

产品规格书

SPECIFICATION

CUSTOMER 客户: _____

PRODUCT 产品: _____ SAW DUPLEXER _____

MODEL NO 型号: _____ KH-SAWD8388A _____

MARKING 印字: _____ ● 5 N _____

PREPARED 编制: _____ CHECKED 审核: _____

APPROVED 批准: _____ D A T E 日期: _____ 2021-5-12 _____

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

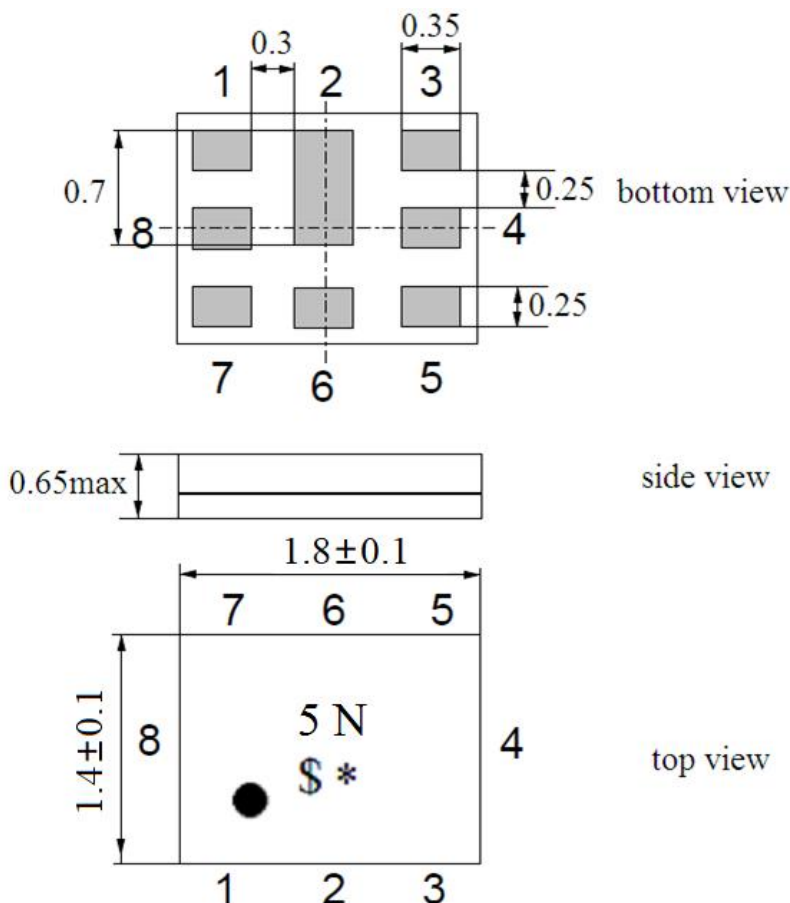
深圳市金航标电子有限公司
SHENZHEN KINGHELM ELECTRON CO., LTD.

SAW DUPLEXER **KH-SAWD8388A**

1. Application

- Low-loss Saw duplexer for mobile telephone LTE and WCDMA Band V systems.
- Low insertion attenuation and low passband ripple.
- Usable passband 25MHz
- High isolation between Tx and Rx.
- RoHS compatible

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



Pad tolerances: ±0.05

Unit:mm

Pin configuration

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

Marking: Laser Printing

\$: EIAJ Code

(Refer to the table 1)

*: Date Code

(Refer to the table 2)

Table 1 \$: EIAJ Code

This rule of code is applied repeatedly every four year.

2019	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2023	A	B	C	D	E	F	G	H	J	K	L	M
2027												
2020	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2024	N	P	Q	R	S	T	U	V	W	X	Y	Z
2028												
2021	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2025	a	b	c̄	d	e	f	g	h	j	k	l	m
2029												
2022	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2026	n	o	p	q	r	s	t	u	v	w	x	y
2030												

Table 2 *: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	A	B	C	D	E	F	G	H	J	K	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	L	M	N	P	Q	R	S	T	U	V	
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	W	X	Y	Z	a	b	c̄	d	e	f	g

3. Maximum Rating

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

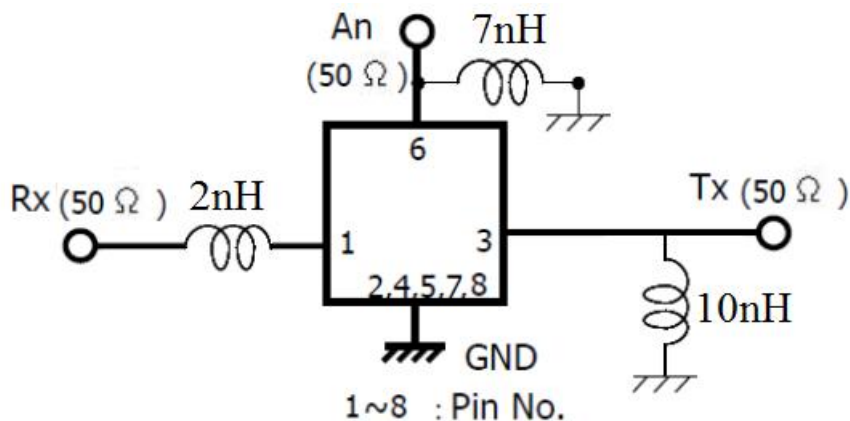
4. ELECTRICAL SPECIFICATION

Item		Condition (MHz)	Specification			Unit	
			Min	Typ	Max		
TX to ANT	Insertion loss	824~849	-	1.4	1.8	dB	
		826.5~846.5	-	1.3	1.7	dB	
	Amplitude ripple	824~849	-	0.5	1.3	dB	
	VSWR	ANT	824~849	-	1.6	2	-
				Tx	-	1.6	2
	Input Power	824~849	+30dBm Ta=+50°C 5000h,CW			-	
	Absolute attenuation	10~420	35	49	-	dB	
		420~494	35	45	-	dB	
		494~764	27	40	-	dB	
		764~804	28	30	-	dB	
		860~869	3	6.5	-	dB	
		869~894	45	59	-	dB	
		1559~1606	30	33	-	dB	
		1648~1698	29	32	-	dB	
		1710~1785	28	31	-	dB	
1920~1980		25	29	-	dB		
2110~2170	25	28	-	dB			
2400~2500	22	26	-	dB			
4900~5950	10	20	-	dB			

Item		Condition (MHz)	Specification			Unit	
			Min	Typ	Max		
ANT to RX	Insertion loss	869~894	-	1.9	2.4	dB	
		871.5~891.5	-	1.6	2.0	dB	
	Amplitude ripple	869~894	-	0.5	1.2	dB	
	VSWR	ANT	869~894	-	1.6	2.0	-
		Rx		-	1.6	2.0	-
	Absolute attenuation	10~447	50	60	-	dB	
		447~824	43	54	-	dB	
		824~849	45	62	-	dB	
		929~979	12	16	-	dB	
		1710~1785	45	58	-	dB	
		1850~1920	40	56	-	dB	
		1920~1980	40	56	-	dB	
		1980~2400	40	53	-	dB	
2400~2500	30	53	-	dB			
4900~5950	25	35	-	dB			

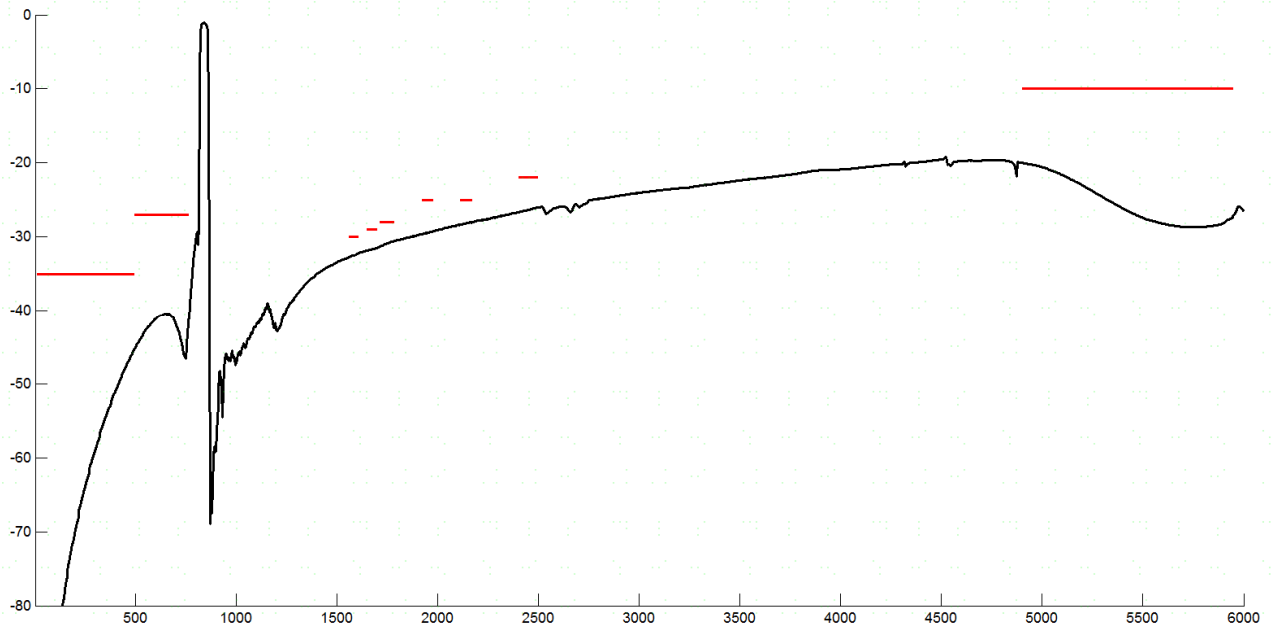
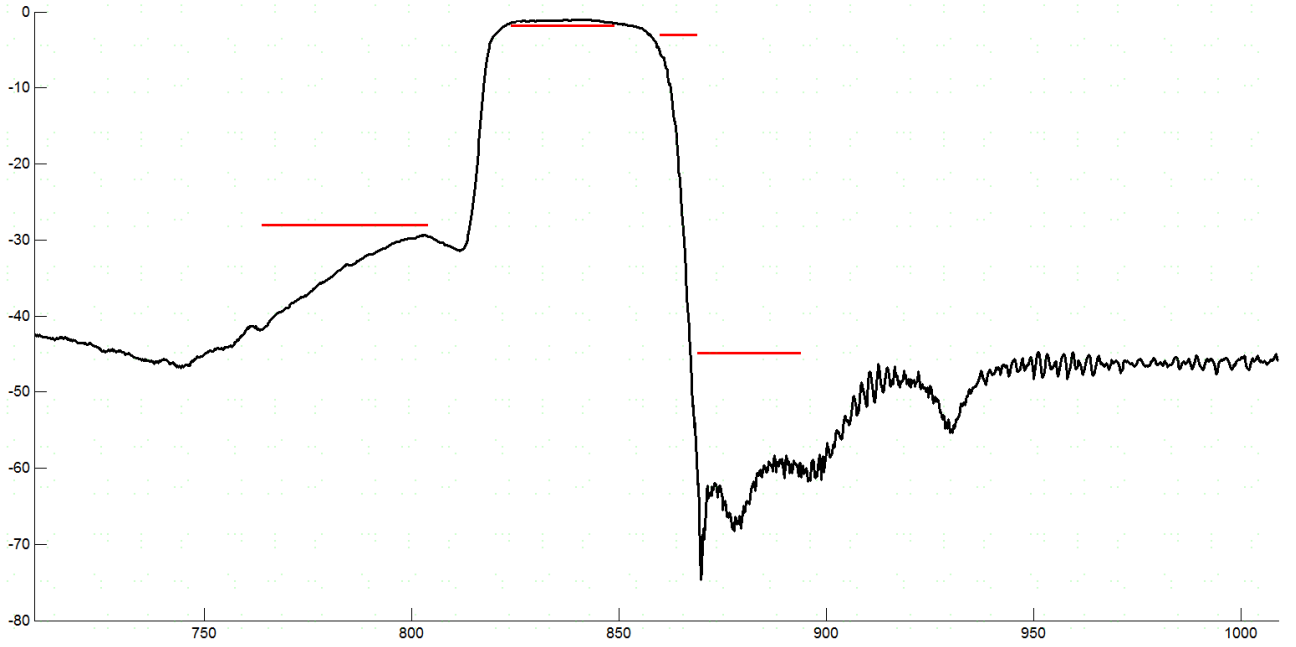
Item		Condition (MHz)	Specification			Unit
			Min	Typ	Max	
TX to RX	Isolation	824~849	55	60	-	dB
		826.5~846.5	55	60	-	dB
		869~894	52	63	-	dB
		871.5~891.5	52	63	-	dB
		1574~1577	50	57	-	dB
		1638~1708	50	56	-	dB
		2462~2557	45	54	-	dB

5. TEST CIRCUIT

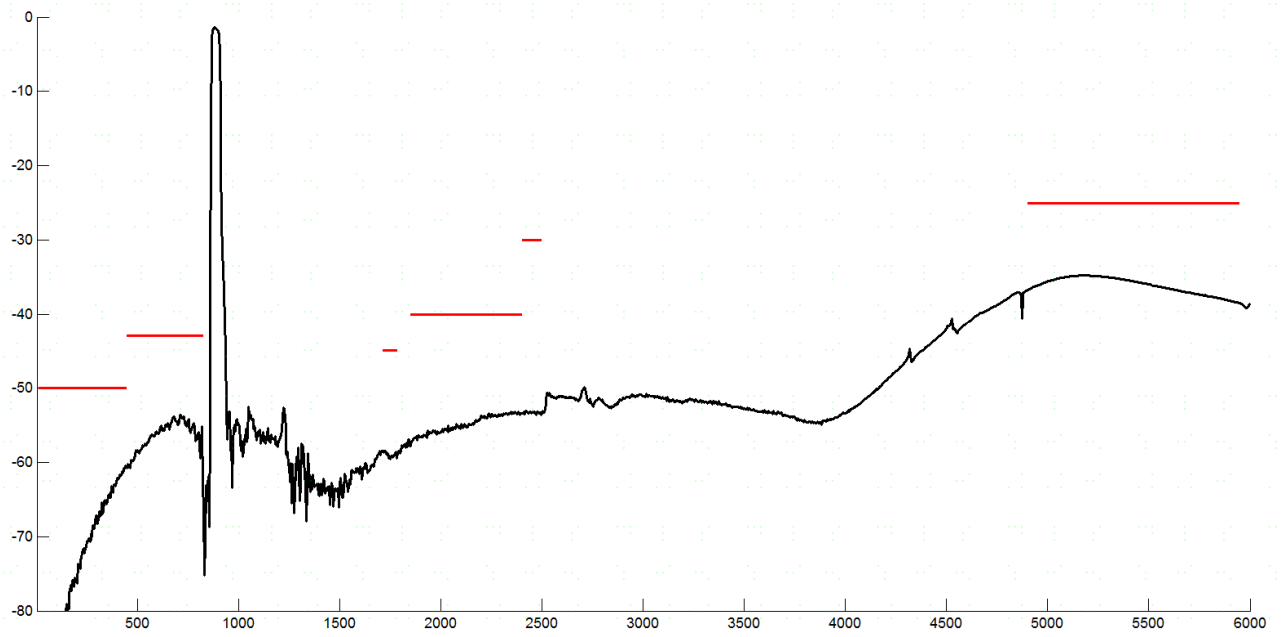
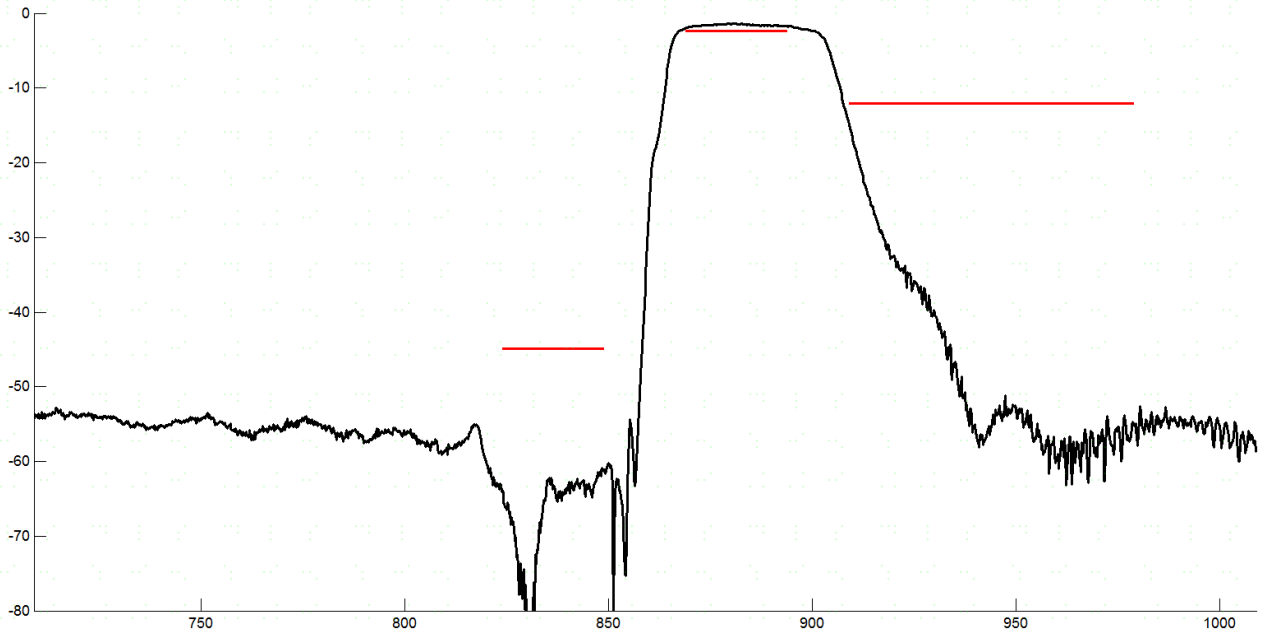


6. Typical frequency response

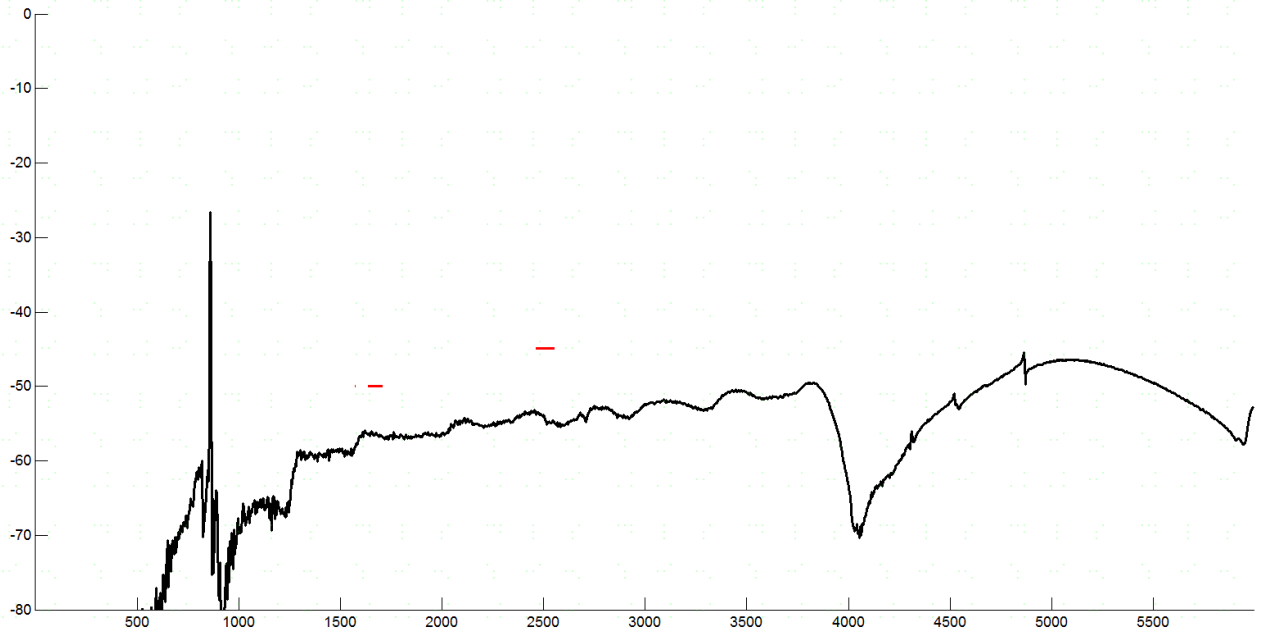
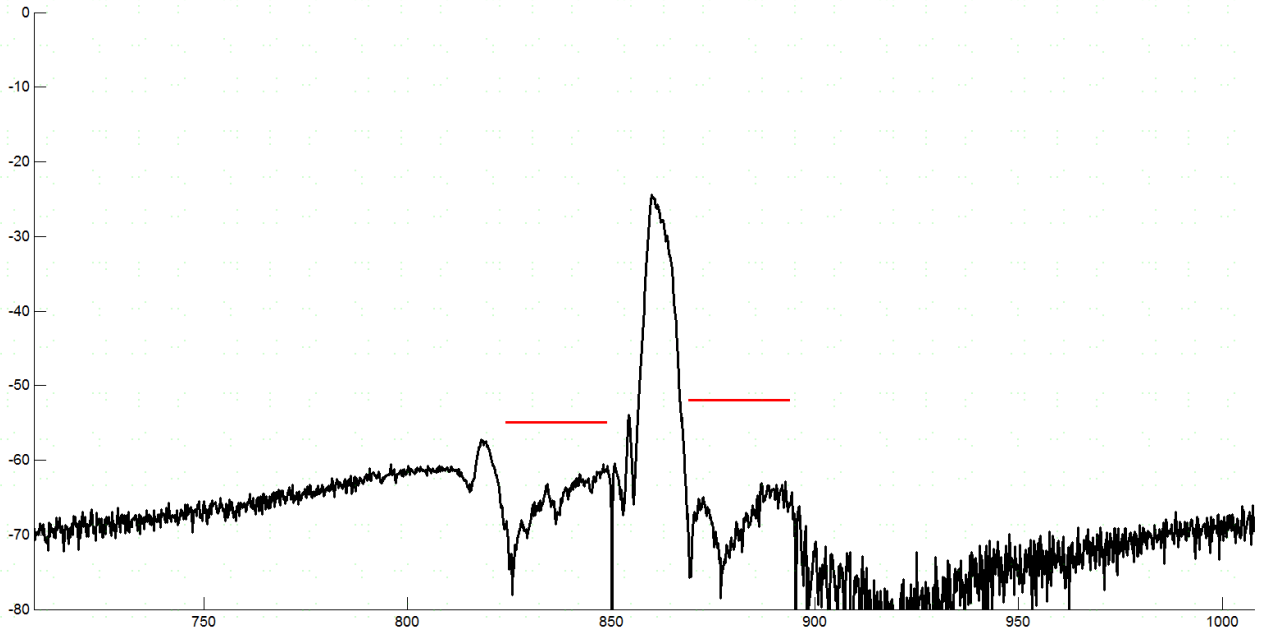
Tx to Ant



Ant to Rx



Tx to Rx Isolation



7. Reliability test item & condition

Category	Reliability test items		Test condition	Quantity	Description
Environment Test	1	Low temperature storage	-40±5℃ 240h	23	JESD22-A119
	2	High temperature storage	125±5℃ 240h	23	JESD22-A103E
	3	High temperature humidity	85℃ 85%RH, 240h	23	JESD22-A106B
	4	Thermal Shock	-40 /30min~ +85 °C/30 min 100 cycle	23	JESD22-A106A
Mechanical Test	5	Drop Test	152mm 12times Steel floor JIG(110g~150g)	23	IEC 1178-1.4.8.9
	6	Vibration	10~55Hz, amplitude 1.5mm Sweep time:1min, X.Y.Z direction, 2h/direction	23	IEC 1178-1.4.8.7
Physical Test	7	Soldering heat resistance	Reflow with 260±5℃, 10±1s (Solder Pot)	23	JIS C 5201 4.18
	8	Solderability test	235±5℃ 3 sec. (Solder Pot)	50	JIS C 5201 4.17
	9	Board adhesion	0.5mm/sec 1point push	11	IEC 68-2-21 Ue3
	10	Leak Hunting	125℃ Fluorocarbon oil leak Hunting (30±1)s	20	MIL-STD-883E 1014.9

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

SAW DUPLEXER **KH-SAWD8388A**

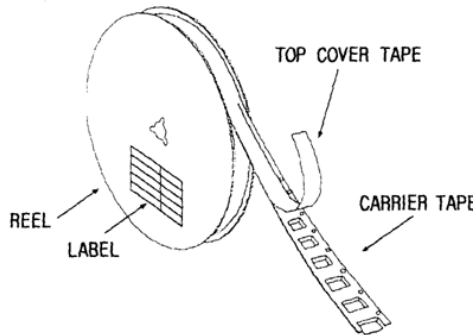
(3) The product shall be packed properly not to be damaged during transportation and storage.

9.2 Reeling Quantity

10000 pcs/reel ϕ 257.5mm

9.3 Taping Structure

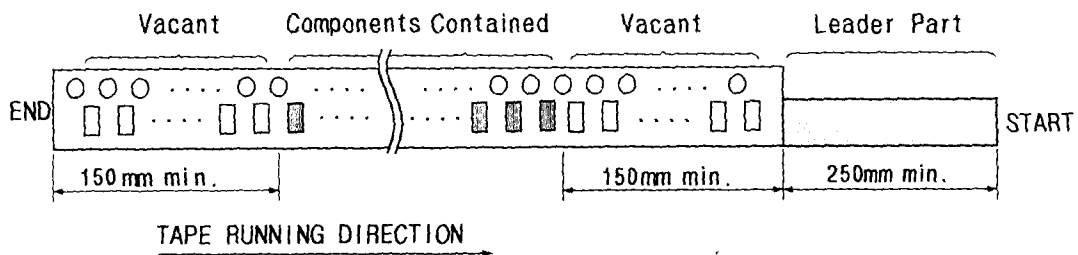
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
Marking	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

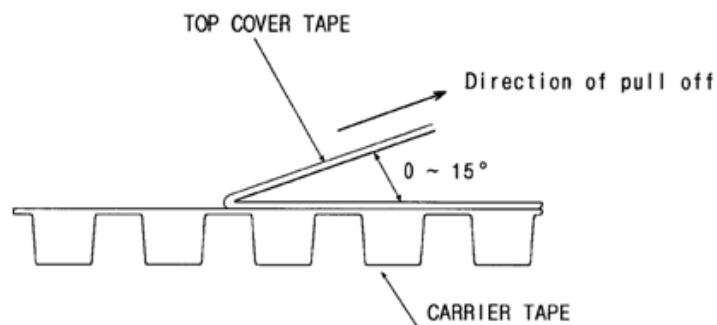


10. TAPE SPECIFICATIONS

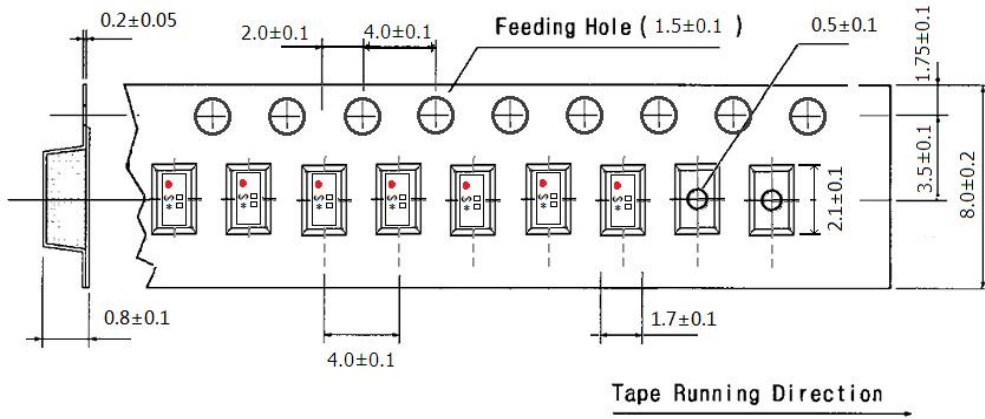
10.1 Tensile Strength of Carrier Tape: 4.4N/mm width

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

