HD SHOULDER

规格书编号

SPEC NO: HDF2442EB5SP03

产品规格书
SPECIFICATION

CUSTOMER 客 户：

PRODUCT 产 品： SAW FILTER

MODEL NO 型 号： HDF2442E-B5

MARKING 印 字： B172

PREPARED 编 制： CHECKED 审 核：

APPROVED 批 准： D A T E 日 期： 2017-1-13

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

Factory Address: NO. 115, Gaoyun Road, Binhu Economic & Technology Development Area, Wuxi, Jiangsu, China. Tel：86-510-85629111

Country of origin: China

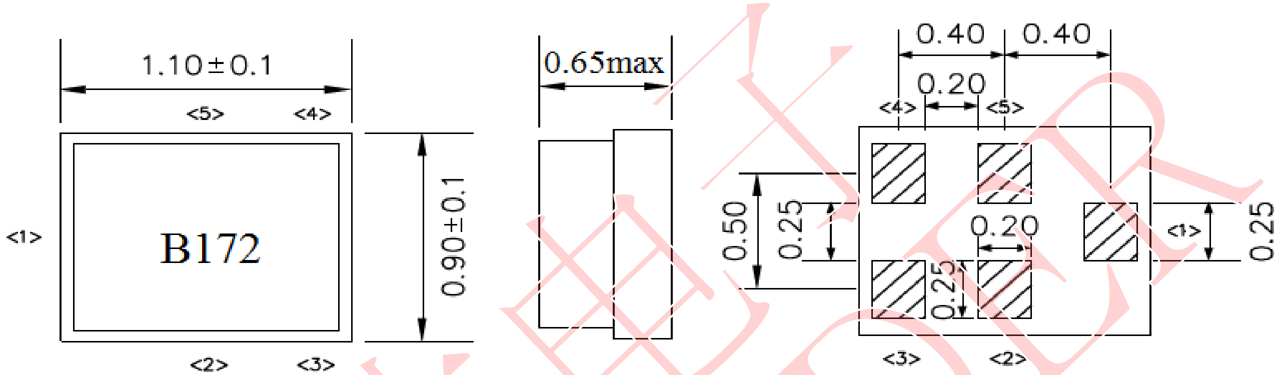
更改历史记录
History Record

更改日期 Date	规格书编号 Spec. No.	产品型号 Part No.	客户产品型号 Customer No.	更改内容描述 Modify Content	备注 Remark
2016-7-26	SP01	HDF2442E-B5		New specification.	
2016-11-25	SP02	HDF2442E-B5		Correction device size. Thickness changed from 0.5max. to 0.65max	2. Package Dimension
2017-1-13	SP03	HDF2442E-B5		Increased Wide-Segment Frequency Response	6. Frequency Response

1. Features

- Low-loss RF filter for Bluetooth/WLAN with LTE Band 7/40 coexistence
- Impedance 50 ohm input and output.
- Unbalanced to unbalanced operation.
- Useable passband 81MHz.
- RoHS compatible.

2. Package Dimension



Unit: mm

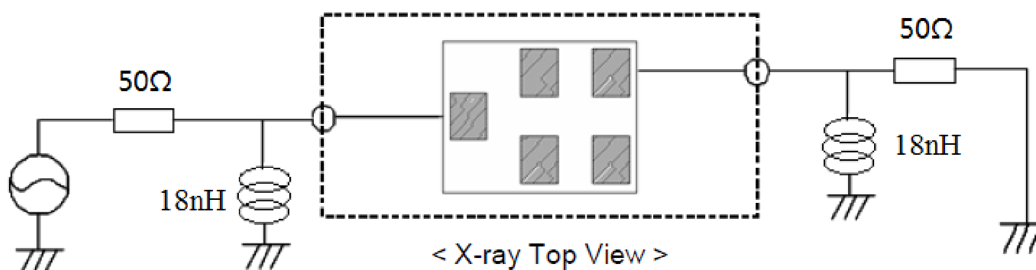
Pin configuration

1. Input
4. Output
2,3,5 To be grounded

3. ELECTRICAL SPECIFICATION

Items	Conditions
Operation temperature rang	-30℃ ~ +85℃
Storage temperature rang	-40℃ ~ +85℃
ESD voltage Sensitive discharge device	ESD(MM) : 50VDC ESD(HBM) : 175VDC
DC Voltage VDC	5V
Max Input Power	25dBm 2000h
Moisture Sensitivity Level	MSL 2

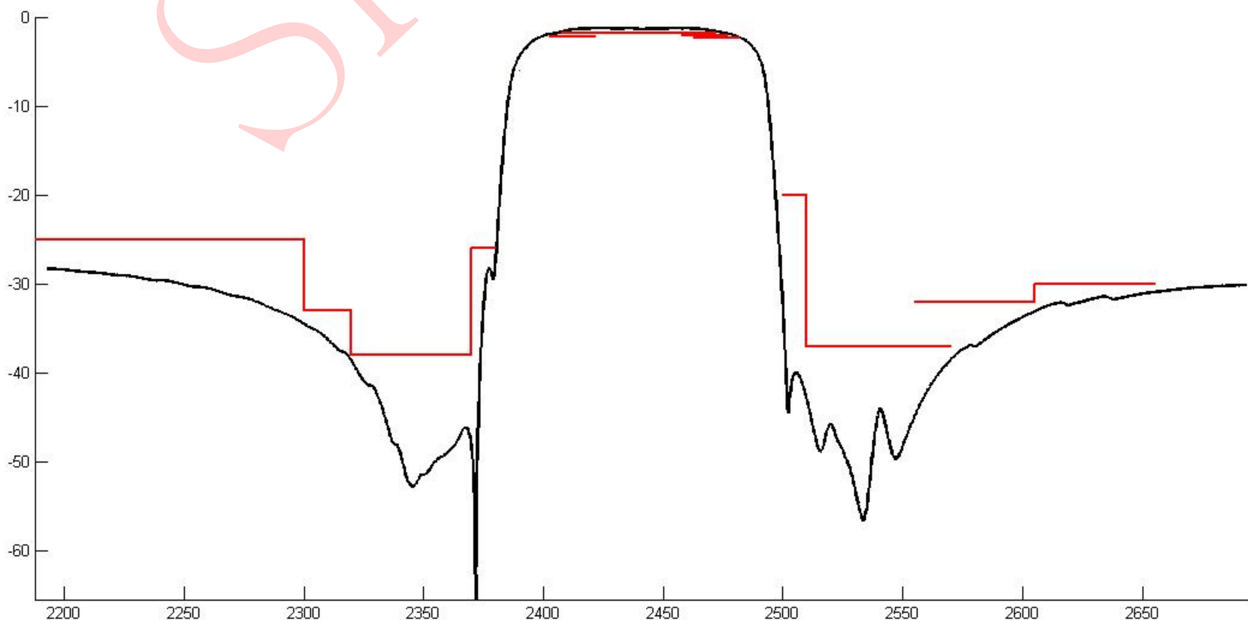
4. Test Circuit

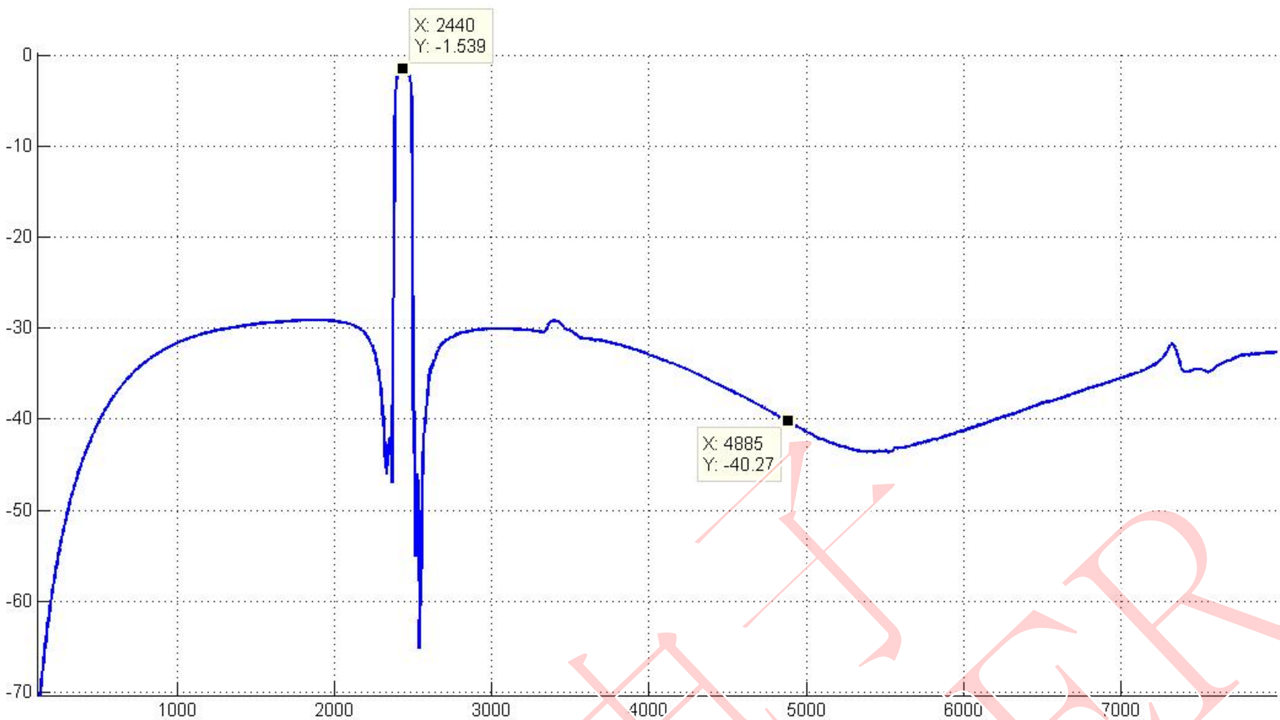


5. ELECTRICAL SPECIFICATION

Items	Test Condition	Min	Typ	Max	Unit	
Center Frequency	Fc	-	2442	-	MHz	
Insertion loss	2402.5~2421.5 MHz	-	1.8	2.2	dB	CH1
	2407.5~2426.5 MHz	-	1.5	1.8	dB	CH2
	2412.5~2471.5 MHz	-	1.5	1.8	dB	CH3~11
	2457.5~2476.5 MHz	-	1.8	2.0	dB	CH12
	2462.5~2481.5 MHz	-	2.0	2.3	dB	CH13
Amplitude Ripple (p-p)	2401~2483 MHz	-	1.2	2.0	dB	
VSWR	2401~2483 MHz	-	1.7	2.1	-	
Attenuation (Reference level from 0dB)	800~2300 MHz	25	30	-	dB	
	2300~2320 MHz	35	38	-	dB	
	2320~2370 MHz	40	43	-	dB	
	2370~2380 MHz	28	32	-	dB	
	2390 MHz	6	8	-	dB	
	2500~2510MHz	20	26	-	dB	
	2510~2570MHz	37	40	-	dB	
	2555~2605MHz	32	35	-	dB	
	2605~2655MHz	30	32	-	dB	
	2690~4000MHz	20	30	-	dB	
	4805~4963MHz	38	40	-	dB	2Fc
	4000~5000MHz	20	30	-	dB	
Input/Output Impedance	-	50Ω//18nH				

6. Frequency Response





7. ENVIRONMENTAL CHARACTERISTICS

7.1 High temperature exposure

Subject the device to +85℃ for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 5.

7.2 Low temperature exposure

Subject the device to -40℃ for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 5.

7.3 Temperature cycling

Subject the device to a low temperature of -40℃ for 30 minutes. Following by a high temperature of +85℃ for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in 5.

7.4 Resistance to solder heat

1、immerge the solder bath at 260℃ for 10 sec.

2、the iron at 370℃ for 3 sec

7.5 Solderability

Submerge the device terminals into the solder bath at 245℃ ±5℃ for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in 5.

7.6 Reflow soldering

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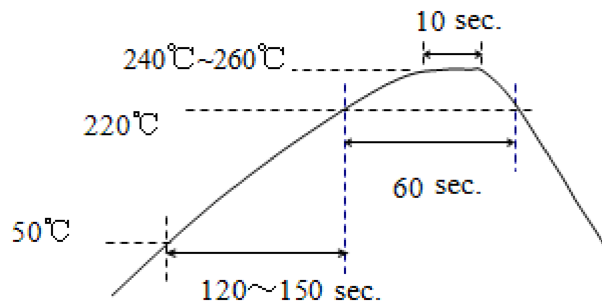

The specimen shall be passed through the reflow furnace with the condition shown in the above profile for 1 time.

The specimen shall be stored at standard atmospheric conditions for 1h, after which the measurement shall be made. Test board shall be 1.6 mm thick. Base material shall be glass fabric base epoxy resin.

7.7 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in 5.

7.8 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 5.

8. REMARK

8.1 Static voltage

Static voltage between signal load & ground may cause deterioration &destruction of the component. Please avoid static voltage.

8.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

8.3 Soldering

Only pad component may be solded. Please avoid soldering another part of component.

9. Packing

9.1 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.

9.2 Reeling Quantity

10000 pcs/reel φ 178mm

9.3 Taping Structure

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

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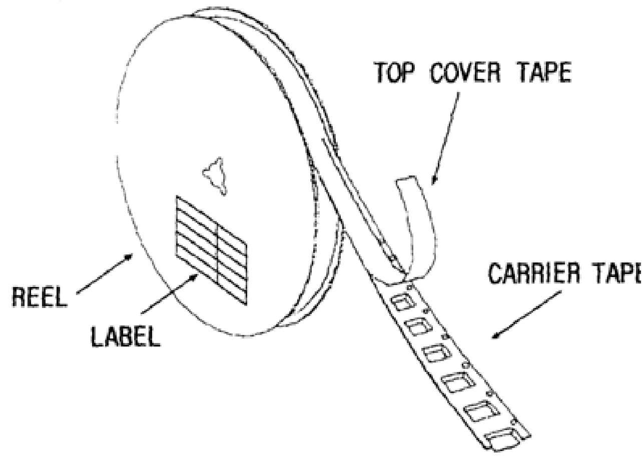
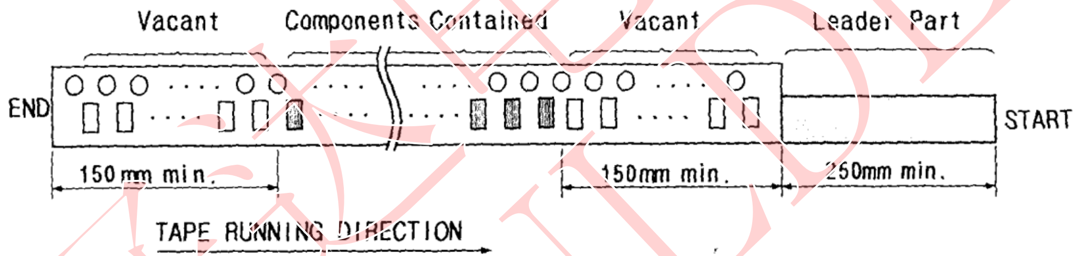


(2) Label

Device Name	
Marking	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.



10. TAPE SPECIFICATIONS

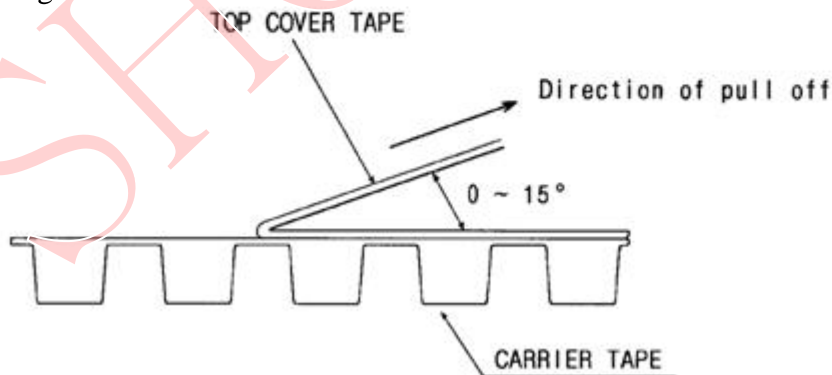
10.1 Tensile Strength of Carrier Tape: 4.4N/mm width

10.2 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

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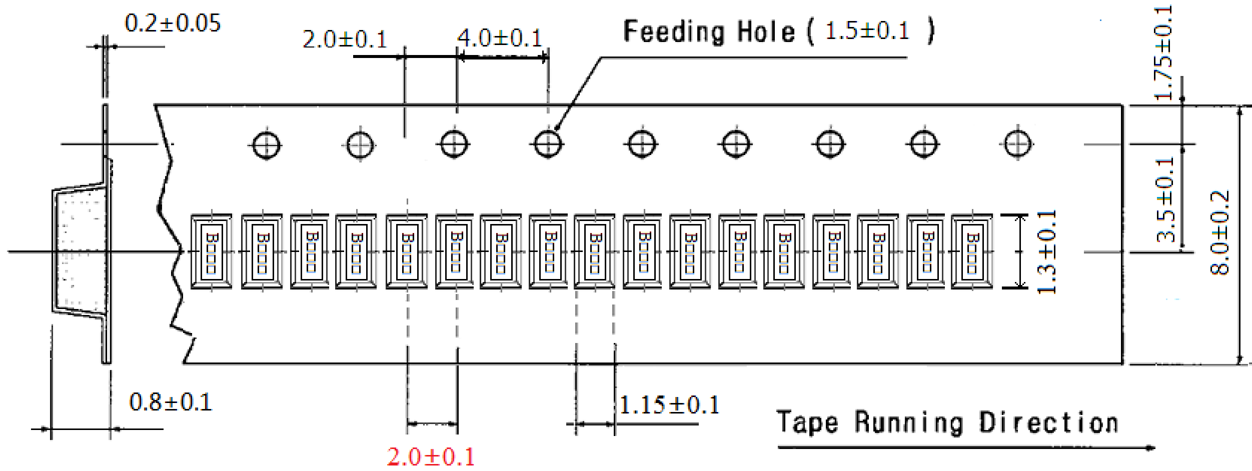
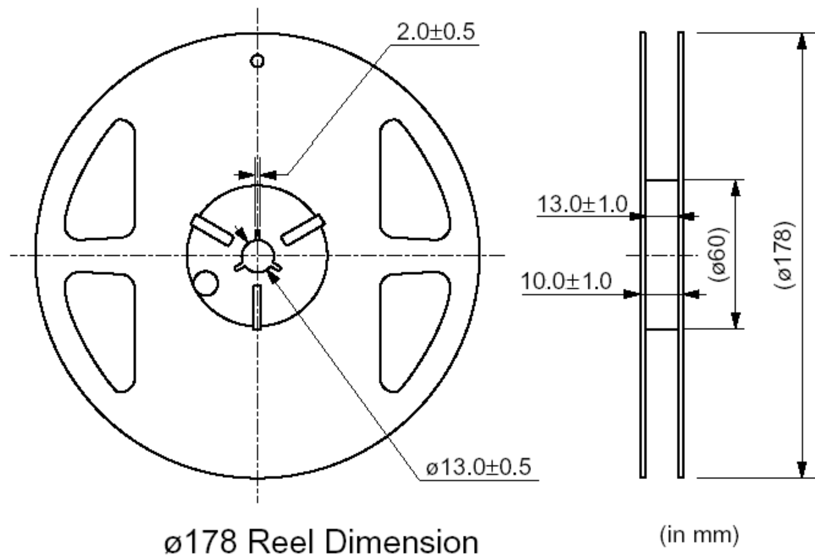


Prior to the size of 4.0±0.1, after encryption, modified to 2.0±0.1.

[Figure 2] **10000 pcs/reel** **φ 178mm**



ø178 Reel Dimension (in mm)