
SHOULDER

SHOULDER ELECTRONICS LIMITED

SPECIFICATION FOR APPROVAL

NO 编号: _____

CUSTOMER 客 户: _____
PRODUCT 产 品: _____ SAW FILTER _____
MODEL NO 型 号: _____ HDF915A F11 _____
PREPARED 编 制: _____ Fengyu _____ CHECKED 审 核: _____ York _____
APPROVED 批 准: _____ Lijiating _____ DATE 日 期: _____ 2007-03-15 _____

CUSTOMER 客户确认意见:	
CHECKED 审 核:	
APPROVED 批 准:	
DATE 日 期:	

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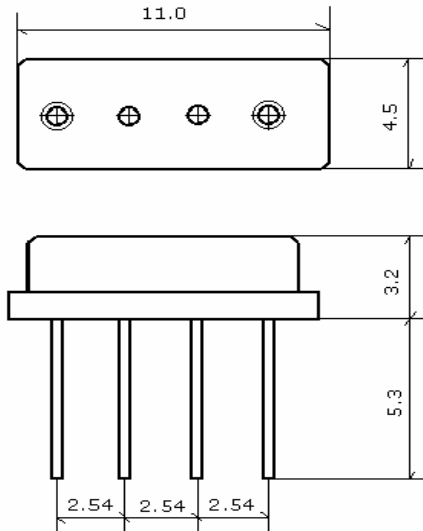
Tel: 86-510-5629111 Fax: 86-510-5627222

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

1. Package Dimension

Unit:mm

(F-11)



NO	Function
1	Input
2	Ground
3	Ground
4	Output

2. Marking

HD F915A

1.Color: Black or Blue

2.914: Center Frequency(MHz)

3.Performance

3.1 Application

Low-Loss SAW Filter of cordless system.

Center Frequency: 915 MHz

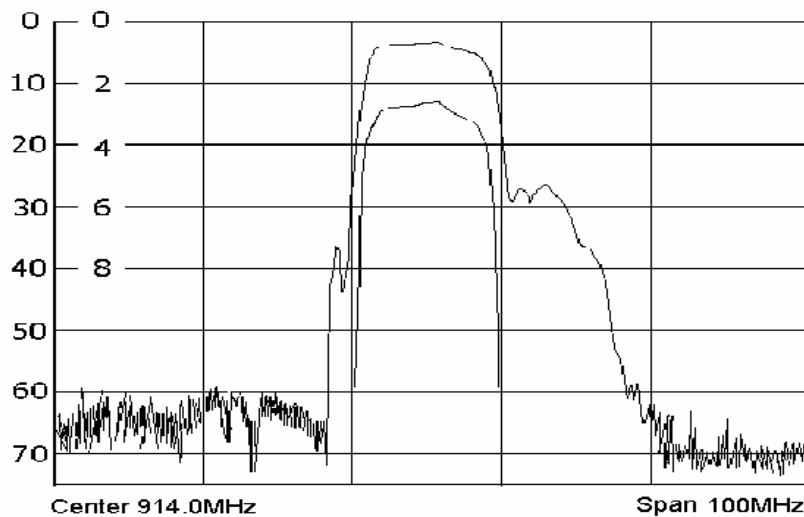
3.2 Maximum Rating

Operation Temperature Range	-10°C to +50°C
Storage Temperature Range	-40°C to +85°C
DC. Permissive Voltage	0 V DC. max.
Maximum Input Power	5dBm

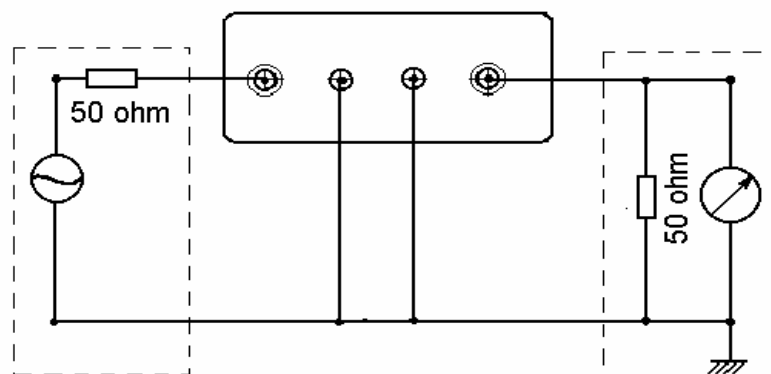
3.3 Electronic Characteristics

Item	Specification
Center Frequency(f_0)	915 MHz
Insertion Loss(dB)	
1.)912-916 MHz	4.5max
2.)869-873 MHz	40 min
3.)891-894 MHz	30 min
4.)934-937 MHz	20 min
5.)955-960 MHz	40 min
Ripple deviation (913-915MHz)(dB)	1.5max
Input/output Impedance(Nominal)	50 Ω
Operating Temperature Range	0°C to +50°C

3.4 Frequency Characteristics



3.5 Test Circuit



4. ENVIRONMENTAL CHARACTERISTICS

4-1 High temperature exposure

Subject the filter to +80°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 .

4-2 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 .

4-3 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.

4-4 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.

4-5 Resistance to solder heat

Dip the filter terminals no closer than 1.5mm into the solder bath at 27°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.

4-6 Mechanical shock

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

4-7 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.

4-8 Lead fatigue

4-8-1 Pulling test

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

4-8-2 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.

5. REMARK

5.1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

5.2 Ultrasonic cleaning

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

5.3 Soldering

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