

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: _____ HDF447.725M SMD-3 _____
MARKING 印字: _____ HDF452 _____
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.SCOPE

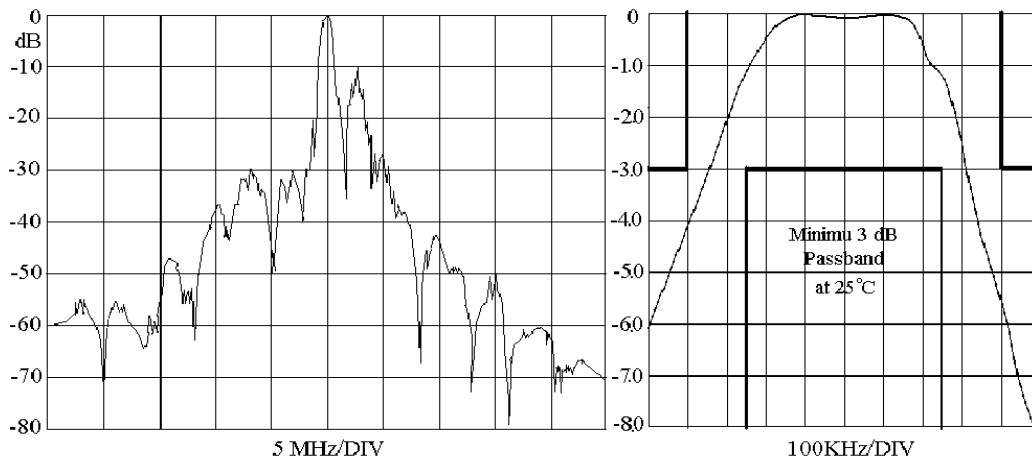
This specification shall cover the characteristics of SAW filter with 447.725MHz used for remote-control security.

2. ELECTRICAL SPECIFICATION

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

Electronic Characteristics

2-1.Type frequency response



2-2.Electrical characteristics

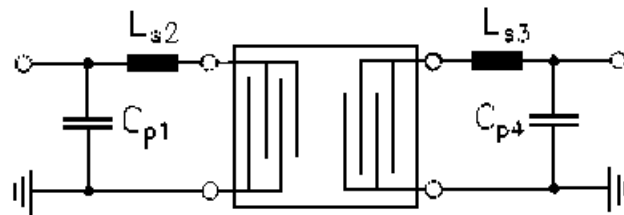
Characteristics		Sym	Notes	Min.	Typical	Max.	Units
Center Frequency	Absolute Frequency	Fc	1.2	446.650	447.725	447.800	M Hz
	tolerance from Nominal	Δ fc				± 75	KHz
Insertion Loss		IL	1		1.7	3.0	dB
3dB Bandwidth		BW ₃	1.2	500	700	800	KHz
Rejection	At fo-21.4MHz (Image)		1	40	50		dB
	At fo-10.7 MHz (LO)			16	40		
	Ultimate				80		
Temperature characteristics	Operating case temp.	Tc	3.4	-35		+85	°C
	Tumover temp.	To		22	37	62	°C
	Tumover Frequency	fo			fc		MHz
	Freq.temp.coefficient	FTC			0.032		ppm/°C
Frequency aging			5		< ± 10		ppm/y

Note:

1. Typical test circuit is shown as below.
2. Passband and reject bands are specified in reference to f_c .
3. The turnover temperature, T_o , is the temperature at the maximum frequency, F_o .
4. The nominal frequency at any case temperature, T_c , inside the operating temperature range may be calculated from: $f=f_o[1-FTC(T_o-T_c)^2]$.

Typical aging is for 10 years.

3. TEST CIRCUIT

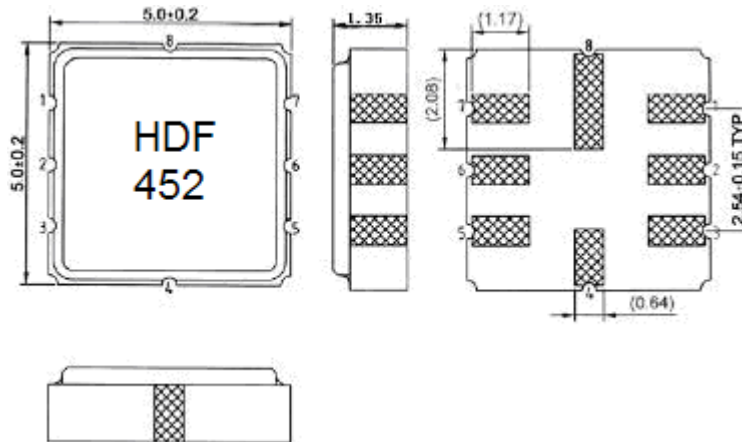


$C_{p1} = 10\text{pF}$, $L_{s2} = 43\text{nH}^*$, $L_{s3} = 43\text{nH}^*$, $C_{p4} = 10\text{pF}$

$L_{s2} = L_{s3} = 6$ turns of 0.51mm insulated Copper, 2.5mm ID.

4. DIMENSION

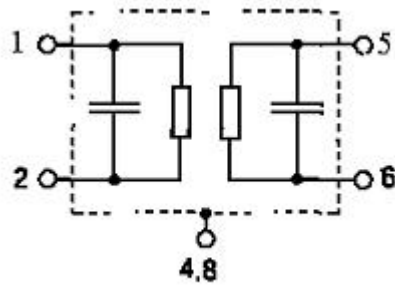
Ceramic package QCC8C



Dimensions in mm, appr. weight 0.1

Marking: HDF452

HD: Brand
 F : Filter
 452 : No.



Pin Configuration	
2	Input
6	Output
1, 3, 4, 5, 7, 8	Case ground

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 2-2.

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 2-2.

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 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

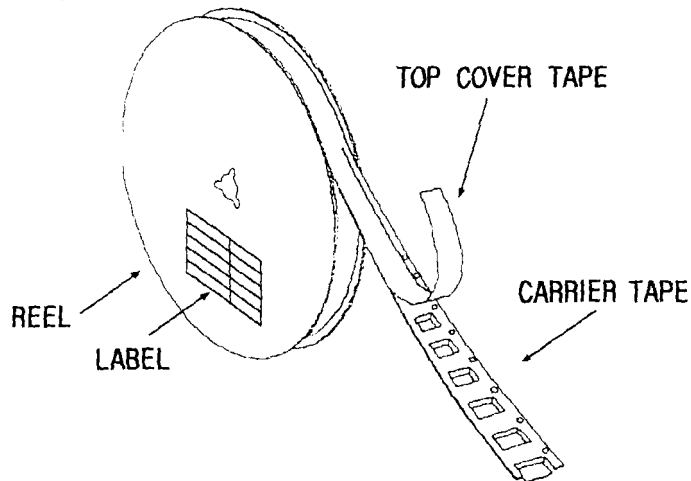
- (1) Carrier Tape: Figure 1
- (2) Reel: Figure 2
- (3) The product shall be packed properly not to be damaged during transportation and storage.

7.2 Reeling Quantity

- 1000 pcs/reel 7"
3000 pcs/reel 13"

7.3 Taping Structure

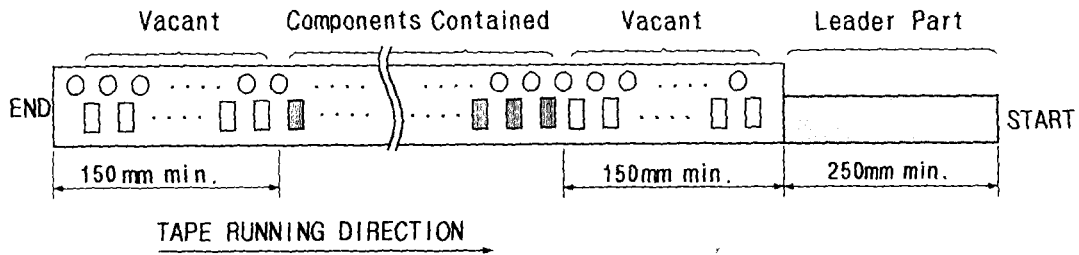
- (1) The tape shall be wound around the reel in the direction shown below.



- (2) Label

Device Name	
User Product Name	
Quantity	
Lot No.	

- (3) Leader part and vacant position specifications.

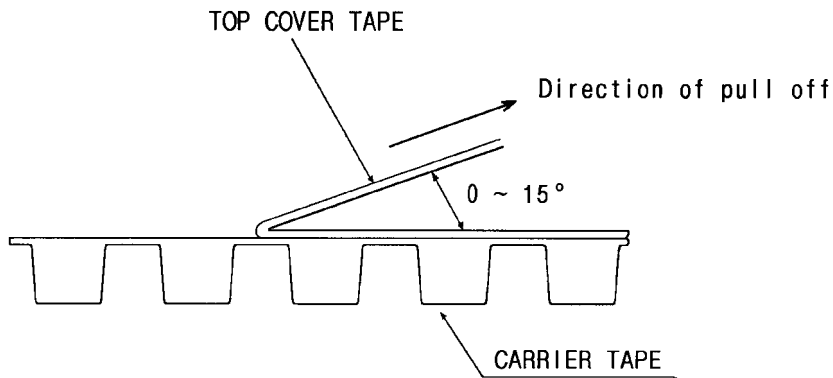


8. TAPE SPECIFICATIONS

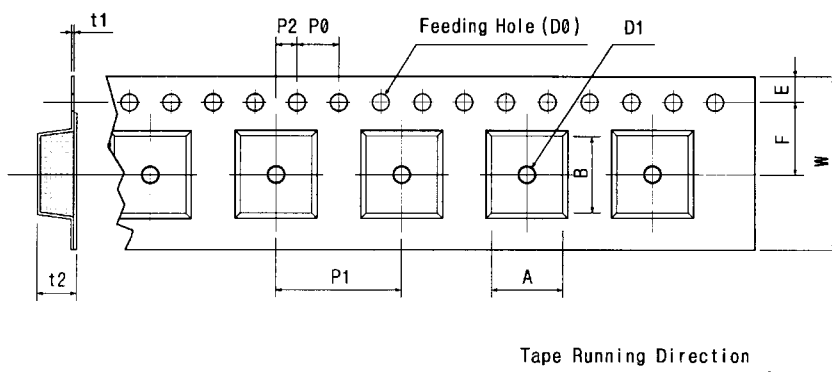
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

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

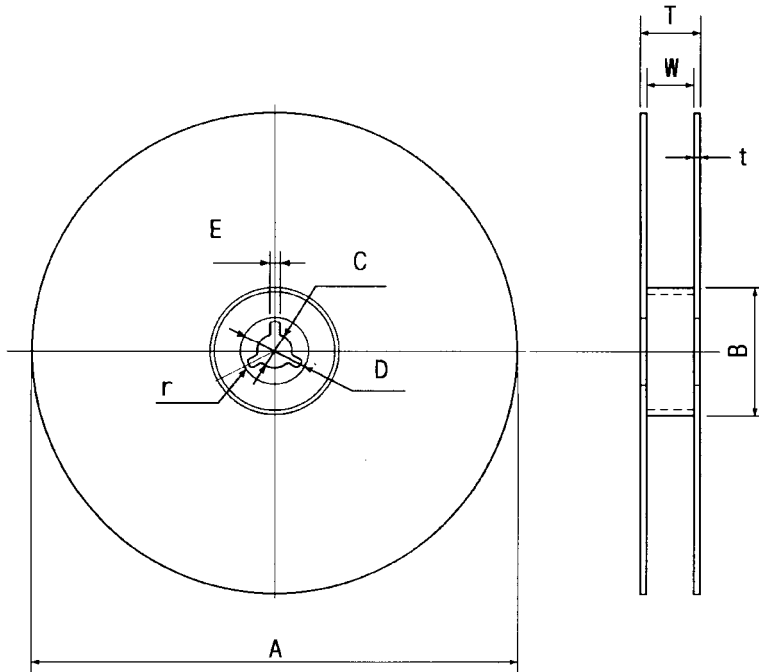


[Unit:mm]

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.