

规格书编号

SPEC NO : **HDDDB01NSSB11SP02**

产品规格书

SPECIFICATION

CUSTOMER 客户: _____

PRODUCT 产品: _____ **SAW DUPLEXER** _____

MODEL NO 型号: _____ **HDDDB01NSS -B11** _____

MARKING 印字: _____ **B077** _____

PREPARED 编制: _____ CHECKED 审核: _____

APPROVED 批准: _____ DATE 日期: _____ **2016-12-21** _____

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

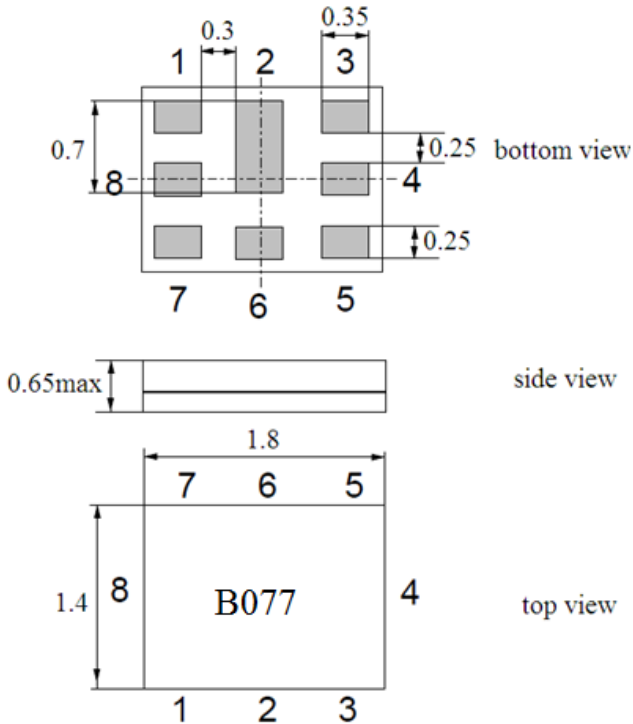
更改历史记录 History Record

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
2015-7-28	SP00	HDDB01NSS -B11		The new specification	
2016-4-11	SP01	HDDB01NSS -B11		Complete specifications. Add product application, reliability and other information. Add downlink power.	
2016-12-21	SP02	HDDB01NSS -B11		Specification update, optimization of electric performance	

1. Application

- Low-loss Saw duplexer for mobile telephone LTE and WCDMA Band1 systems.
- Low insertion attenuation and low passband ripple.
- Usable passband 60MHz
- High isolation between Tx and Rx.
- RoHS compatible

2. DIMENSION (PKG SIZE 1.8 x 1.4 x 0.65mm)



Marking: B077

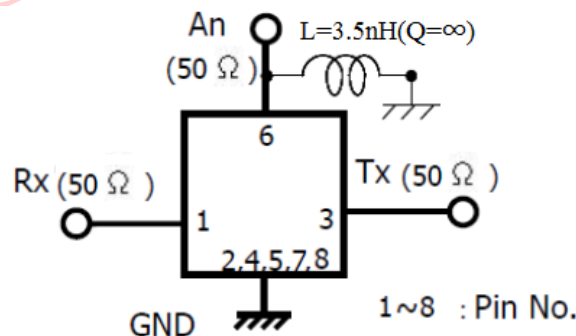
Pin configuration

- 3. Tx Input
- 6. Antenna
- 1. Rx Output
- 2,4,5,7,8 To be grounded

3. Maximum Rating

Items	Conditions
Operation temperature rang	-30℃ ~ +85℃
Storage temperature rang	-40℃ ~ +85℃
ESD voltage	ESD(MM) : 50VDC
Sensitive discharge device	ESD(HBM) : 175VDC
DC Voltage VDC	3V (25+/-2 deg.C)
Moisture Sensivity Level	MSL 2

4. TEST CIRCUIT



5. ELECTRICAL SPECIFICATION

Table1. Electrical Specification

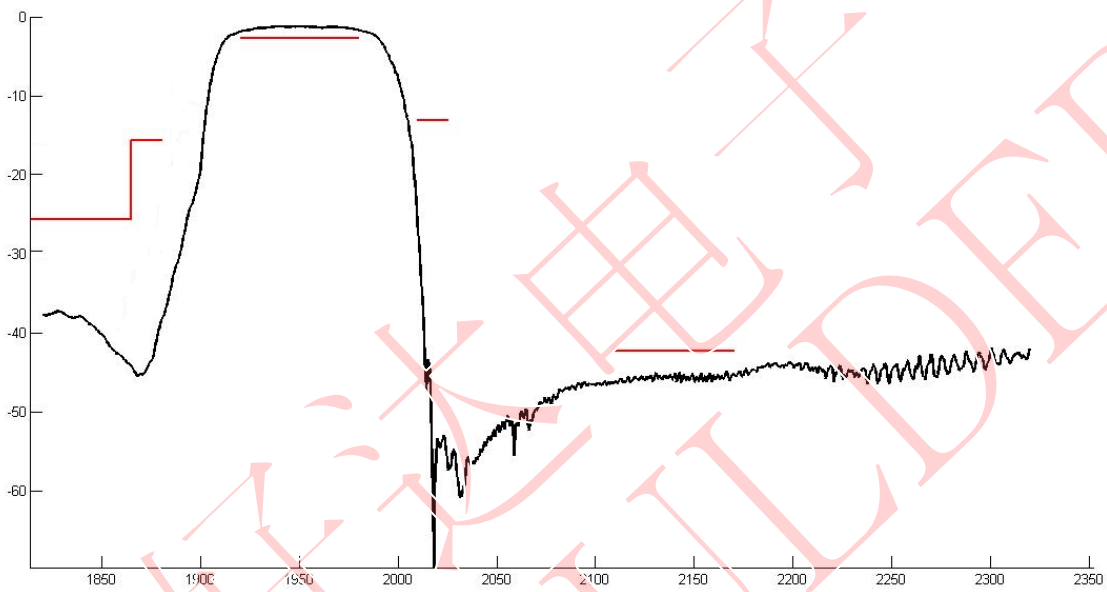
Item		Condition (MHz)	Specification			Unit		
			Min	Typ	Max			
TX to ANT	Insertion loss		1920~1980		1.9	2.1	dB	
	Pass band ripple		Any 5MHz in pass band		-	0.3	0.8	dB
	VSWR	ANT	1920~1980		-	1.6	2.0	-
		Tx			-	1.6	2.0	-
	Input Power		1920~1980		+29dBm Ta=+50°C 5000h,CW		-	
	Absolute attenuation		10~494		44	54	-	dB
			843~894		38	44	-	dB
			920~960.0		39	44	-	dB
			1226~1250		36	41	-	dB
			1470~1511		35	40	-	dB
			1559~1605		36	42	-	dB
			1605~1805		30	38	-	dB
			1805~1865		25	35	-	dB
			1865~1880		15	30	-	dB
			2010~2025		13	20	-	dB
			2110~2170		42	45	-	dB
2400~2500			37	40	-	dB		
2620~2690			33	38	-	dB		
3830~3960			23	28	-	dB		
4900~5950		16	25	-	dB			
ANT to RX	Insertion loss		2110~2170		-	2.0	2.5	dB
	Pass band ripple		Any 5MHz in pass band		-	0.5	1.0	dB
	VSWR	ANT	2110~2170		-	1.6	2.0	-
		Rx			-	1.6	2.0	-
	Input Power		2110~2170		+12dBm Ta=+50°C 5000h,CW		-	
			718~910		40	52	-	dB
			1427~1447		40	46	-	dB
			1447~1463		40	45	-	dB
			1710~1785		37	45	-	dB
			1920~1980		45	55	-	dB
			1980~2010		25	40	-	dB
			2010~2050		28	34	-	dB
			2050~2070		18	27	-	dB
2400~2500			33	40	-	dB		
2500~2570			38	42	-	dB		
4000~6000			30	38	-	dB		

Table2. Electrical Specification

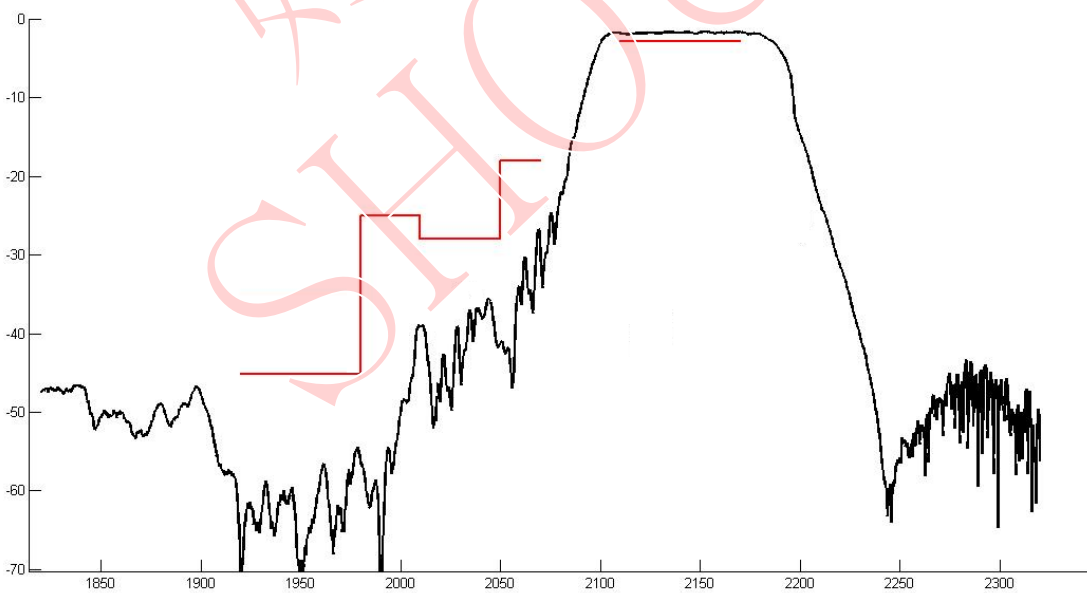
Item		Condition (MHz)	Specification			Unit
			Min	Typ	Max	
TX to RX	Isolation	1920~1980	52	55	-	dB
		2110~2170	50	52	-	dB
Terminating Impedance		Tx port	50Ω			
		Rx port	50Ω			
		Ant port	50Ω//3.5nH			
Operating Temperature			-20 to +90°C			

6. Typical frequency response

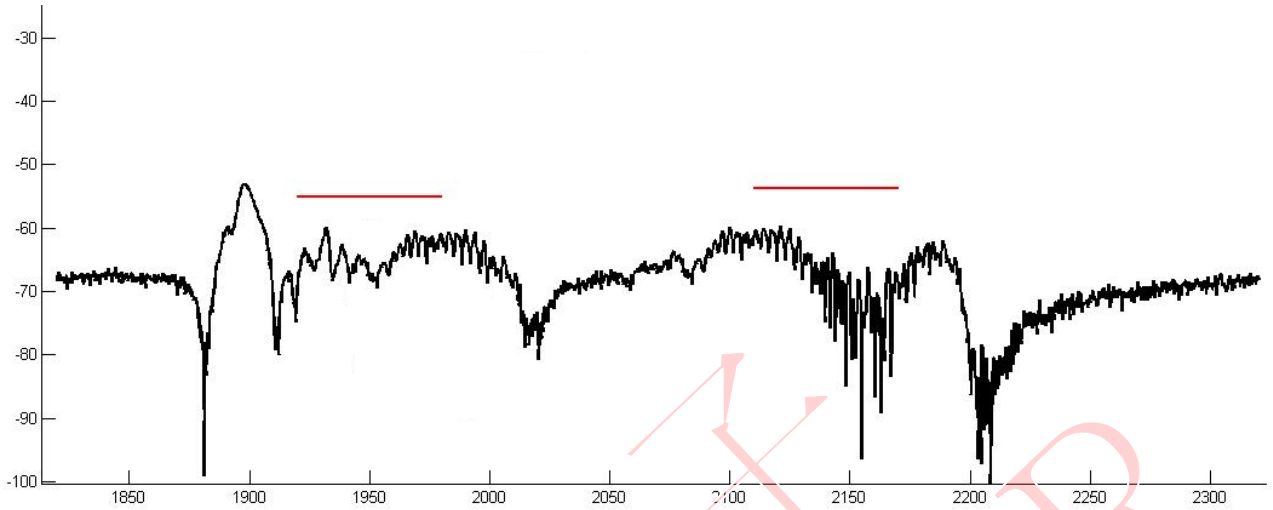
Tx to Ant



Ant to Rx



Tx to Rx Isolation



7. ENVIRONMENTAL CHARACTERISTICS

7.1 High temperature exposure

Subject the device to +85°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 5.

7.2 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 5.

7.3 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of +85°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 5.

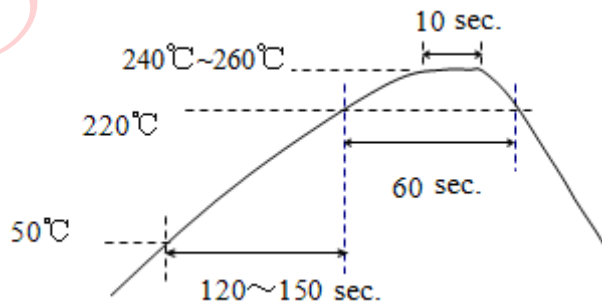
7.4 Resistance to solder heat

- 1、immerge the solder bath at 260°C for 10 sec.
- 2、 the iron at 370°C for 3 sec

7.5 Solderability

Submerge the device terminals into the solder bath at 245°C ±5°C 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



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 soldered. Please avoid soldering another part of component.

9. Packing

9.1 Dimensions

(1) Carrier Tape: Figure 1

(2) Reel: Figure 2

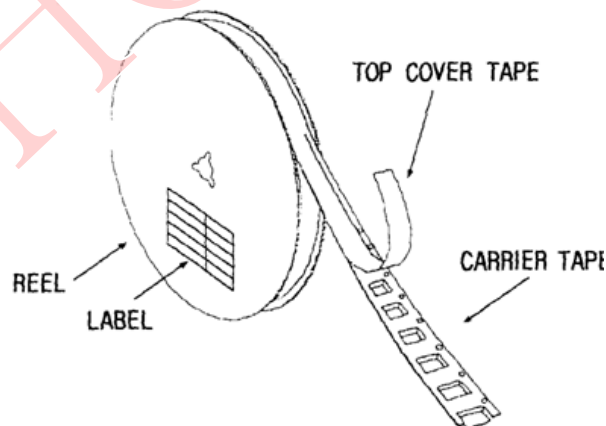
(3) The product shall be packed properly not to be damaged during transportation and storage.

9.2 Reeling Quantity

10000 pcs/reel ϕ 257.5mm

9.3 Taping Structure

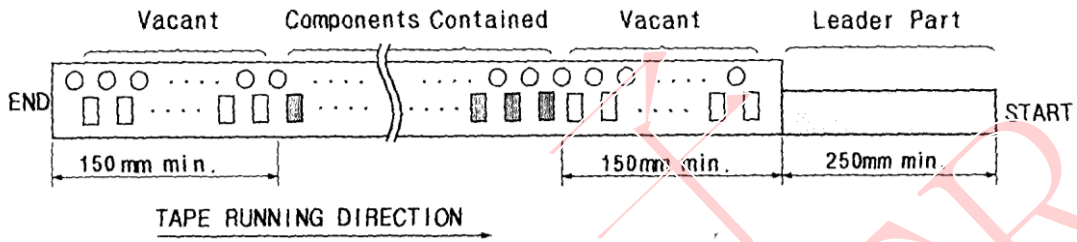
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
Marking	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

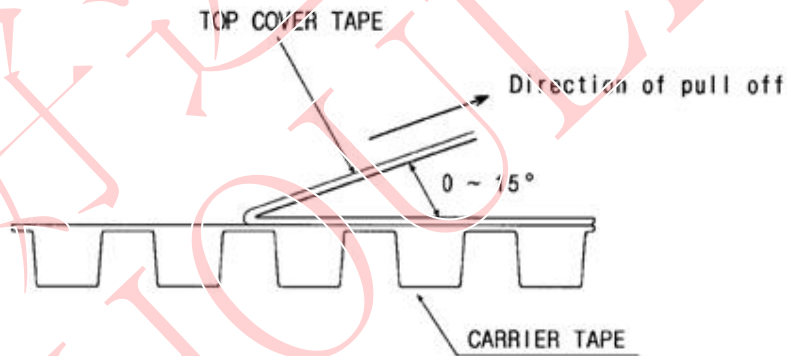


10. TAPE SPECIFICATIONS

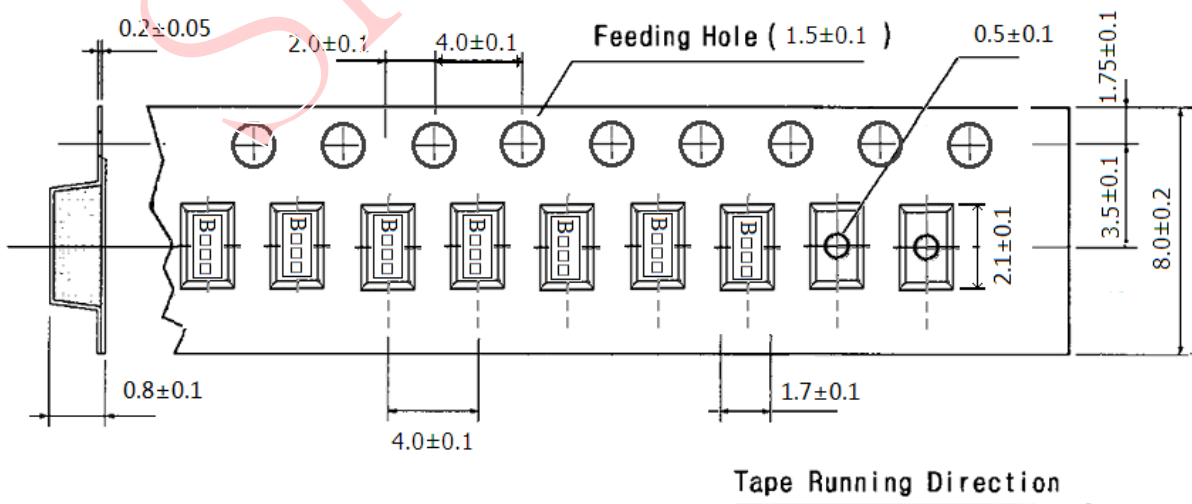
10.1 Tensile Strength of Carrier Tape: 4.4N/mm width

10.2 Top Cover Tape Adhesion (See the below figure)

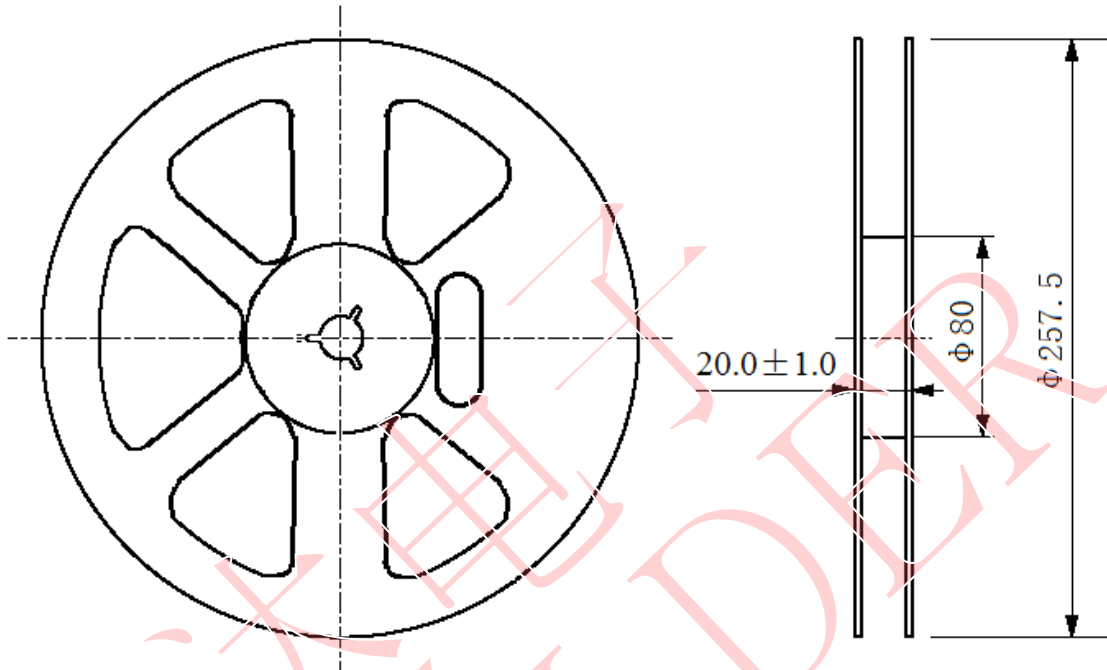
- (1) pull off angle: 0~15°
- (2) speed: 300mm/min
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions



[Figure 2] 10000 pcs/reel ϕ 257.5mm



ϕ 257.5 Reel Dimension

(in mm)