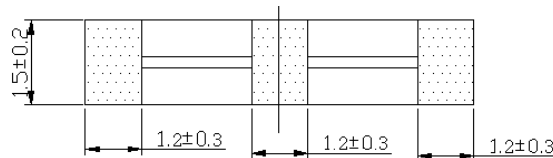
See Page 6 Marking List

For different Part code

FK series Case Dimension,
L7.0*W3.0*H1.5mm



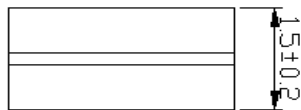
*: QC Code



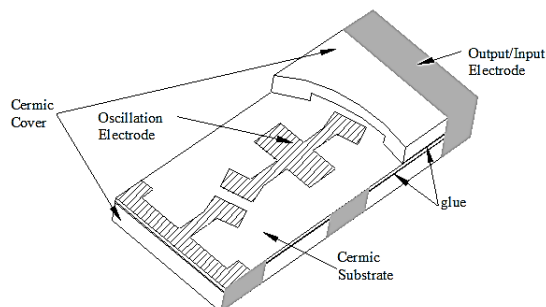
(1): Input

(2): Ground

(3): Output



Structure



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ELECTRICAL SPECIFICATIONS - Rating

| PARAMETER | SYMBOLS | VALUE | UNITS |
|---|------------------|------------|-------|
| Withstanding Voltage Max. @DC, 1 min. | - | 50 | V |
| Insulation Resistance Min. @10V, 1 min. | R _i | 100 | mΩ |
| Operating Junction e Temperature Range | T _J | -20 to +80 | °C |
| Storage Temperature Range | T _{STG} | -40 to +85 | °C |

ELECTRICAL CHARACTERISTICS FOR DIFFERENT PART CODE- PART I

| PART CODE | Center Frequency | 3dB Bandwidth Min. | 20dB Bandwidth Max. | Insertion Loss @Min. Loss Point | Ripple Max. (Within 3dB Bandwidth) |
|-----------------------|------------------|--------------------|---------------------|---------------------------------|------------------------------------|
| | MHz | KHz | KHz | dB | dB |
| FK10M70000SOAJ | 10.7±0.03 | 150±40 | 430 | 10.0 Max. | 1.0 |
| FK10M70000SOVJ | 10.7±0.03 | 150±40 | 380 | 5.5±2.0 | 1.0 |
| FK10M70000SAS3 | 10.7±0.03 | 180±40 | 520 | 7.0 Max. | 1.0 |
| FK10M70000SVS3 | 10.7±0.03 | 180±40 | 470 | 4.0±2.0 | 1.0 |
| FK10M70000SAS2 | 10.7±0.03 | 230±50 | 570 | 6.0 Max. | 1.0 |
| FK10M70000SVS2 | 10.7±0.03 | 230±50 | 510 | 3.5±2.0 | 1.0 |
| FK10M70000SAA5 | 10.7±0.03 | 280±50 | 650 | 6.0 Max. | 1.0 |
| FK10M70000SVA5 | 10.7±0.03 | 280±50 | 590 | 3.0±2.0 | 1.0 |
| FK10M70000SVA20 | 10.7±0.03 | 330±50 | 680 | 4.0±2.0 | 1.0 |
| FK10M70000SVA19 | 10.7±0.03 | Fn±175 | 950 | 3.0±2.0 | 3.0 |
| FK10M70000SOHY | 10.7±0.03 | 110±30 | 320 | 6.0±2.0 | 1.0 |

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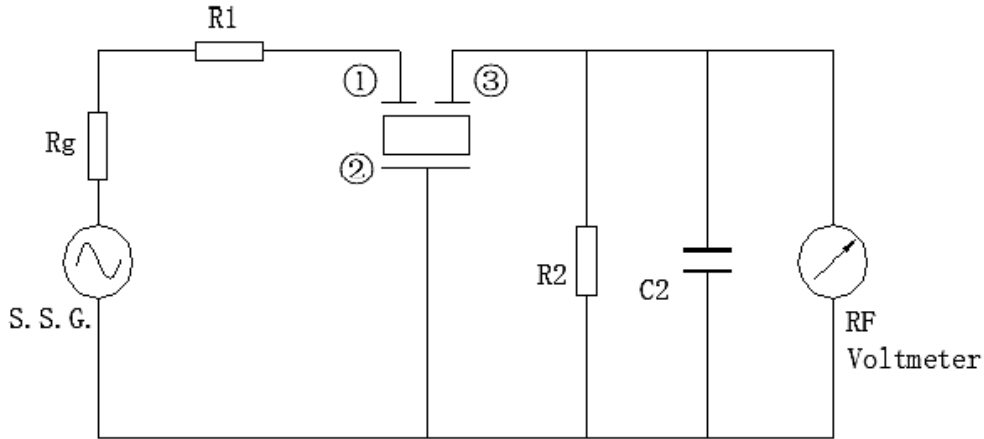
ELECTRICAL CHARACTERISTICS FOR DIFFERENT PART CODE- PART II

| PART CODE | Center Frequency | Spurious Attenuation Min. | Input/Output Impedance | Temperature Characteristic @ -20°C to 80°C | Marking List |
|-----------------------|------------------|---------------------------|------------------------|--|--------------|
| | MHz | dB | Ω | % | |
| FK10M70000S0AJ | 10.7±0.03 | 30 @9~12MHz | 330 | ±0.5 | MJ |
| FK10M70000S0VJ | 10.7±0.03 | 35 @9~12MHz | 330 | ±0.5 | MJ |
| FK10M70000SAS3 | 10.7±0.03 | 30 @9~12MHz | 330 | ±0.5 | S3 |
| FK10M70000SVS3 | 10.7±0.03 | 35 @9~12MHz | 330 | ±0.5 | S3 |
| FK10M70000SAS2 | 10.7±0.03 | 30 @9~12MHz | 330 | ±0.5 | S2 |
| FK10M70000SVS2 | 10.7±0.03 | 35 @9~12MHz | 330 | ±0.5 | S2 |
| FK10M70000SAA5 | 10.7±0.03 | 30 @9~12MHz | 330 | ±0.5 | A5 |
| FK10M70000SVA5 | 10.7±0.03 | 35 @9~12MHz | 330 | ±0.5 | A5 |
| FK10M7000SVA20 | 10.7±0.03 | 30 @9~12MHz | 330 | ±0.5 | A20 |
| FK10M7000SVA19 | 10.7±0.03 | 20 @5~15MHz | 470 | ±0.5 | A19 |
| FK10M70000S0HY | 10.7±0.03 | 35 @9~12MHz | 330 | ±0.5 | HY |

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TEST CIRCUIT - For Reference Only

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



$R1+Rg = R2=330\Omega\pm5\%$, $Rg=50\Omega$; $C2=10\text{ PF}$ (Including stray capacitance and capacitance of RF Voltmeter)

S.S.G:Output Voltmeter; (1): Input (2): Ground (3): Output

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RELIABILITY

| TEST ITEMS | TEST METHOD AND CONDITIONS | REQUIREMENT |
|---------------------|--|--|
| Humidity | After being placed in a chamber with 90-95% R.H. at 40±2°C for 96 hours and then being placed in room temperature for 1 hour, filter shall be measured. | It shall meet Specification |
| High Temperature | After being placed in a chamber with 85±2 °C,for 96 hours and then being placed in room temperature for 1 hour, filter shall be measured. | It shall meet Specification |
| Low Temperature | After being placed in a chamber with -40±2 °C,for 96 hours and then being placed in room temperature for 1 hour, filter shall be measured. | 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.: -20±3°C, Time: 30±3 min ; Temp.: -80±3°C, 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 |
| Soldering Test | Passed through the reflow oven under the following condition, and left at room temp. for 24 hours before measurement. | It shall meet Specification |
| Solderability | Dipped in 235°C±5°C solder bath for 3s±0.5s with rosin flux (25wt% ethanol solution.) see <i>Suggested Reflow Profile</i> | The terminals shall be at least 95% covered by solder. |
| Board Bending | Mount on a glass-epoxy board(width =50mm, thickness=1.6mm),then bend it to 1mm displacement(velocity= 1mm/s) and keep it for 5s. | Mechanical damage such as break shall not occur |

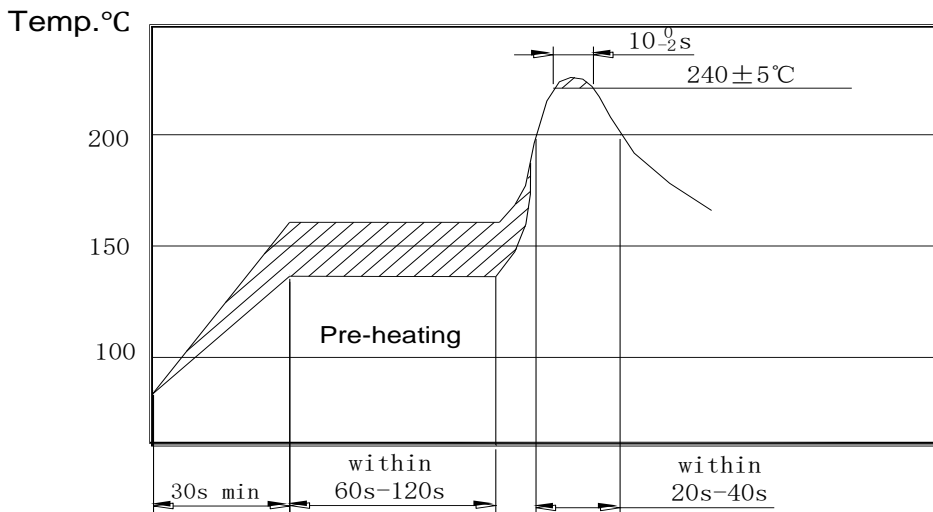
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Table 1

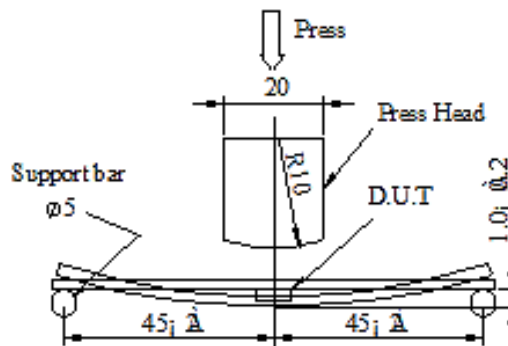
| TEST ITEMS | CHARACTERISTICS AFTER TEST | |
|-----------------------------|----------------------------|-------|
| | VALUE | UNITS |
| Center Frequency Drift Max. | ±30 | kHz |
| Insertion Loss Drift Max. | ±2.0 | dB |
| 3dB Bandwidth Drift Max. | ±25 | kHz |
| 20dB Bandwidth Drift Max. | ±60 | kHz |

Note: The limits in the above table are referenced to the initial measurements.

Soldering Test

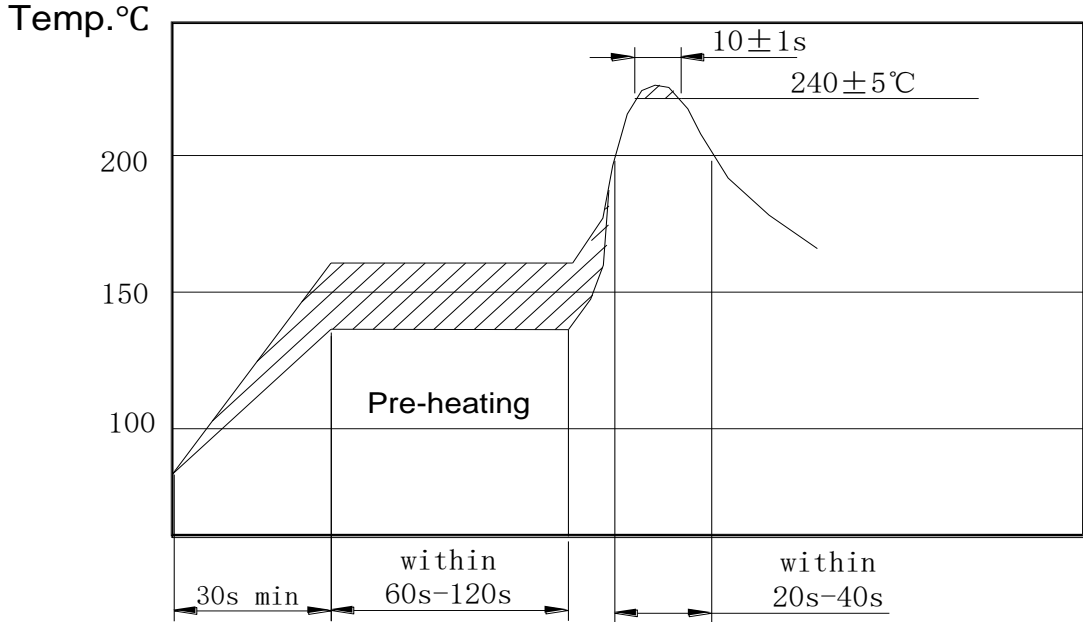


Board Bending

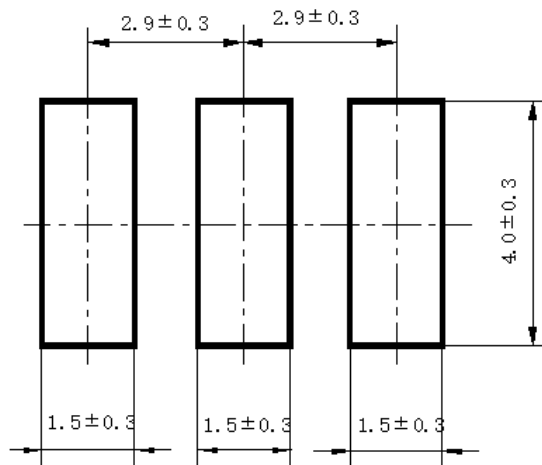


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SUGGESTED REFLOW PROFILE - For Reference Only



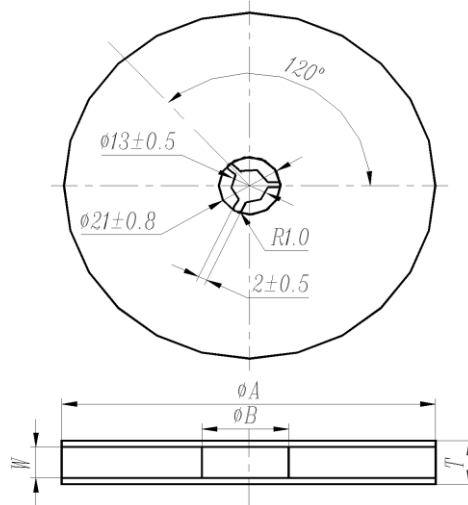
RECOMMENDED LAND PATTERN- (Unit: mm)



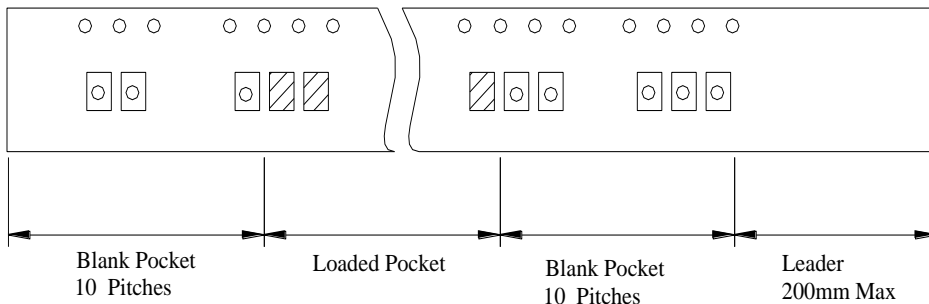
- (1): Input
- (2): Ground
- (3): Output

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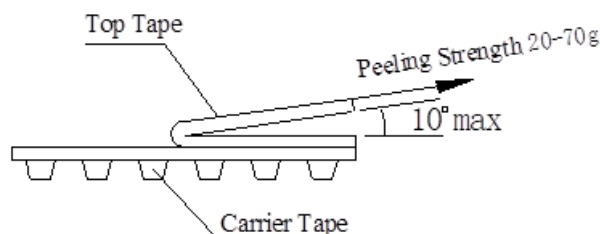
TPAE/REEL DIMENSIONS (Unit: mm)



| φA | φB | W | T | Pieces Per Reel | Carrier Tape Size |
|---------|---------|-----------|-----------|-----------------|-------------------|
| 180 ± 3 | 60 Min. | 12.4 Min. | 19.4 Max. | 1000 Typ. | 12 |



TEST CONDITION OF PEELING STRENGTH



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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 .

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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.
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