HD 好达 SHOULDER

规格书编号

SPEC NO: HDFB12RSSB5SP02

产品规格书

SPECIFICATION

CUSTOMER 客 户:			
PRODUCT 产 品:	SAW FILTER		
MODEL NO 型 号:	HDFB12RSS-B5		
MARKING 印 字:	● B196		
PREPARED 编 制:		CHECKED 审 核:	
APPROVED 批 准:		D A T E 日 期:	2017-12-29

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

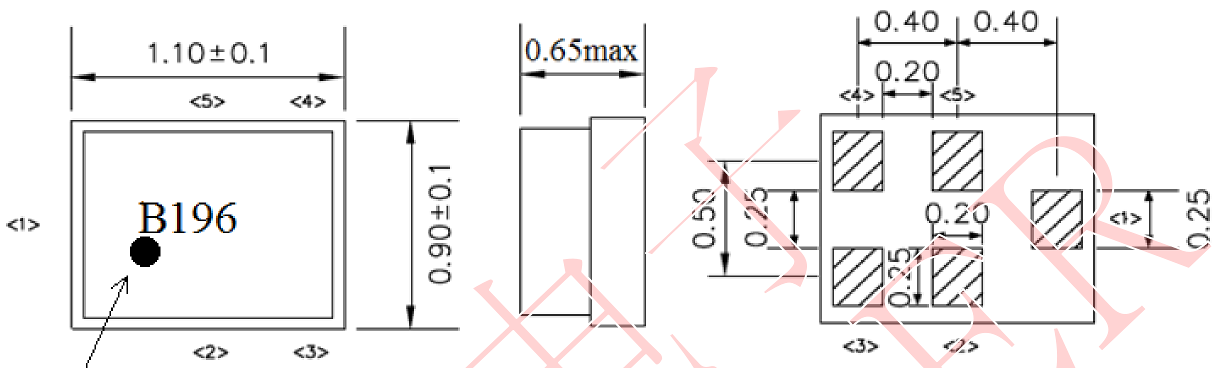
更改历史记录
History Record

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
2017-3-21	SP00	HDFB12RSS-B5		The new specification	
2017-9-21	SP01	HDFB12RSS-B5		Add dot marking.	2. DIMENSION
2017-12-29	SP02	HDFB12RSS-B5		Update matching circuit	

1. Application

- Low-loss RF filter for mobile telephone LTE Band12 systems, receive path(RX).
- Usable passband 17MHz
- Impedance 50 ohm input and output
- Unbalanced to unbalanced operation
- RoHS compatible

2. DIMENSION (PKG SIZE 1.1 x 0.9mm)



Dot Marking

Unit: mm

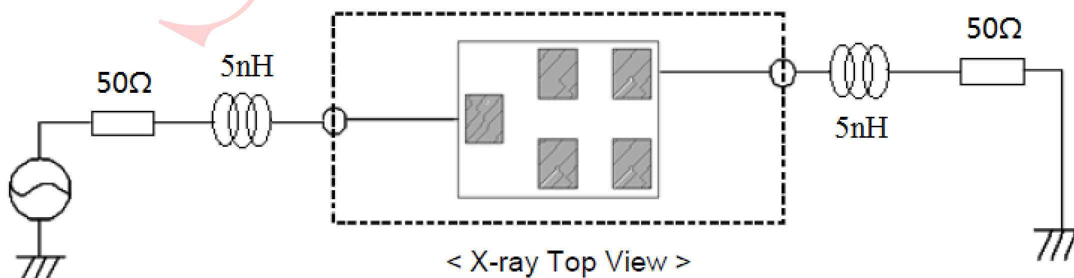
Pin configuration

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

3. Maximum Rating

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	3V (25+/-2 deg.C)
Max Input Power	15dBm 2000h
Moisture Sensitivity Level	MSL 2

4. Test Circuit



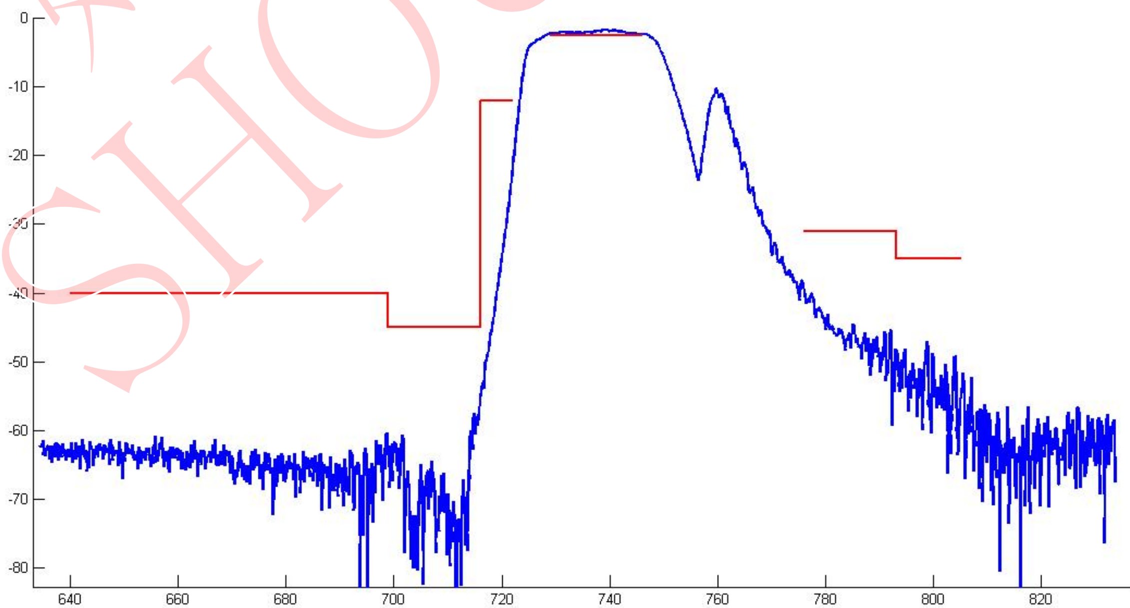
5. ELECTRICAL SPECIFICATION

Table1. Electrical Specification

Temperature range for specification: T = -20~+80℃
Terminating source impedance: Zs = 50Ω //28nH unbalanced
Terminating load impedance: Zl = 50Ω //30nH unbalanced
Input power: 15dBm 2000h

Item		Condition (MHz)	Specification			Unit
			Min	Typ	Max	
Insertion loss		729~746	-	2.0	2.5	dB
Amplitude Ripple		729~746	-	0.6	1.5	dB
VSWR	Input	729~746	-	1.8	2.0	-
	Output		-	1.7	2.0	-
Absolute attenuation		1~699	40	58	-	dB
		699~716	45	55	-	dB
		716~722	12	20	-	dB
		776~793	31	40	-	dB
		793~805	35	53	-	dB
		1710~1755	43	54	-	dB
		1850~1910	41	55	-	dB
		2187~2238	40	50	-	dB
		2400~2500	39	50	-	dB
		4900~5950	25	33	-	dB
		6561~6714	18	27	-	dB
		7290~7460	12	20	-	dB
		8019~8206	5	13	-	dB

6. Typical frequency response



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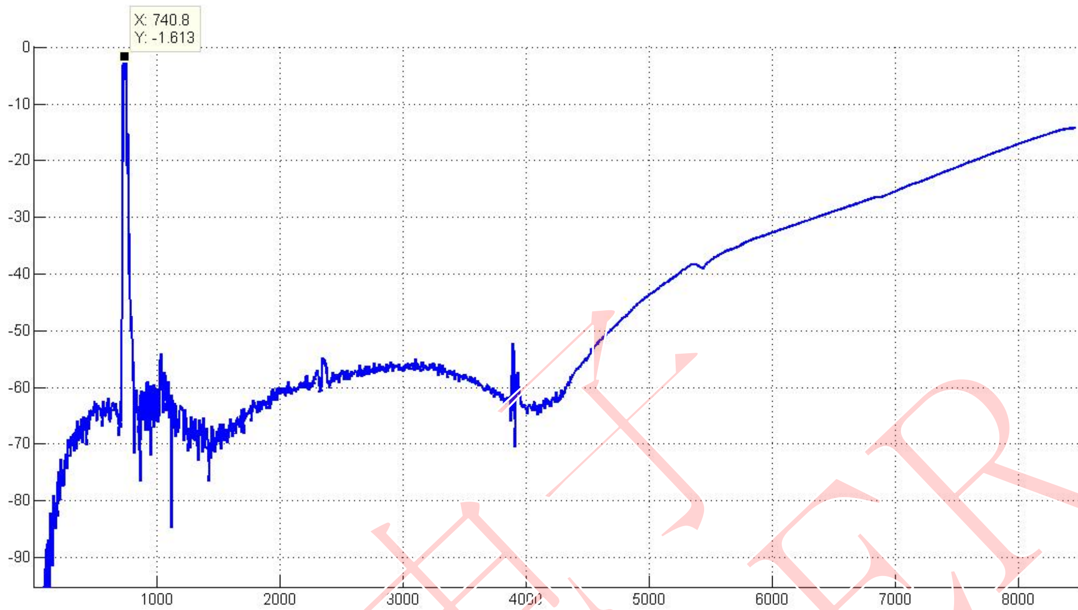


7. ENVIRONMENTAL CHARACTERISTICS

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

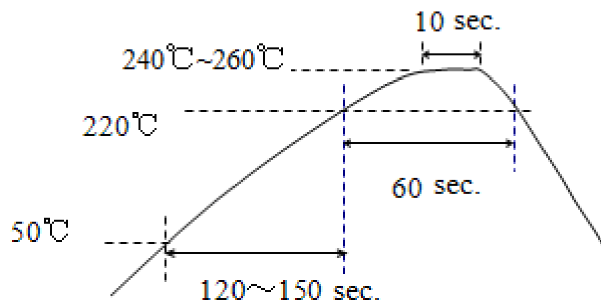
1、immerge the solder bath at 260℃ for 10 sec.

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

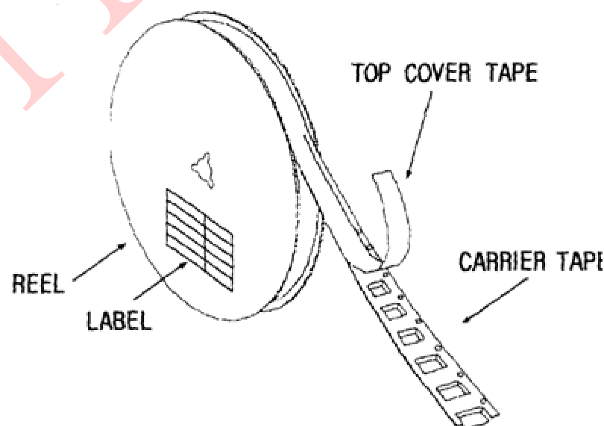
(3) The product shall be packed properly not to be damaged during transportation and storage.

9.2 Reeling Quantity

10000 pcs/reel φ 178mm

9.3 Taping Structure

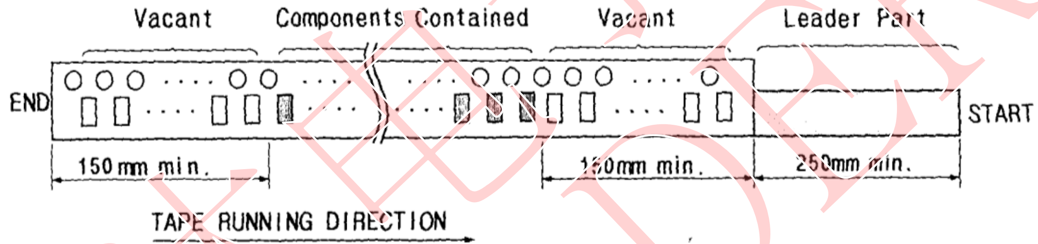
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
Marking	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.



10. TAPE SPECIFICATIONS

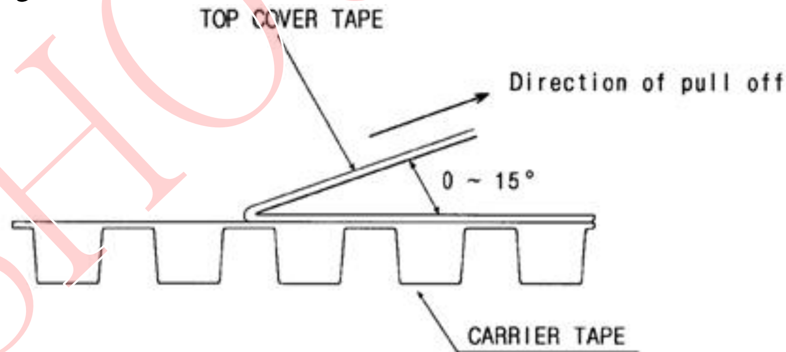
10.1 Tensile Strength of Carrier Tape: 4.4N/mm width

10.2 Top Cover Tape Adhesion (See the below figure)

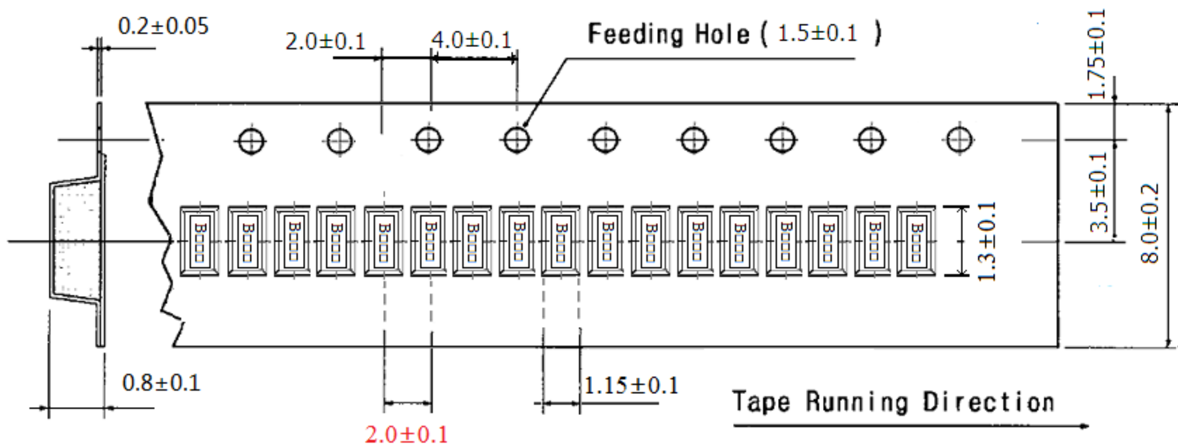
(1) pull off angle: 0~15°

(2) speed: 300mm/min.

(3) force: 20~70g



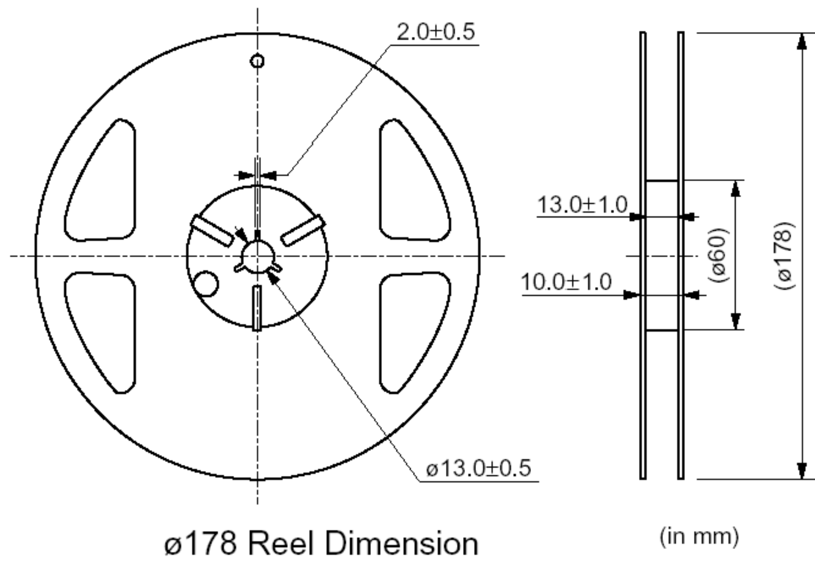
[Figure 1] Carrier Tape Dimensions



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