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| Approved by: |
| Checked by: |
| Issued by: |

# *SPECIFICATION*

**MODEL:HDF930A1 F11**

**CHINA SHOULDER ELECTRONICS COMPANY LIMITED**

# 1. SCOPE

This specification shall cover the characteristics of SAW filter With F930A1 used for the page system.

# 2. ELECTRICAL SPECIFICATION

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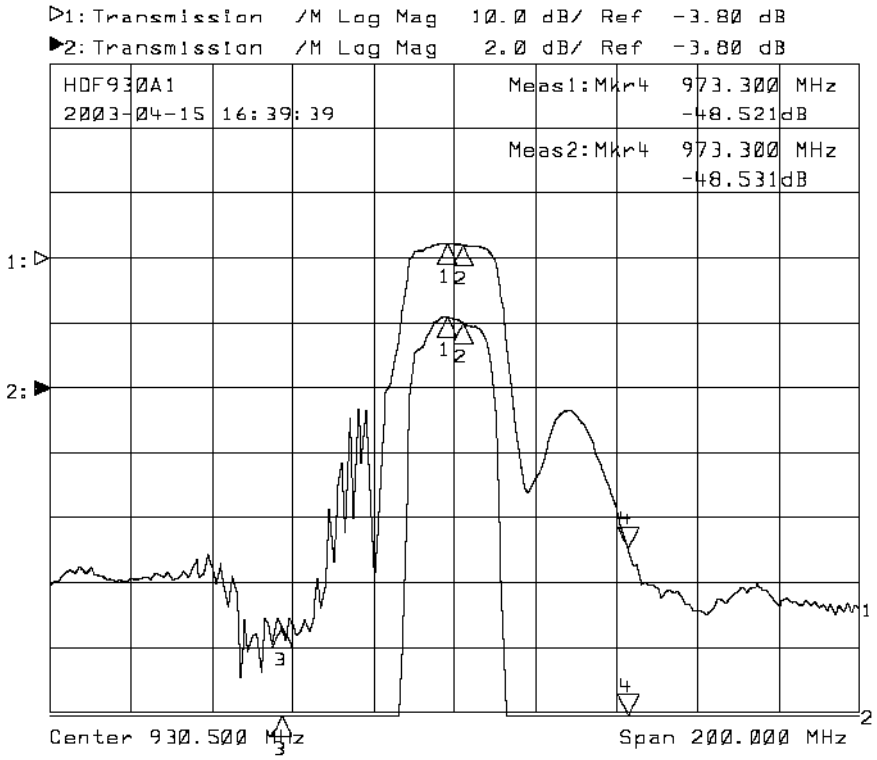
|---|---|
| DC Voltage VDC | 10V |
| AC Voltage Vpp | 10V50Hz/60Hz |
| Operation temperature | -20℃ to +60℃ |
| Storage temperature | -45℃ to +85℃ |
| RF Power Dissipation | 0dBm |

Electronic Characteristics

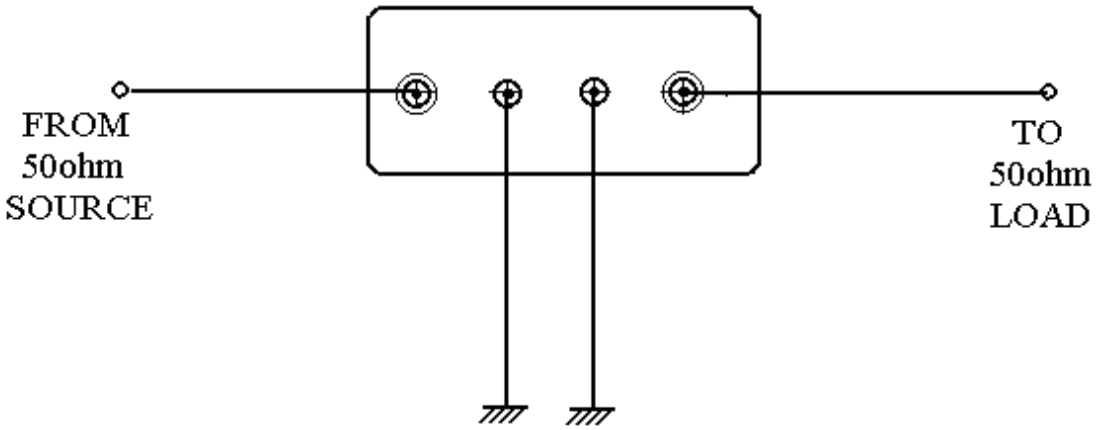
2-1.Typical frequency response



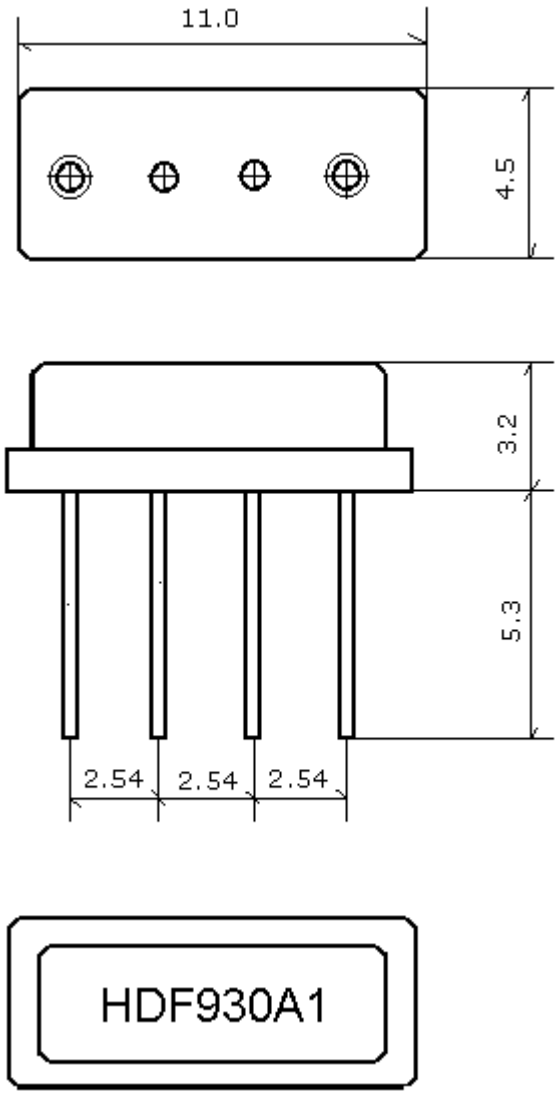

2-2.Electrical characteristics

| | |
|---|---|
| Part Number | HDF930A1 |
| Nominal center frequency(MHz) | 930.5 |
| Insertion loss(dB)<br>1. Fo±2.0MHz<br>2. Fo-400.0~-40.8MHz<br>3. Fo+50.0~+400MHz | <br>4.5 max.<br>45 min.<br>45 min. |
| Ripple deviation (Fo±2.0MHz) | 2.0 max. |
| Input/output impedance (Nominal) | 50+j52.8 ohm |

## 3. TEST CIRCUIT




## 4. DIMENSION



# 5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the filter to +80℃ for 96 hours. Then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-2 Moisture

Keep the filter at 40℃ and 95% rh for 96 hours. then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-3 Low temperature exposure

Subject the filter to -20℃ for 96 hours. Then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-4 Temperature cycling

Subject the filter to a low temperature of -55℃for 30 minutes. Following by a high temperature of +85℃ for 30 Minutes. Then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall meet the specifications in table 1.

5-5 Resistance to solder heat

Dip the filter terminals no closer than 1.5mm into the solder bath at 270 ℃ ±10℃ for 10±1 sec. Then release the Filter into the room conditions for 1 to 2 hours. The Filter shall meet the specifications in table 1.

5-6 Mechanical shock

Drop the filter randomly onto the concrete floor from the height of 30cm 3 times. the filter shall fulfill the specifications in table 1.

5-7 Vibration

Subject the filter to the vibration for 1 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 hz. The filter shall fulfillthe specifications in table 1.

5-8 Lead fatigue

6-8-1 Pulling test

Weight along with the direction of lead without an shock 3 kg. The filter shall satisfy all the initial Characteristics.

6-8-2 Bending test

Lead shall be subject to withstand against 90℃ bending in the direction of thickness. This operation shall be done toward both direction. The filter shall show no evidence of damage and shall satisfy all the initial electrical characteristics.

# 6. REMARK

6.1 Static voltage

Static voltage between signal load & ground may cause deterioration

&destruction of the component. Please avoid static voltage.

6.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

6.3 Soldering

Only leads of component may be soldered. Please avoid soldering another part of component.