

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: \_\_\_\_\_ HDF959A SMD-4 \_\_\_\_\_  
PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ D A T E 日期: \_\_\_\_\_ 2006-5-11 \_\_\_\_\_

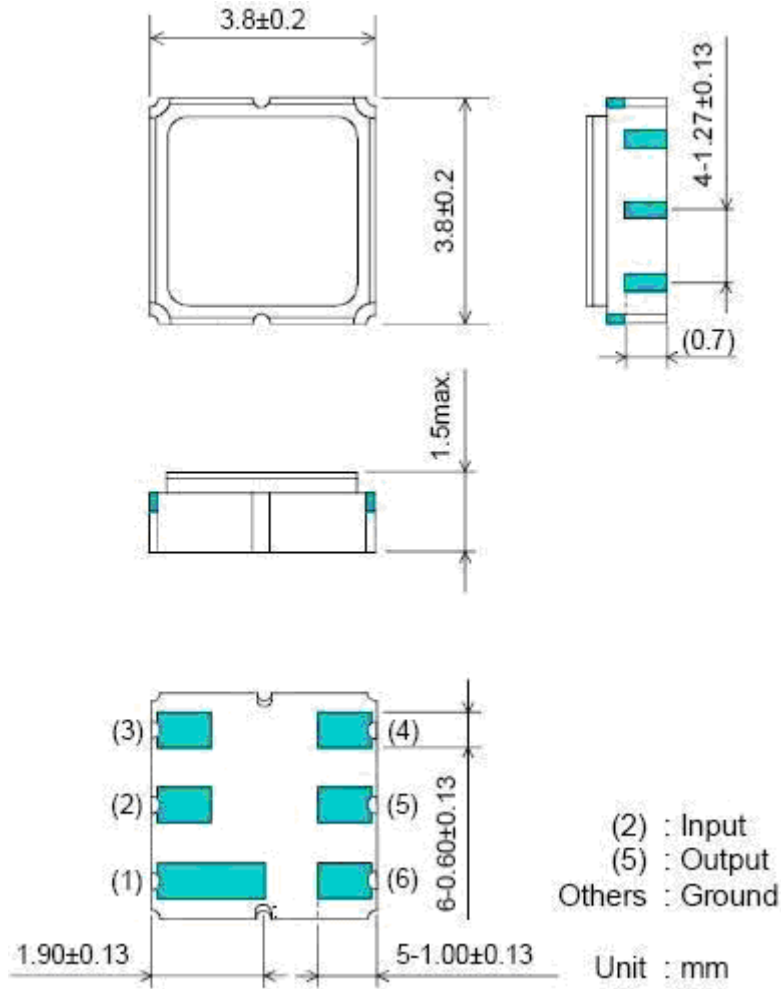
客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

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



**1. Package Dimension**

Unit:mm



**2. Marking HD F 4903**

- 2.1 Color: Black or Blue
- 2.2 959: Center Frequency(MHz)

**3. Performance**

**3.1 Application**

Low-Loss SAW Filter of cordless system.  
Center Frequency:959 MHz

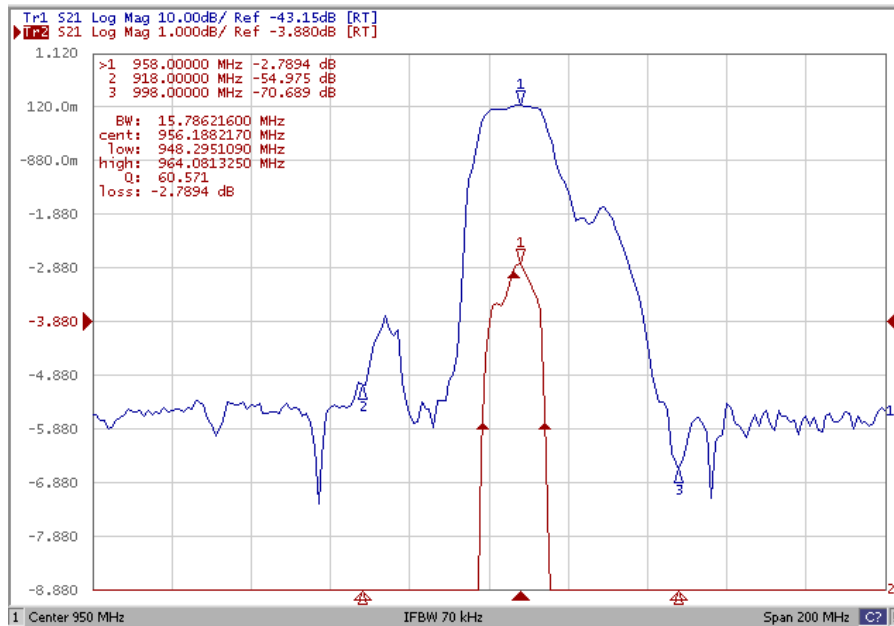
**3.2 Maximum Rating**

Operation Temperature Range	-20°C to +50°C
Storage Temperature Range	-40°C to +85°C
DC. Permissive Voltage	0 V DC. max.
Maximum Input Power	5dBm

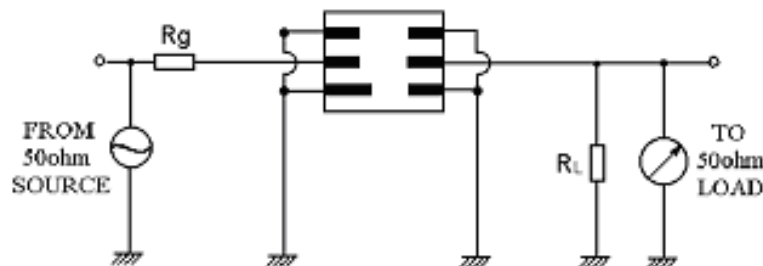
1.1 Electronic Characteristics

Item	Specification
Center Frequency( $f_0$ )	959 MHz
Insertion Loss(dB)	
1.)953-965 MHz	5.0max
2.)913-918 MHz	40 min
3.)936-939 MHz	30 min
4.)979-982 MHz	20 min
5.)1000-1004 MHz	40 min
Ripple deviation (953-965MHz)(dB)	1.5max
Input/output Impedance(Nominal)	50 $\Omega$

3.4 Frequency Characteristics



3.5 Test Circuit



## 4. ENVIRONMENTAL CHARACTERISTICS

### 4-1 Temperature cycling

Subject the device to a low temperature of  $-40^{\circ}\text{C}$  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.

### 4-2 Resistance to solder heat

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

### 4-3 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.

### 4-4 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.

### 4-5 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.

## 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.

## 6. Packing

### 6.1 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.

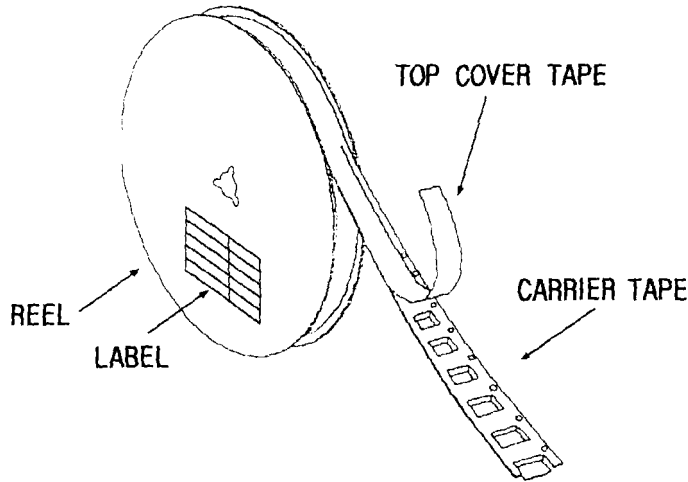
### 6.2 Reeling Quantity

1000 pcs/reel 7''

3000 pcs/reel 13''

**6.3 Taping Structure**

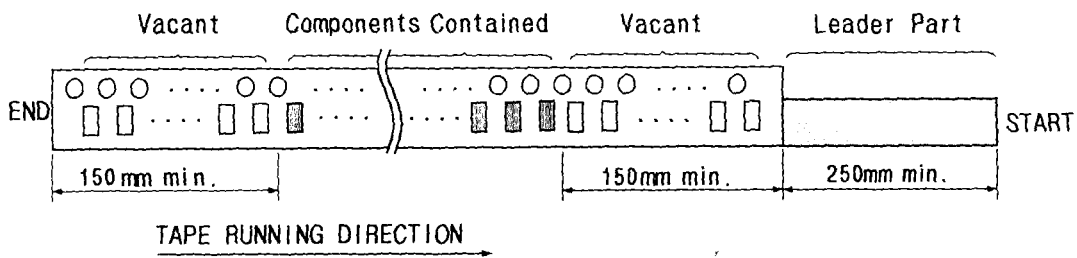
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

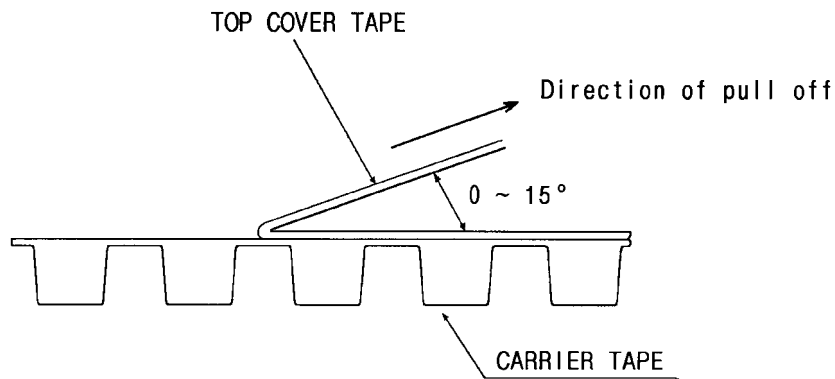


**7. TAPE SPECIFICATIONS**

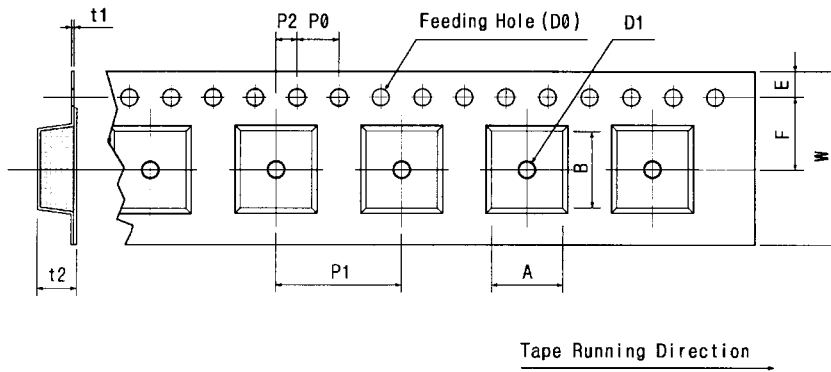
7.1 Tensile Strength of Carrier Tape: 4.4N/mm width

7.2 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

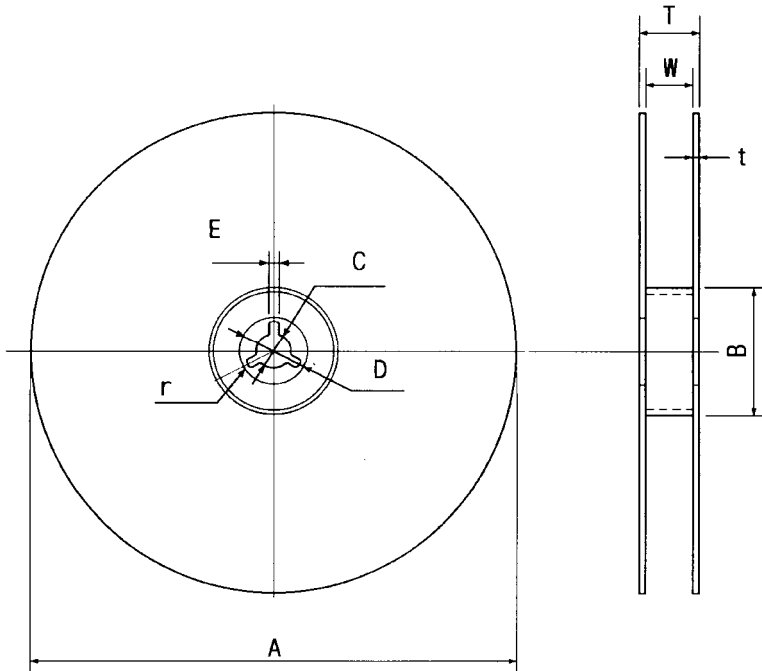


[Unit:mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.00	5.50	1.75	4.00	8.00	2.00	Ø1.50	Ø1.0	0.25	1.65	4.04	4.10
±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	13	3	1.0
±1.0	±0.5	±0.5	±0.8	±0.5	±0.3	max.	max.