

规格书编号

SPEC NO :

# 产品规格书

# SPECIFICATION

CUSTOMER 客户: \_\_\_\_\_  
PRODUCT 产品: \_\_\_\_\_ SAW FILTER \_\_\_\_\_  
MODEL NO 型号: \_\_\_\_\_ HDF110M3 SMD-21 \_\_\_\_\_  
PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ D A T E 日期: \_\_\_\_\_ 2005-10-10 \_\_\_\_\_

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子有限公司  
Shoulder Electronics Limited



**1. SCOPE**

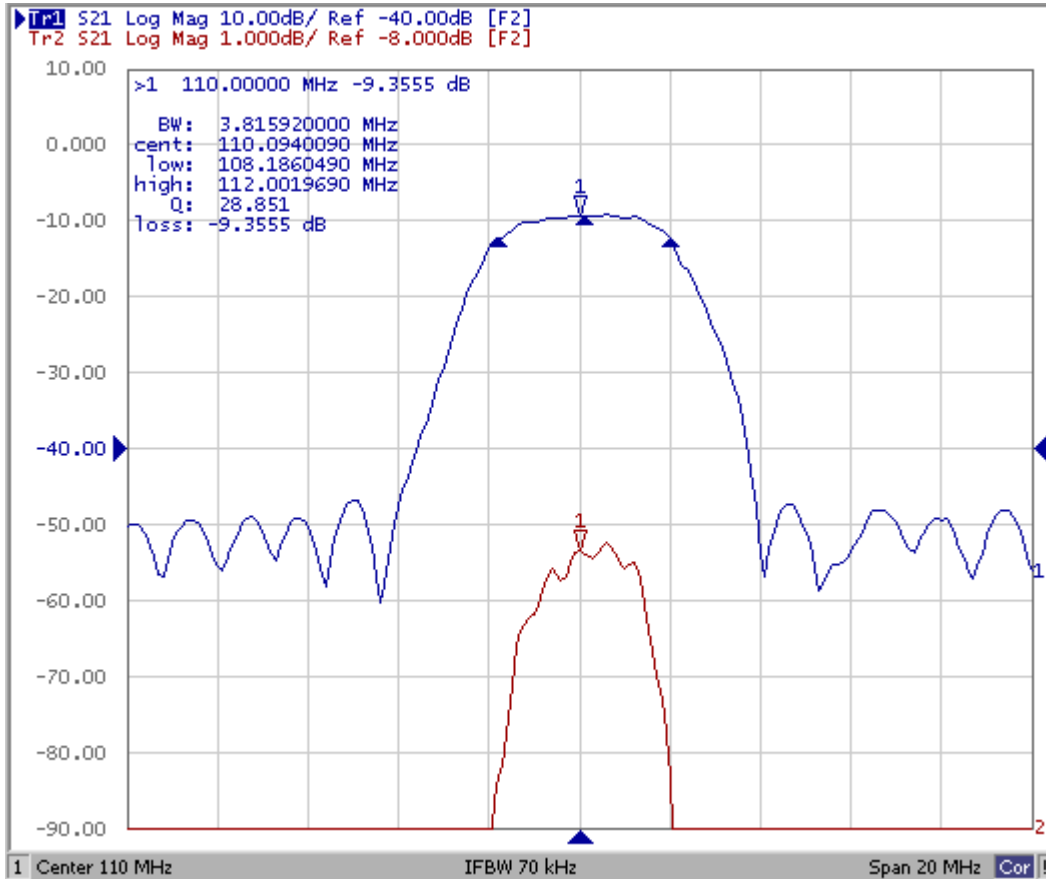
This specification shall cover the characteristics of SAW filter With 110M3 used for IF applications.

**2. ELECTRICAL SPECIFICATION**

DC Voltage VDC	0V
AC Voltage Vpp	10V50Hz/60Hz
Operation temperature	-40°C to +85°C
Storage temperature	-45°C to +85°C
RF Power Dissipation	0dBm

Electronic Characteristics

2-1. Typical frequency response

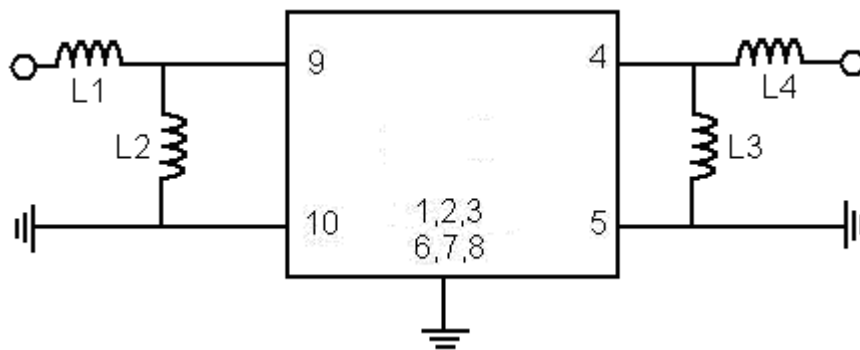


2-2.Electrical characteristics

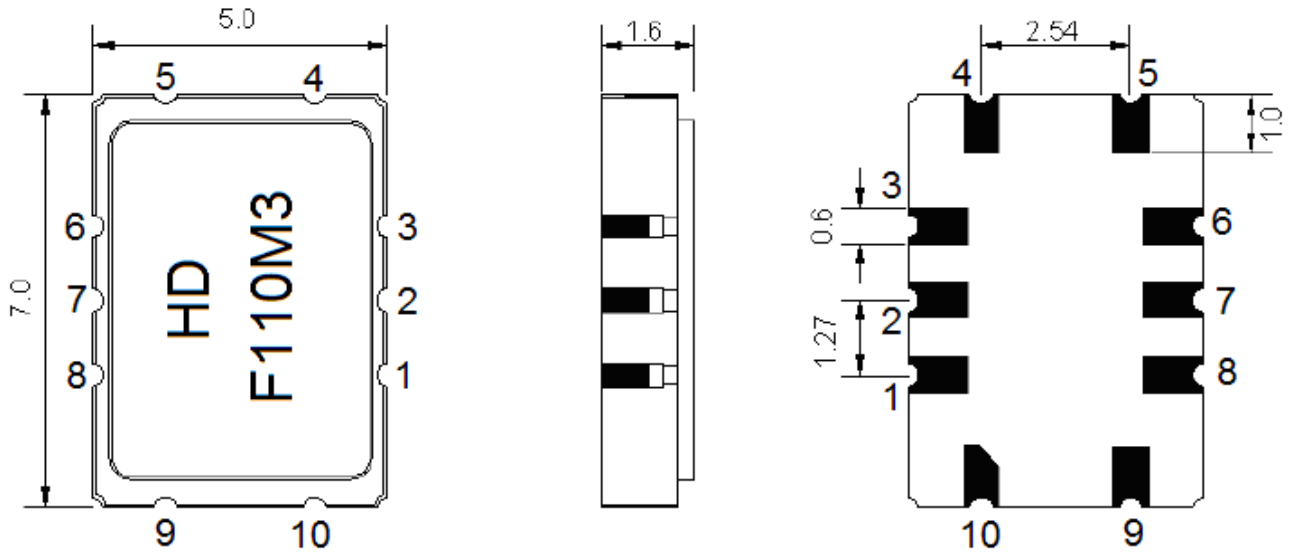
Parameter	Minimum	Typical	Maximum	Unit
<b>Center Frequency Fc</b> (between -3dB points)	109.90	110.0	110.1	MHz
<b>Insertion loss at 110.0 MHz</b> (Including loss in matching elements)		6.8	10.0	dB
<b>Bnd width</b> <b>B<sub>-3dB</sub></b>	3.75	4.0		MHz
<b>B<sub>-1dB</sub></b>		3.1		
<b>Group delay ripple(p-p)</b> Fc+/-1.6MHz		45	80	nsec.
<b>Rejection<sup>(4)</sup></b>				dB
60.0MHz            .....    100.0MHz	40	42		
100.0MHz        .....    105.5MHz	36	41		
114.5MHz        .....    120.0MHz	36	41		
120.0MHz        .....    160.0MHz	38	43		
<b>Temperature coefficient of frequency TC<sub>f</sub></b>		-18		ppm/K

**3. TEST CIRCUIT**

Actual matching values may vary due to PCB layout and parasitics



**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°C for 5 Minutes and a higher temperature of +85°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 2-2.

**5-2 Resistance to solder heat**

Submerge the device terminals into the solder bath at 260°C ± 5°C for 10 ± 1 sec. Then release the device into the room conditions for 4 hours. It shall meet the specifications in 2-2.

**5-3 Solderability**

Submerge the device terminals into the solder bath at 245°C ± 5°C for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in 2-2.

**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 2-2.

**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 2-2.

## 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.

## 7. Packing

### 7.1 Dimensions

(1) Carrier Tape: Figure 1

(2) Reel: Figure 2

(3) The product shall be packed properly not to be damaged during transportation and storage.

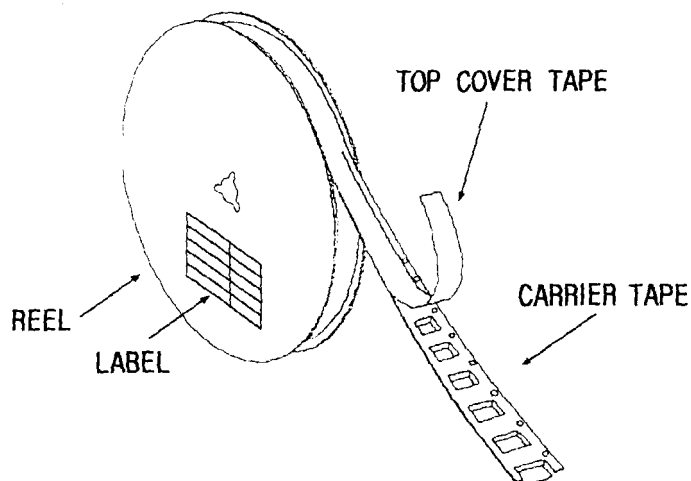
### 7.2 Reeling Quantity

1000 pcs/reel 7"

3000 pcs/reel 13"

### 7.3 Taping Structure

(1) The tape shall be wound around the reel in the direction shown below.

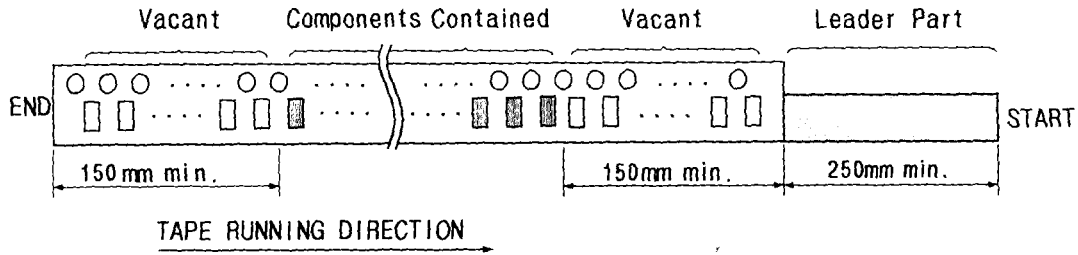


(2) Label

Device Name	
User Product Name	
Quantity	

Lot No.	
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(3) Leader part and vacant position specifications.

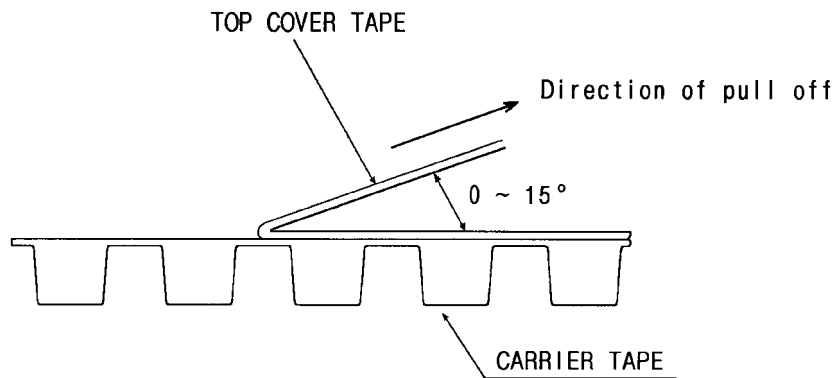


## 8. TAPE SPECIFICATIONS

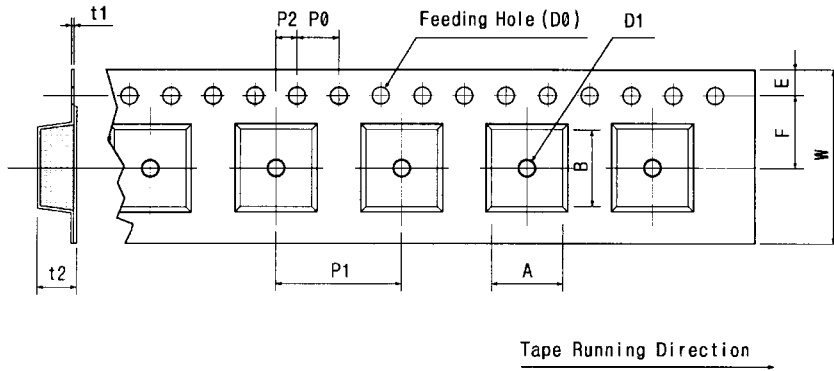
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

8.2 Top Cover Tape Adhesion (See the below figure)

- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions

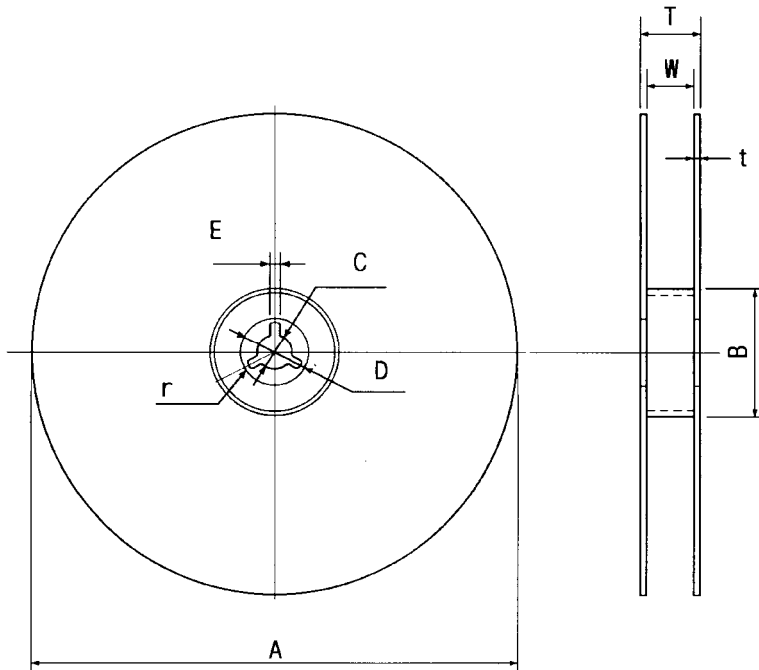


[Unit:mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.00	7.50	1.75	4.00	8.00	2.00	Ø1.50	Ø1.5	0.25	2.20	5.80	7.30
±0.30	±0.10	±0.10	±0.10	±0.10	±0.10		±0.25	±0.05	±0.10	±0.10	±0.10

[Figure 2]

[Unit:mm]



A	B	C	D	E	W	t	r
Ø330	Ø100	Ø13	Ø21	2	16.8	3	1.0
±1.0	±0.5	±0.5	±0.8	±0.5	±0.3	max.	max.



## 9. CAUTION

- 9-1. This is an electrostatic sensitive device. Please avoid static voltage during operation and storage.
- 9-2. Sudden change of temperature shall be avoided, deterioration If the characteristics can occur.
- 9-3. Ultrasonic vibration may cause deterioration and destruction of the components. Please avoid ultrasonic cleaning.