

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: HDF109A2 SMD-3  
MARKING 印字: HDF119  
PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ DATE 日期: 2009-8-3

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

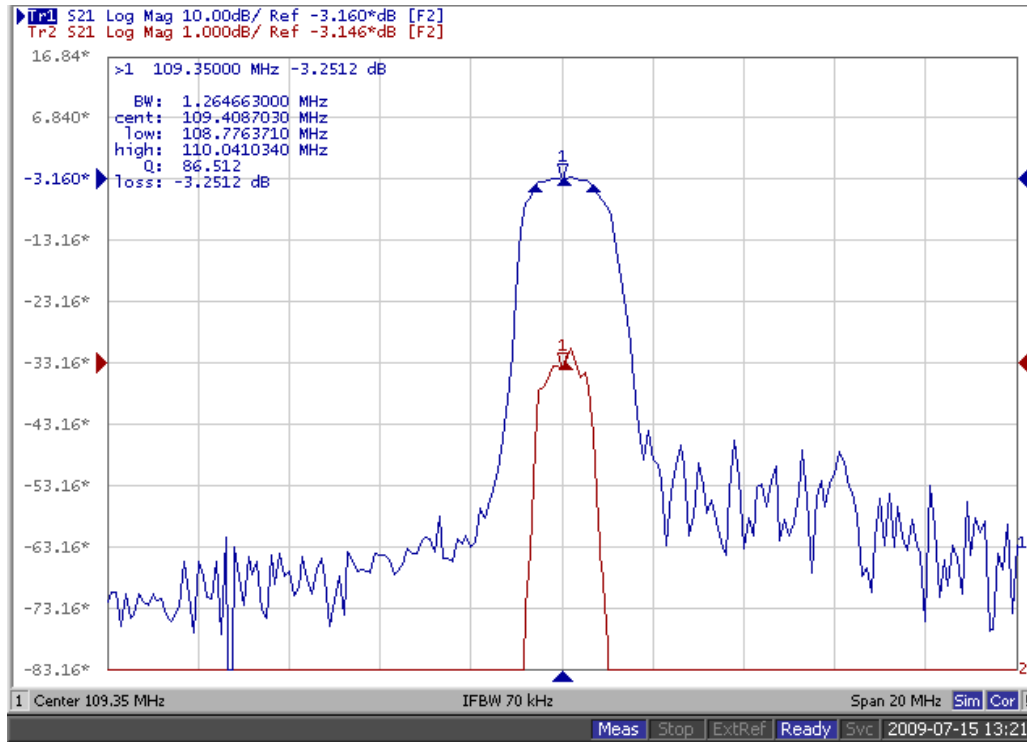
This specification shall cover the characteristics of SAW filter With F109A2 used for the page system.

## 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

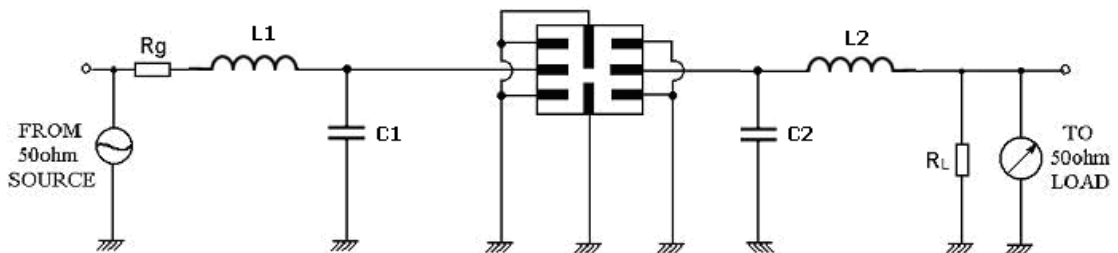
#### 2-1. Typical frequency response



2-2.Electrical characteristics

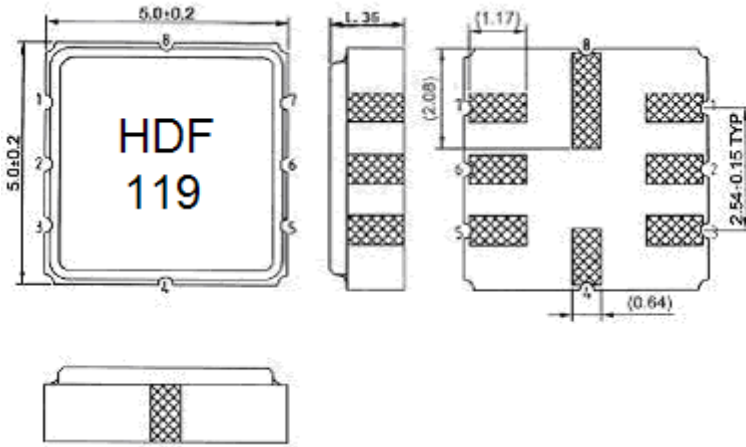
型号 Part Number	HDF109A2S3
中心频率(fo)(MHz) Nominal Center Frequency	109.35
1dB 带宽 1dB Bandwidth	±600min
3dB 带宽 3dB Bandwidth(from fo)(KHz)	±700min
阻带衰减 Stop Band Attenuation (from peak level)(dB) 1)5.00~103.70MHz 2)115.00~200.00MHz	55min 45min
插入损耗(dB) Insertion Loss(at minimum loss point)	4.5max
VSWR (at passband of 1.0 MHz) With the matching network	1.6
群延时变化 (fo+/-50KHz)( nsec.) Group Delay Variation	60
群延时波动(fo+/-500KHz)( μ sce.) Absolute Group Delay	1.2max
群延时波动(fo+/-50KHz)( μ sce.) Absolute Group Delay	0.85max
输入/输出阻抗 Input/output Impedance	200 Ω // 8pF

**3.TEST CIRCUIT**



**C1=C2=11pF ; L1=L2=68nH**

### 4. DIMENSION



**2.INPUT**  
**6. OUTPUT**  
**1.3.5.7:GROUND**  
**4.8 GROUND**

### Marking: HDF119

HD: Brand  
 F : Filter  
 119 : No.

### 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.

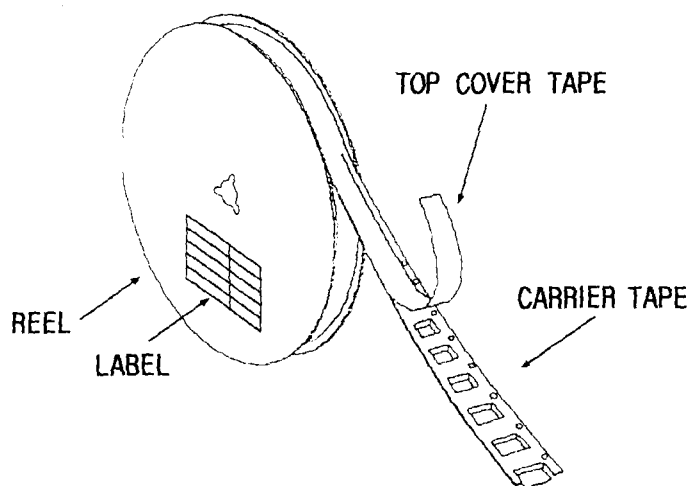
### 7.2 Reeling Quantity

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.

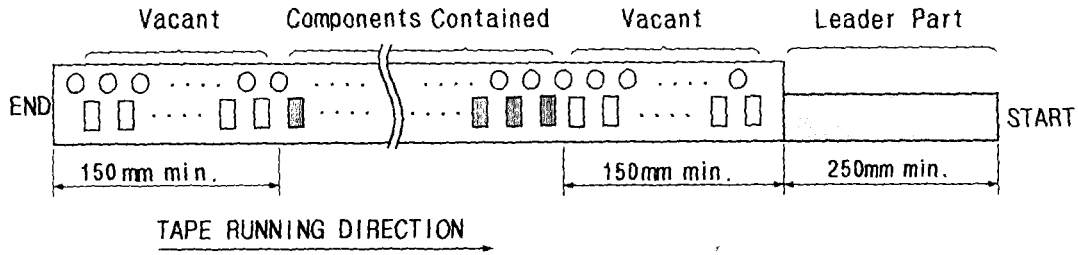


(2) Label

Device Name	
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User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

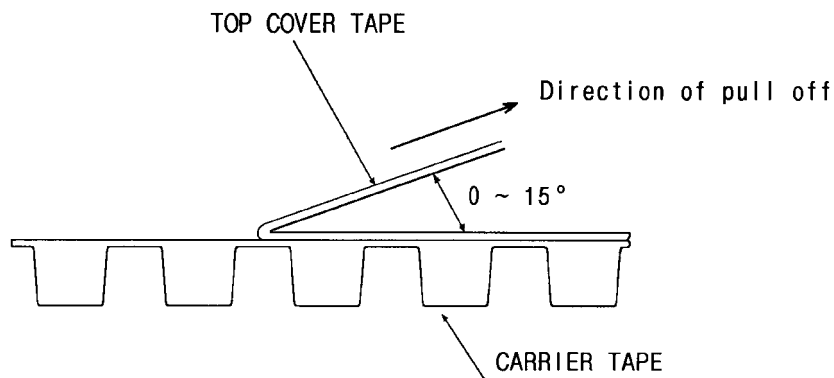


## 8. TAPE SPECIFICATIONS

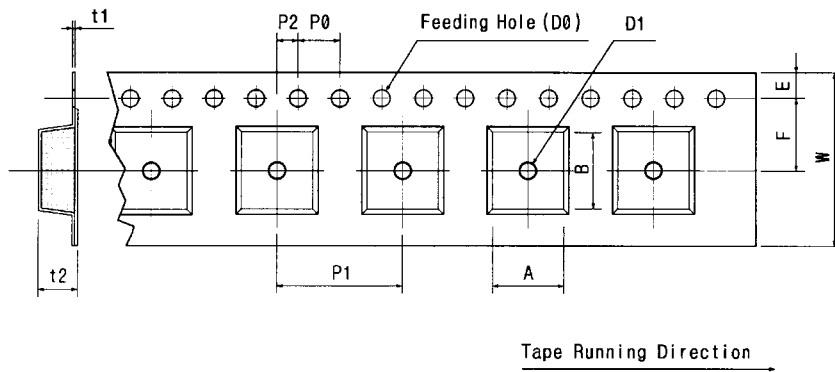
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

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

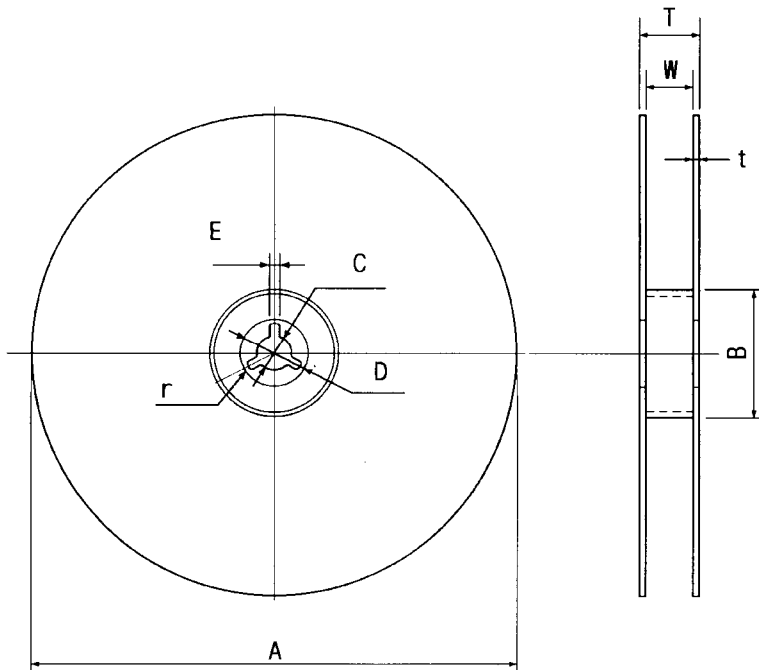


[Unit:mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.0	5.5	1.75	4.0	8.0	2.0	Ø1.5	Ø1.0	0.3	2.10	6.40	5.20
±0.3	±0.05	±0.1	±0.1	±0.1	±0.05	±0.1	±0.25	±0.05	±0.1	±0.1	±0.1

[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.