#### HDF947E SMD-6

## SAW FILTER

## 1. SCOPE

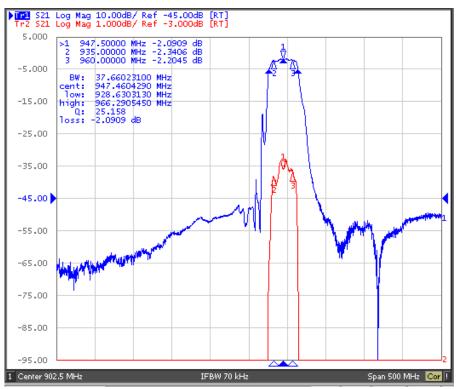
This specification shall cover the characteristics of SAW filter With HDF947E used for the page system.

## 2. ELECTRICAL SPECIFICATION

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

**Electronic Characteristics** 

#### 2-1. Typical frequency response

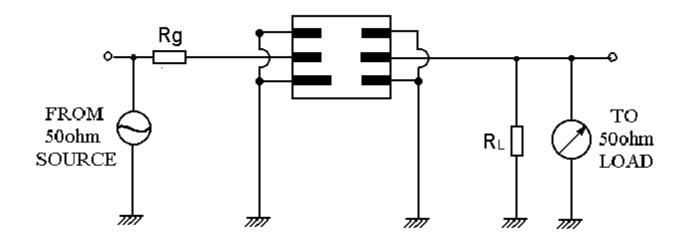


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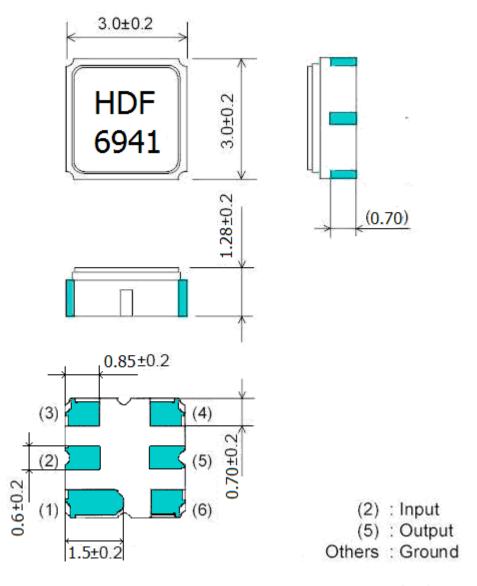
#### 2-2. Electrical characteristics

	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	-	947.5	-
Insertion Loss (In Fc +/- 12.5 MHz)	dB		2.5	3.0
Amplitude Ripple (In Fc +/- 12.5 MHz)	dB		1.0	1.5
Relative Attenuation				
700 MHz ~ 900 MHz	dB	40	45	
900 MHz ~ 924 MHz		15	25	-
1000 MHz ~ 1200 MHz		40	45	
Input/Output Impedance	Ohms		50	

# **3. TEST CIRCUIT**



## **4. DIMENSION**



Unit : mm

# Marking: HDF6941

HD: Brand F : Filter 6 : SMD-6 941 : No.

## **5. ENVIRONMENTAL CHARACTERISTICS**

5-1 High temperature exposure

Subject the device to  $+85^{\circ}$ C for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

5-2 Low temperature exposure

Subject the device to  $-40^{\circ}$ C for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

5-3 Temperature cycling

Subject the device to a low temperature of  $-40^{\circ}$ C for 30 minutes. Following by a high temperature of  $+85^{\circ}$ C for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in 2-2.

5-4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at  $260^{\circ}$ C  $\pm 10^{\circ}$ C for  $10\pm 1$  sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in 2-2.

5-5 Solderability

Subject the device terminals into the solder bath at  $245^{\circ}$ C  $\pm 5^{\circ}$ C for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in 2-2.

5-6 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in 2-2.

5-7 Vibration

Subject the device 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 device 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 solded. Please avoid soldering another part of component.

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### 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.

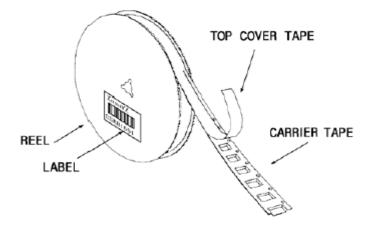
#### 7.2 Reeling Quantity

1000 pcs/reel 7"

3000 pcs/reel 13"

#### 7.3 Taping Structure

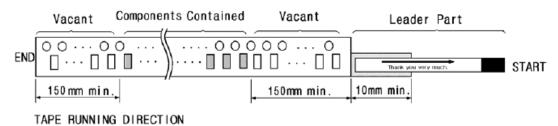
(1) The tape shall be wound around the reel in the direction shown below.



#### (2) Label

Device Name	
User Product Name	
Quantity	
Lot No.	

#### (3) Leader part and vacant position specifications.

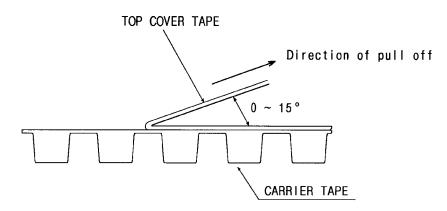


## 8. TAPE SPECIFICATIONS

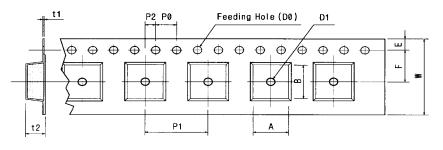
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

8.2 Top Cover Tape Adhesion (See the below figure)

- (1) pull off angle:  $0 \sim 15^{\circ}$
- (2) speed: 300mm/min.
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions



Tape Running Direction

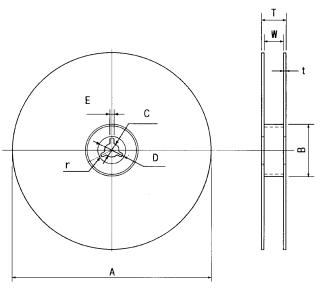
[Unit:mm]

											Lound
W	F	E	P0	P1	P2	D0	D1	t1	t2	А	В
12.00	5.50	1.75	4.00	4.00	2.00	Ø1.50	Ø1.5	0.31	1.30	3.4	3.4
±0.30	±0.10	±0.10	±0.10	±0.10	±0.10		$\pm 0.25$	$\pm 0.05$	±0.10	MAX.	MAX

[Figure 2]

# HDF947E SMD-6

[Unit:mm]



Α	В	С	D	Е	W	t	r
Ø330	Ø100	Ø13	Ø21	2	13	3	1.0
$\pm 1.0$	$\pm 0.5$	$\pm 0.5$	$\pm 0.8$	$\pm 0.5$	$\pm 0.3$	max.	max.