



SHOULDER

SHOULDER ELECTRONICS CO., LTD

SPECIFICATION FOR APPROVAL

NO 编号: _____

CUSTOMER 客 户: _____

PRODUCT 产 品: _____ SAW FILTER

MODEL NO 型 号: _____ HDF160F F11

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

APPROVED 批 准: _____ Lijiating DATE 日 期: _____ 2006-5-11

CUSTOMER 客户确认意见:

CHECKED 审 核:

APPROVED 批 准:

DATE 日 期:

公司地址: 广东深圳市福田区车公庙泰然工业区 303 栋 5 楼西座
West 5/F, 303 Bldg., Che Gong Miao, Industry Park, Futian
Dist., Shenzhen, Guangdong, China.

Tel: 86-755-82916880 Fax: 86-755-82916881

工厂地址: 江苏无锡市滨湖经济技术开发区高运路 115 号

No. 115, Gaoyun road, Binhu Economic&Technology Development
Area, Wuxi, Jiangsu, China

Tel: 86-510-5629111 Fax: 86-510-5627222

[Website: www.shoulder.cn](http://www.shoulder.cn)

1. SCOPE

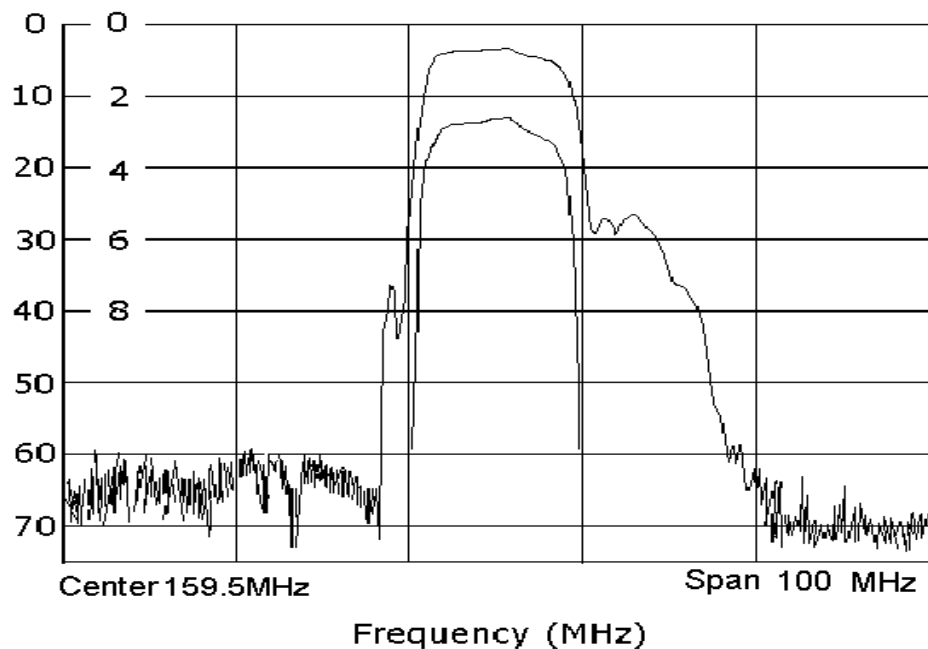
This specification shall cover the characteristics of SAW filter With F160F used for the page system.

2. ELECTRICAL SPECIFICATION

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

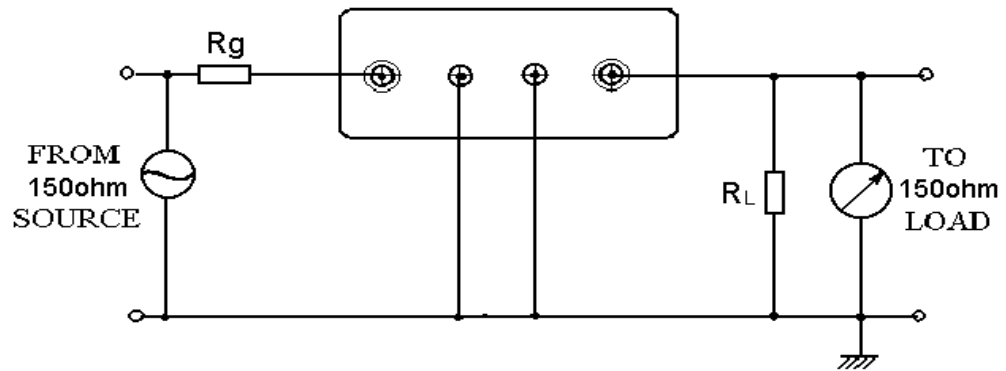
2-1. Typical frequency response



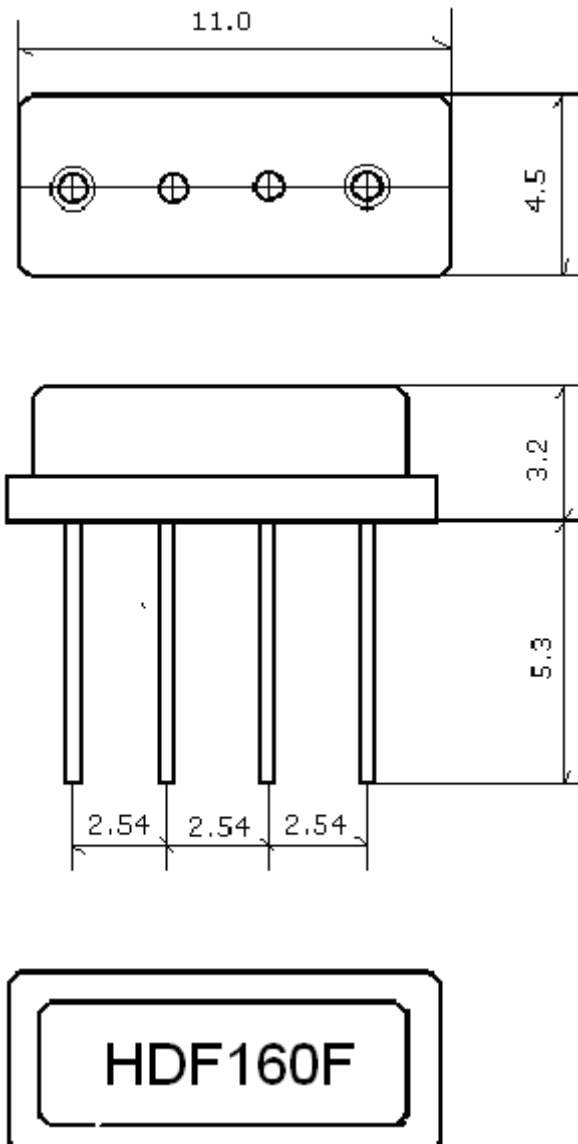
2-2. Electrical characteristics

Part number	F160F	Unit
Nominal center frequency (Fo)	159.5	MHz
Insertion Loss		
1.fo-45.8~fo-39.8 MHz	50min.	dB
2.fo	5.0max.	
3.fo +39.8~ fo +45.8MHz	45min.	
Passband(ΔF_{-3dB})	± 4.0 min.	MHz
Ripple (with Fo ± 3.0 MHz)	2.0max	dB
Input/Output Impedance(Nominal)	150//0	Ω /pF

3. TEST CIRCUIT



4. DIMENSION



5. ENVIRONMENTAL CHARACTERISTICS

5-1 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of $+25^{\circ}\text{C}$ for 5 Minutes and a higher temperature of $+85^{\circ}\text{C}$ for 30 Minutes. Then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall meet the specifications in table 1.

5-2 Resistance to solder heat

Submerge the device terminals into the solder bath at $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 10 ± 1 sec. Then release the device into the room conditions for 4 hours. It shall meet the specifications in table 1.

5-3 Solderability

Submerge the device terminals into the solder bath at $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in table 1.

5-4 Mechanical shock

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

5-5 Vibration

Subject the device to the vibration for 2 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.

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.