

规格书编号

SPEC NO: HDF433M3S3SP02

产品规格书

PECIFICATION

CUSTOMER 客户: _____
PRODUCT 产品: _____ SAW FILTER _____
MODEL NO 型号: _____ HDF433M3-S3 2,5 脚位 _____
MARKING 印字: _____ HDF43A _____
PREPARED 编制: _____ CHECKED 审核: _____
APPROVED 批准: _____ D A T E 日期: _____ 2014-4-10 _____

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. Maximum Rating

Rating	Value	Units
Operable temperature range	-45~+85	°C
Storage temperature range	-45~+85	°C
Source power	10	dBm

2. Electronic Characteristics

2.1 Typical frequency response

Reference temperature:

$$T_A = 25^{\circ}\text{C}$$

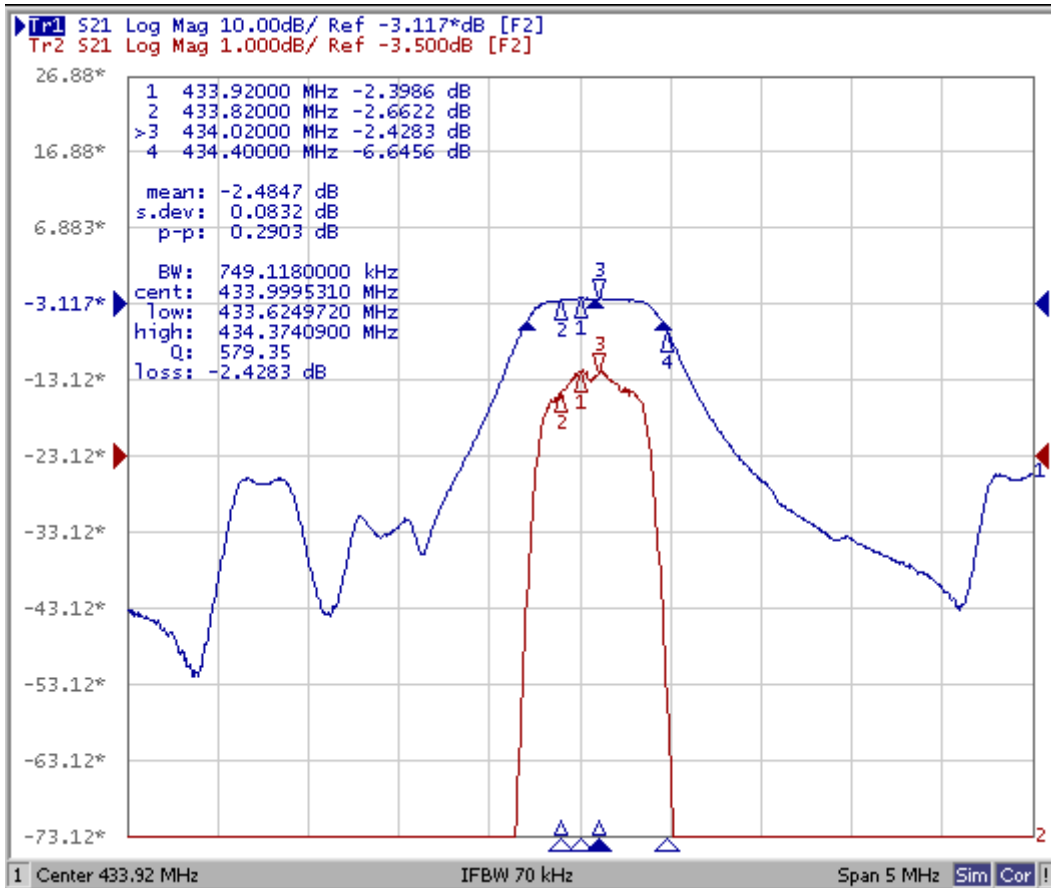
Terminating source impedance:

$$Z_s = 50\Omega \text{ and matching network}$$

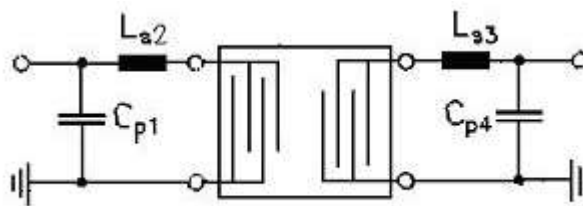
Terminating load impedance:

$$Z_L = 50\Omega \text{ and matching network}$$

Characteristic		Min.	Typ.		
Center Frequency f_c f_c (center frequency between 3dB points)		--	433.92	--	MHz
Minimum insertion attenuation α_{\min}		--	2.6	4.0	dB
3dB Passband BW_3		650	720	790	kHz
Relative Attenuation (relative α_{\min})	10.0 ~ 414.00 MHz	45	58	--	dB
	414.00 ~ 423.50 MHz	45	53	--	
	423.50 ~ 431.52 MHz	32	40	--	
	431.52 ~ 432.90 MHz	18	24	--	
	432.90 ~ 433.10 MHz	15	24		
	434.92 ~ 444.00 MHz	12	19		
	444.00 ~ 500.00 MHz	42	50		
	500.00 ~ 810.00 MHz	48	54		
	810.00 ~ 2500.00 MHz	45	60	--	
Impedance for pass band matching Input: $Z_{IN} = R_{IN} \parallel C_{IN}$ Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$			250 \parallel 2.9 250 \parallel 2.9		$\Omega \parallel \text{pF}$ $\Omega \parallel \text{pF}$

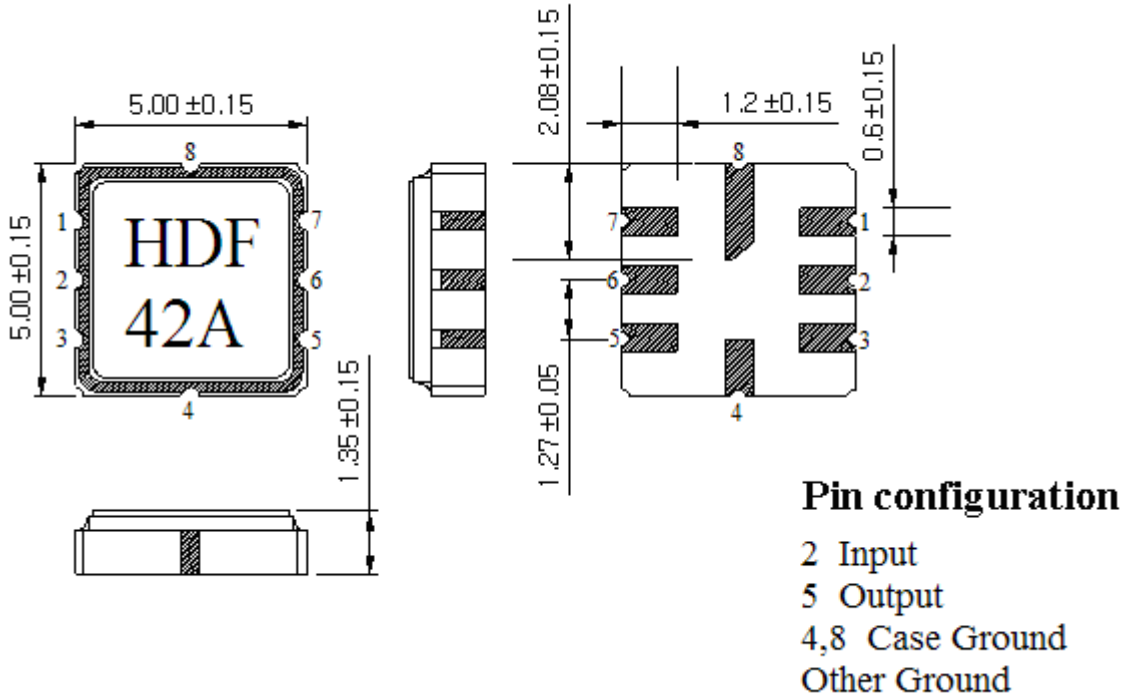


3. Matching network to 50Ω (element values depend on pcb layout and equivalent circuit)



$L_{s2} = 33 \text{ nH} ; \quad L_{s3} = 33 \text{ nH}$

4. DIMENSION



5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the device to $+85^{\circ}\text{C}$ for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 3.1.

5-2 Low temperature exposure

Subject the device to -40°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 3.1.

5-3 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of $+85^{\circ}\text{C}$ for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in 3.1.

5-4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for 10 ± 1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in 3.1.

5-5 Solderability

Subject 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 terminals must be covered with new solder. It shall meet the specifications in 3.1.

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 3.1.

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 3.1.

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.

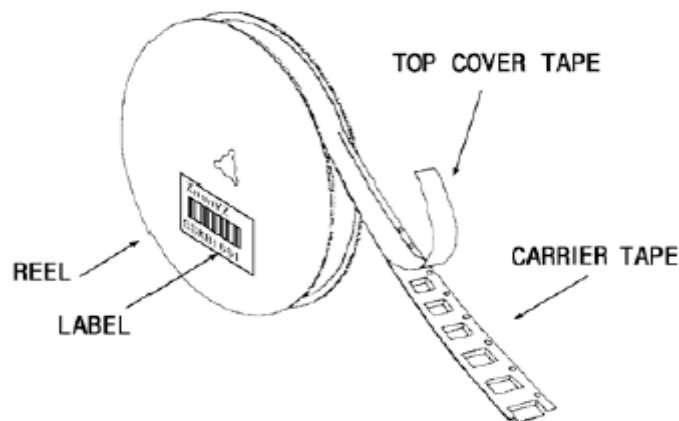
7.2 Reeling Quantity

1000 pcs/reel 7"

3000 pcs/reel 13"

7.3 Taping Structure

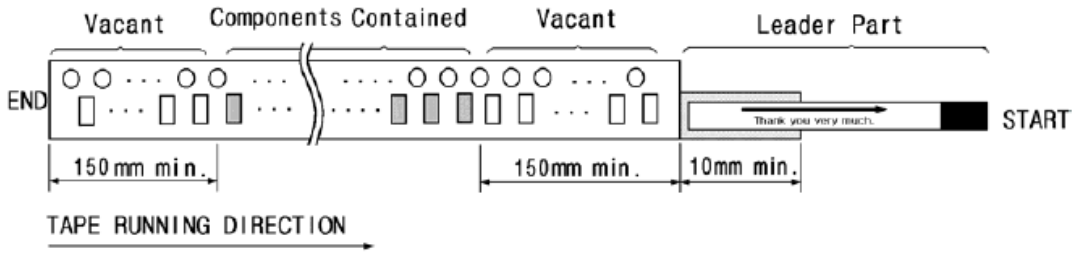
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

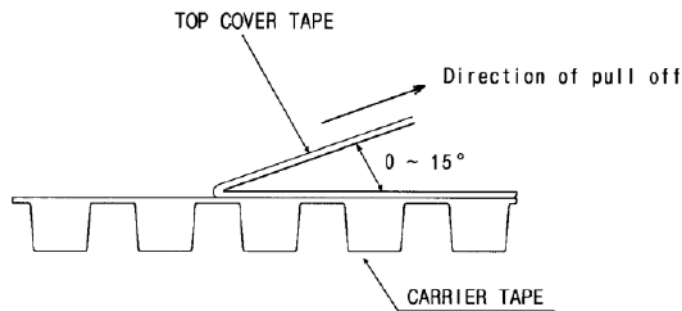


8. TAPE SPECIFICATIONS

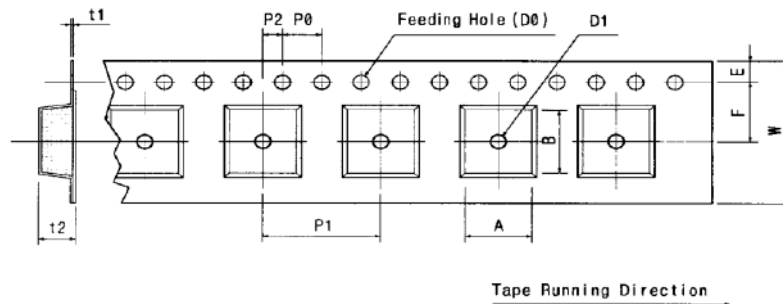
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

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

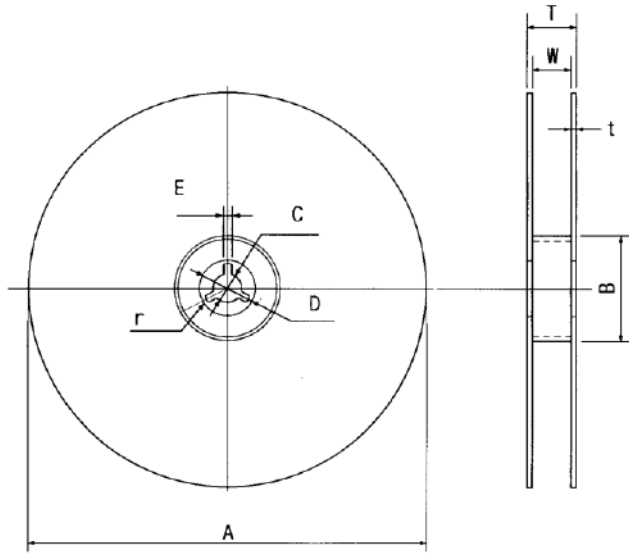


[Unit:mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.00	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		±0.25	±0.05	±0.10	MAX.	MAX.

[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.