



SHOULDER

SHOULDER ELECTRONICS LIMITED

SPECIFICATION FOR APPROVAL

NO 编号: _____

CUSTOMER 客 户: _____

PRODUCT 产 品: _____ SAW FILTER _____

MODEL NO 型 号: _____ HDF448A F11 _____

PREPARED 编 制: _____ Fengyu _____ CHECKED 审 核: _____ York _____

APPROVED 批 准: _____ Lijiating _____ DATE 日 期: _____ 2007-04-03 _____

CUSTOMER 客户确认意见:

CHECKED 审 核:

APPROVED 批 准:

DATE 日 期:

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1. SCOPE

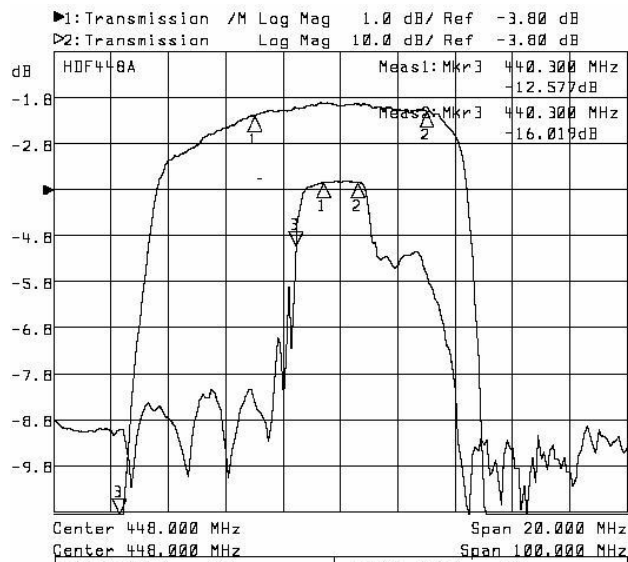
This specification shall cover the characteristics of SAW filter With F448A&AS used for the page system.

2. ELECTRICAL SPECIFICATION

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

Electronic Characteristics

2-1. Typical frequency response

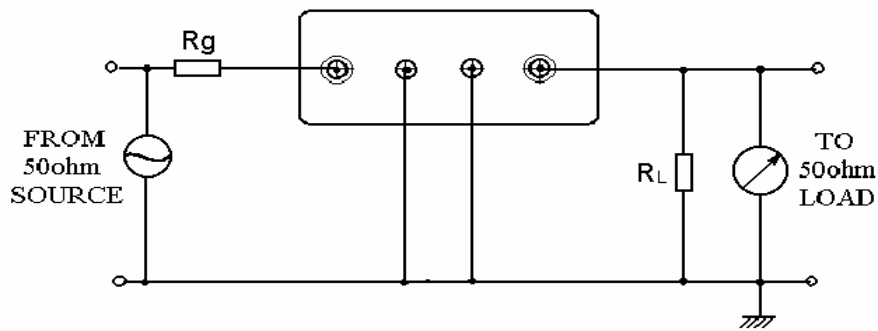


2-2. Electrical characteristics

Part number	F448A&AS	Unit
Nominal center frequency (Fo)	448	MHz
Insertion Loss		
1.fo-45.8~fo-39.8 MHz	50min.	dB
2.fo ± 3.0 MHz	4.0max.	
3.fo +39.8~ fo +45.8MHz	45min.	
Ripple (with Fo ± 3.0MHz)	2.0max	dB
Input/Output Impedance(Nominal)	50//0	Ω/pF

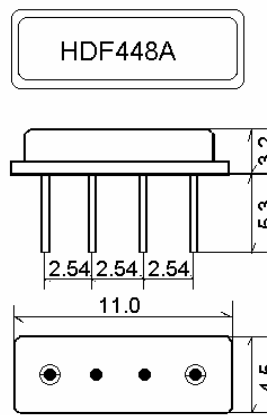
(Note: Operating temperature Range:-20°C to +60°C)

2. TEST CIRCUIT

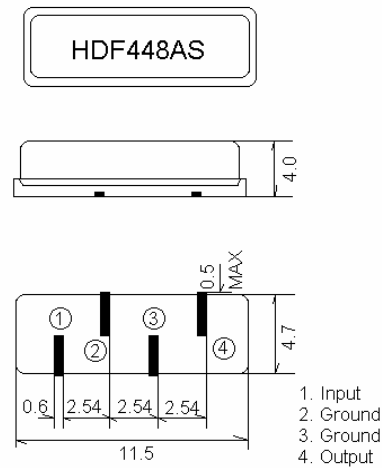


4. DIMENSION

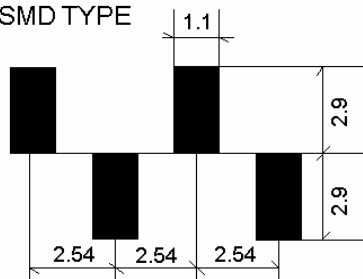
■ DIP TYPE:



■ SEMI-SMD TYPE:



■ Recommended layout of PCB(MM) (Tolerance ± 0.2 MM) for Semi-SMD TYPE



5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the filter to $+80^{\circ}\text{C}$ 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°C 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°C 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°C for 30 minutes. Following by a high temperature of +85°C 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 °C $\pm 10^\circ\text{C}$ 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 fulfill the 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°C 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.