

规格书编号

SPEC NO : **HDDB07NSSB11SP01**

# 产品规格书

# SPECIFICATION

CUSTOMER 客户: \_\_\_\_\_  
PRODUCT 产品: \_\_\_\_\_ SAW DUPLEXER \_\_\_\_\_  
MODEL NO 型号: \_\_\_\_\_ HDDB07NSS-B11 \_\_\_\_\_  
MARKING 印字: \_\_\_\_\_ HD B163 \_\_\_\_\_  
PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ DATE 日期: \_\_\_\_\_ 2016-7-7 \_\_\_\_\_

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

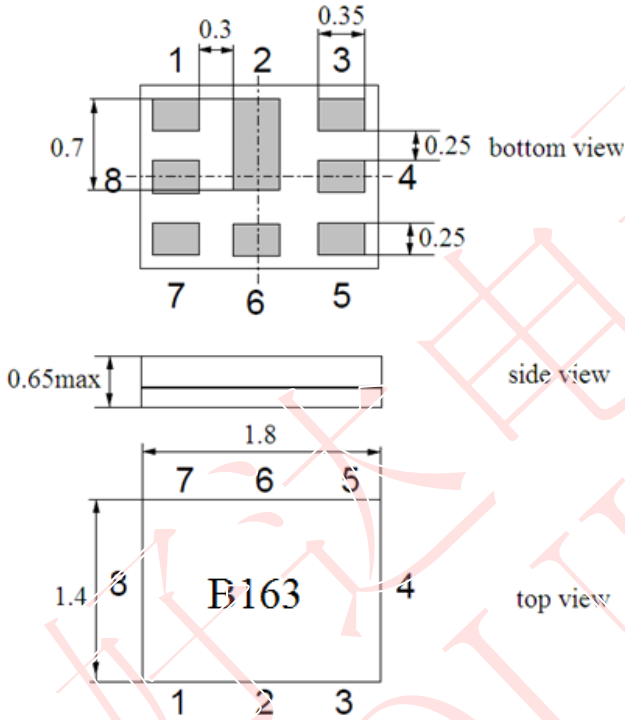
### 更改历史记录 History Record

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
2016-03-25	SP00	HDDB07NSS -B11		New preliminary specification.	
2016-07-07	SP01	HDDB07NSS -B11		New specification.	

**1. Application**

- Low-loss Saw duplexer for mobile telephone LTE Band7 systems.
- Low insertion attenuation and low passband ripple.
- Usable passband 70MHz
- High isolation between Tx and Rx.
- RoHS compatible

**2. DIMENSION (PKG SIZE 1.8 x 1.4 x 0.6mm)**



**Marking:**

B163 : Model code

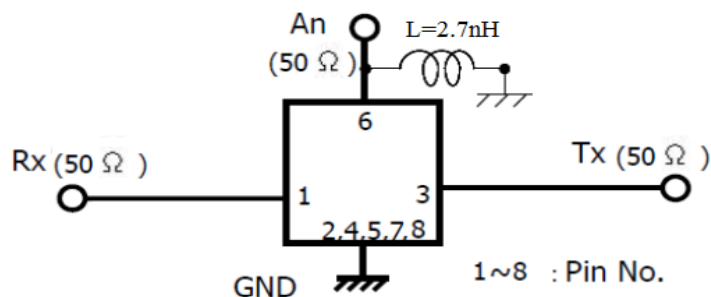
**Pin configuration**

- 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 Sensitivity Level	MSL 2

**4. TEST CIRCUIT**



## 5. ELECTRICAL SPECIFICATION

**Table1. Electrical Specification**

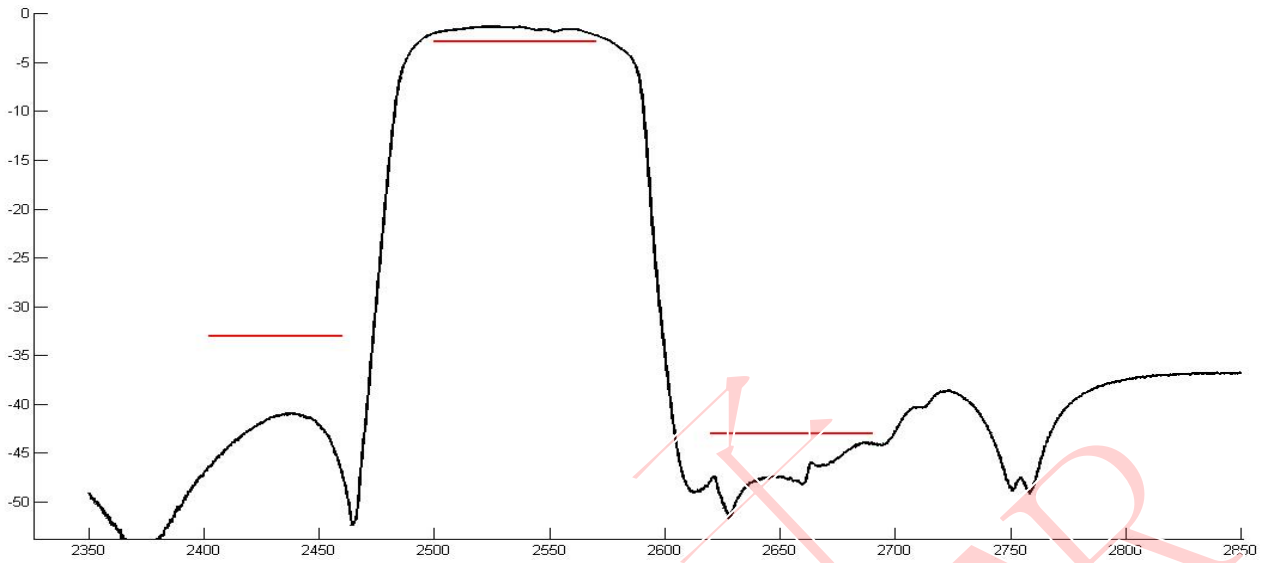
Item		Condition (MHz)	Specification			Unit	
			Min	Typ	Max		
TX to ANT	Center Frequency		-	2535	-	MHz	
	Insertion loss	2500~2570	-	2.2	2.8	dB	
	Amplitude ripple	2500~2570	-	1.0	2.0	dB	
	VSWR	TX	2500~2570	-	1.6	2.2	-
		ANT		-	1.6	2.2	-
	Input Power	2500~2570	+29dBm Ta=+50°C 50000h,CW			-	
			10~2170	30	38	-	dB
			2402~2460	33	41	-	dB
			2620~2690	45	48	-	dB
			5000~5850	30	47	-	dB
		7500~7710	45	58	-	dB	
ANT to RX	Center Frequency		-	2655	-	dB	
	Insertion loss	2620~2690	-	2.5	3.2	dB	
	Pass band ripple	2620~2690	-	0.8	2.4	dB	
	VSWR	ANT	2620~2690	-	1.8	2.4	-
		Rx		-	2.0	2.4	-
	Absolute attenuation		10~2500	35	40	-	dB
			2500~2570	45	48	-	dB
			2775~6000	30	35	-	dB
		7620~7830	15	20	-	dB	

**Table2. Electrical Specification**

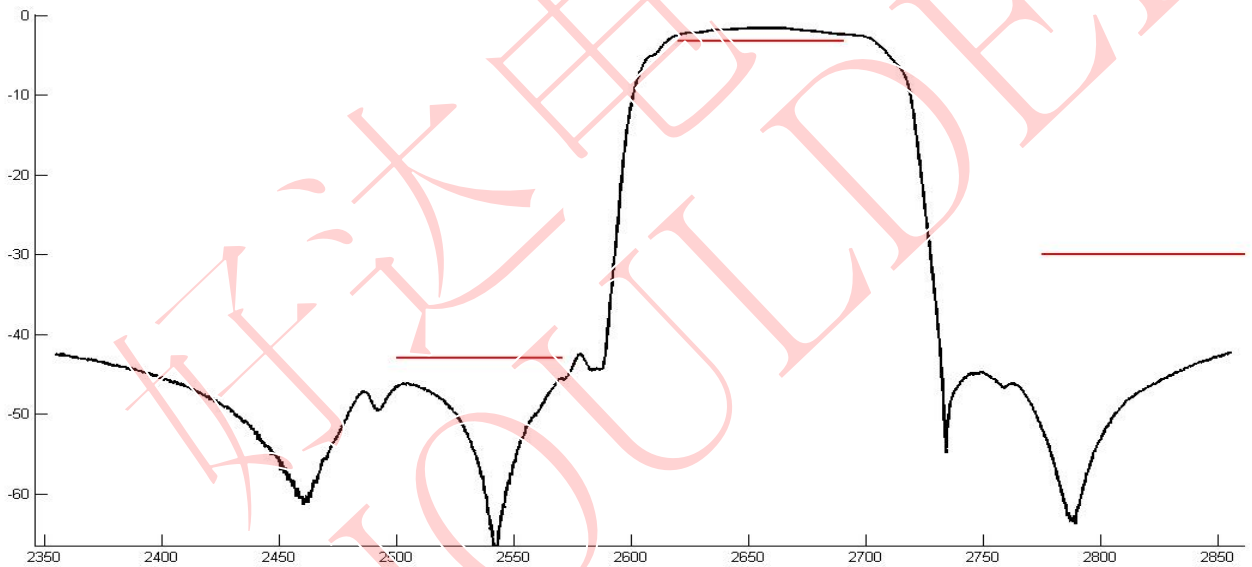
Item		Condition (MHz)	Specification			Unit
			Min	Typ	Max	
TX to RX	Isolation	2500~2570	48	53	-	dB
		2620~2690	48	53	-	dB
Terminating Impedance		Tx port	50Ω			
		Rx port	50Ω			
		Ant port	50Ω//2.7nH			
Operating Temperature			-20 to +85°C			

## 6. Typical frequency response

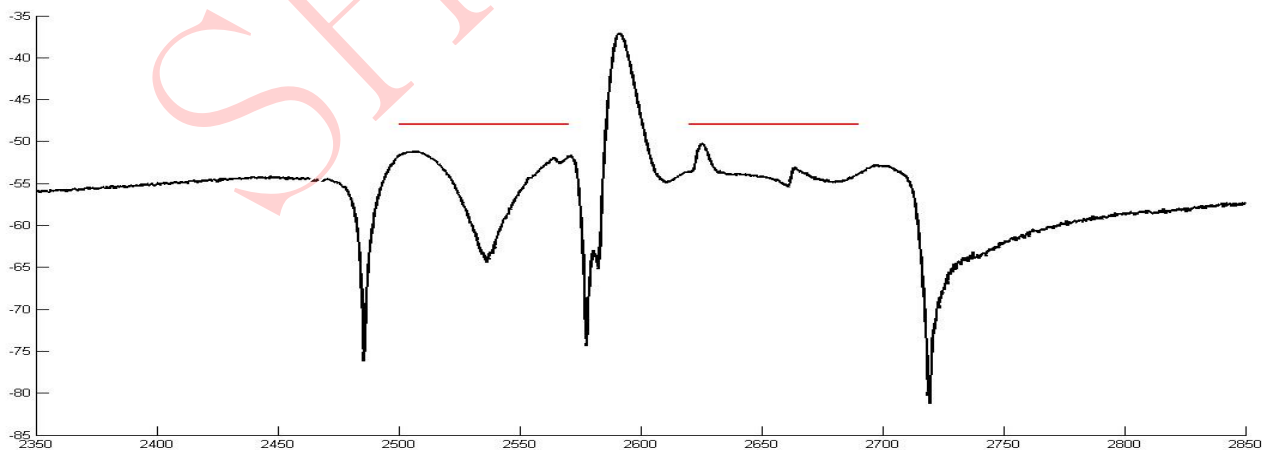
Tx to Ant



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.

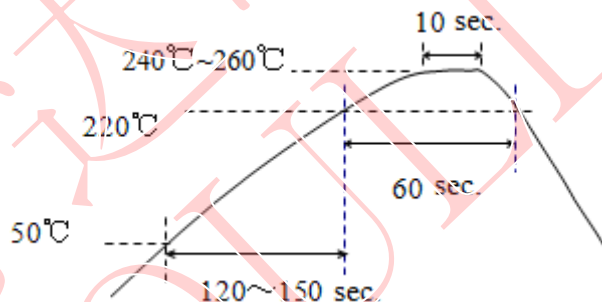
7.4 Resistance to solder heat

- 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 solded. Please avoid soldering another part of component.

**9. Packing**

9.1 Dimensions

(1) Carrier Tape: Figure 1

(2) Reel: Figure 2

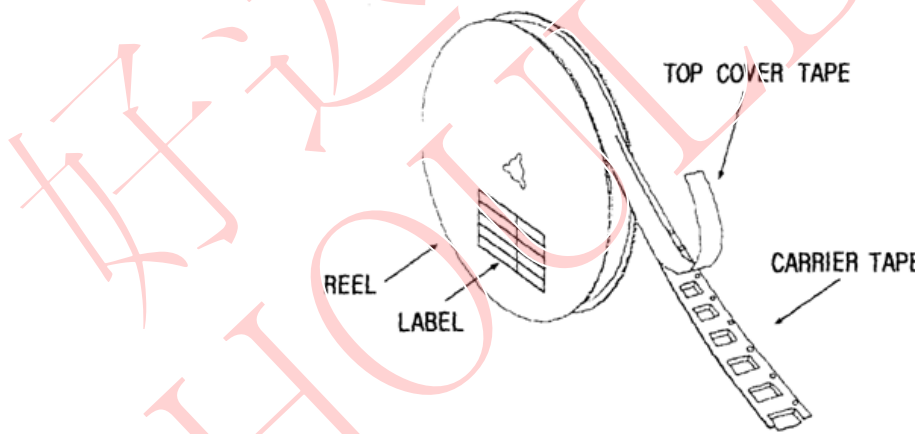
(3) The product shall be packed properly not to be damaged during transportation and storage.

9.2 Reeling Quantity

10000 pcs/reel  $\phi$  257.5mm

9.3 Taping Structure

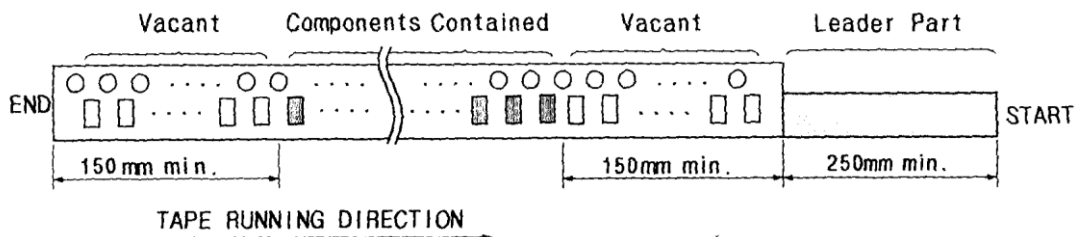
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
Marking	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

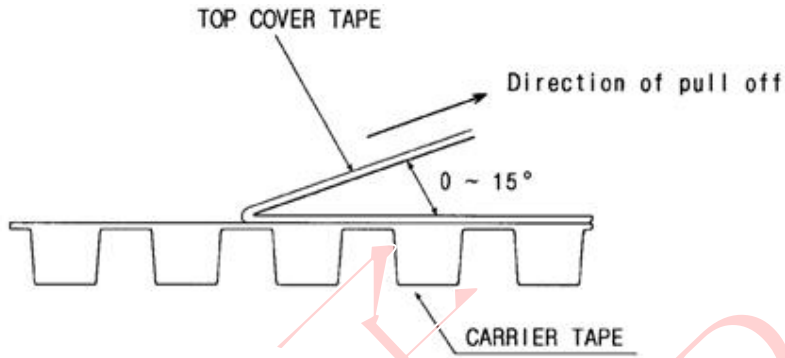


**10. TAPE SPECIFICATIONS**

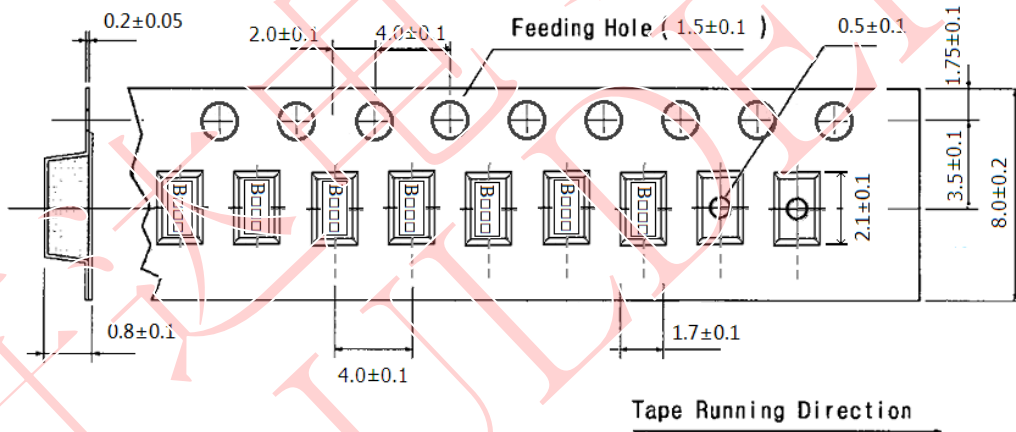
10.1 Tensile Strength of Carrier Tape: 4.4N/mm width

10.2 Top Cover Tape Adhesion (See the below figure)

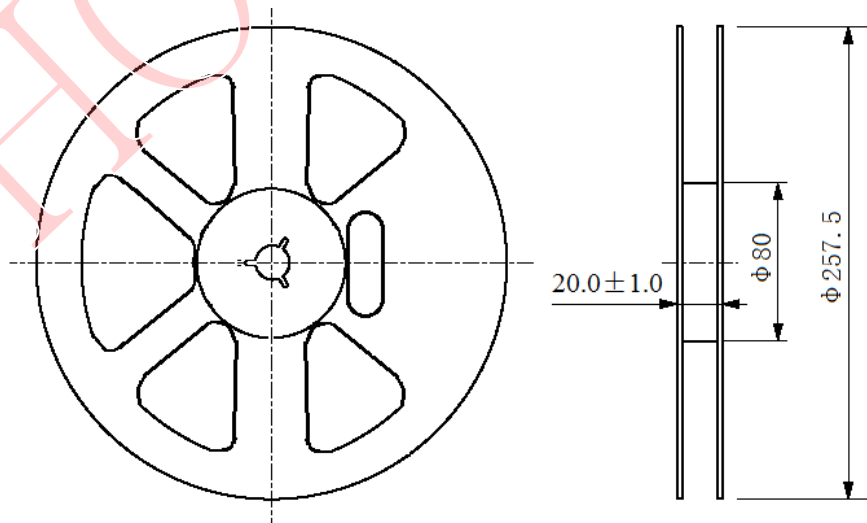
- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g



**[Figure 1] Carrier Tape Dimensions**



**[Figure 2] 10000 pcs/reel φ 257.5mm**



**φ 257.5 Reel Dimension**

(in mm)