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Datasheet of SAW Device

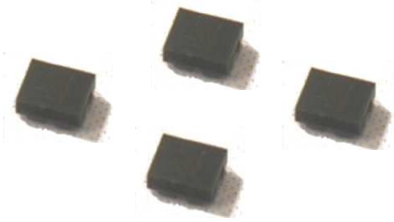
SAW Duplexer

for Band8 / Unbalanced / LR /1814

Murata PN: SAYEY897MBA0B0A

■ Feature

- LTE-A
- Low Insertion Loss & High Isolation
- TC-SAW



Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.
Please also read caution at the end of this document.

SAYEY897MBA0B0A (Band8 / Unbalanced / LR / 1814)

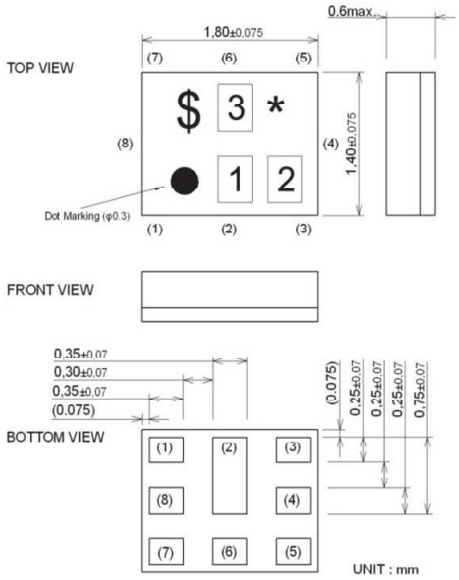
Revision Number	Date	Description
SAYEY897MBA0B0A_rev. A	Feb-21-2014	■ Initial Release
SAYEY897MBA0B0A_rev. B	May-28-2014	■ Updated for MP
SAYEY897MBA0B0A_rev. C	Sep-02-2015	■ Updated General Information
SAYEY897MBA0B0A_rev. D	Sep-15-2015	■ Updated General Information
SAYEY897MBA0B0A_rev. E	Sep-05-2016	■ Updated General Information
SAYEY897MBA0B0A_rev. F	Jun-13-2017	■ Updated General Information

- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h +55 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals : 10M ohm
- RoHS compliance : Yes
- ESD (ElectroStatic Discharge) sensitive device

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions

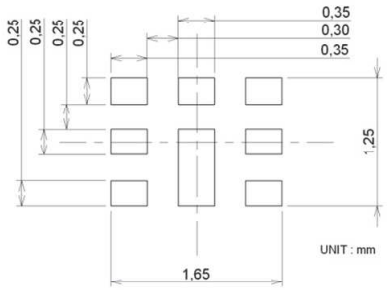


Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 6
2 : G
3 : A

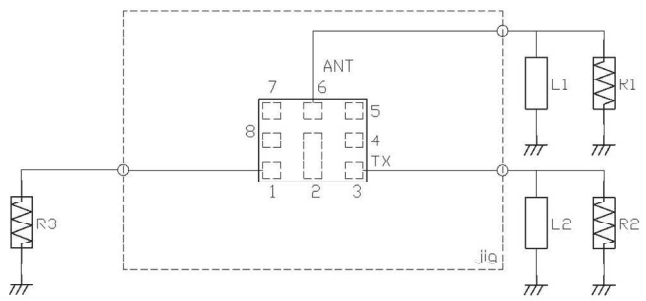
Terminal Number
(6) : Ant
(3) : TX
(1) : RX
Others : GND

Notice) Please refer to Measurement Circuit for Port information in detail.

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :8.2nH(Ideal inductor)
	:9.1nH(LQP03TN9N1) <Reference>
R2 : 50 ohm	L2 :24nH(Ideal inductor)
R3 : 50 ohm	

SAYEY897MBA0B0A (Band8 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

TX → ANT.				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Center Frequency					897.5		MHz	
Insertion Loss	880.	to	915. MHz		2.3	3.0	dB	
	880.25	to	914.75 MHz		2.2	3.0	dB	
	882.5	to	912.5 MHz		1.8	2.2	dB_{INT}	Any 4.5MHz
Ripple Deviation	880.	to	915. MHz		1.5	2.3	dB	
VSWR	880.	to	915. MHz		1.5	2.0		TX
	880.	to	915. MHz		1.5	2.0		ANT.
Absolute Attenuation	10.	to	716. MHz	30	37		dB	
	716.	to	728. MHz	35	37		dB	
	728.	to	793. MHz	30	37		dB	
	832.	to	862. MHz	30	40		dB	B20 TX
	925.	to	960. MHz	44	56		dB	
	1559.	to	1563. MHz	33	39		dB	COMPASS
	1565.42	to	1573.37 MHz	33	38		dB	Lower GPS
	1573.37	to	1577.47 MHz	33	38		dB	Regular GPS
	1577.47	to	1585.42 MHz	33	37		dB	Upper GPS
	1597.55	to	1605.89 MHz	33	39		dB	GLONASS
	1710.	to	1785. MHz	30	46		dB	B3 TX
	1760.	to	1840. MHz	40	49		dB	2f
	1840.	to	1880. MHz	38	50		dB	
	1920.	to	1980. MHz	30	46		dB	B1 TX
	2110.	to	2170. MHz	27	41		dB	
	2400.	to	2500. MHz	35	39		dB	ISM2.4
	2434.	to	2494. MHz	35	39		dB	WLAN co-ex
	2620.	to	2745. MHz	33	38		dB	3f
	3520.	to	3660. MHz	20	33		dB	4f
	4400.	to	4575. MHz	20	31		dB	5f
	4900.	to	5950. MHz	20	28		dB	ISM5G, 6f
	6160.	to	6405. MHz	15	25		dB	7f
	7040.	to	7320. MHz	9.0	14.0		dB	8f
	7920.	to	8235. MHz	2.0	11.0		dB	9f
	8800.	to	9150. MHz	2.0	11.0		dB	10f
	9680.	to	10065. MHz	2.0	12.0		dB	11f
	10560.	to	10980. MHz	2.0	7.0		dB	12f
	11440.	to	11895. MHz	2.0	7.0		dB	13f
	12320.	to	12750. MHz	2.0	9.0		dB	14f

* Typical value at 25±2deg.C

SAYEY897MBA0B0A (Band8 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX >

ANT. → RX			Characteristics (-20 to +85 deg.C)			Unit	Note
			min.	typ.*	max.		
Center Frequency				942.5		MHz	
Insertion Loss	925. to 960.	MHz		2.5	3.8	dB	
	925.25 to 959.75	MHz		2.4	3.5	dB	
	927.5 to 957.5	MHz		1.9	2.7	dB_{INT}	Any 4.5MHz
Ripple Deviation	925. to 960.	MHz		1.3	3.0	dB	
VSWR	925. to 960.	MHz		1.7	2.2		RX
	925. to 960.	MHz		1.8	2.2		ANT.
Absolute Attenuation	10. to 880.	MHz	45	64		dB	
	45.	MHz	50	109		dB	RX - TX
	835. to 870.	MHz	40	67		dB	2TX - RX
	880. to 915.	MHz	45	58		dB	TX
	902.5 to 910.	MHz	30	61		dB	(RX + TX) / 2
	980. to 1045.	MHz	25	28		dB	
	1427. to 1448.	MHz	40	72		dB	B11 TX
	1710. to 1785.	MHz	40	66		dB	B3 TX
	1805. to 1920.	MHz	40	64		dB	RX + TX, 2f
	1920. to 1980.	MHz	40	63		dB	B1 TX
	2400. to 2500.	MHz	40	59		dB	ISM2.4
	2500. to 2570.	MHz	40	60		dB	B7 TX
	2685. to 2790.	MHz	40	58		dB	RX + 2TX
	2775. to 2880.	MHz	40	58		dB	3f
	2880. to 3700.	MHz	35	55		dB	
	3700. to 3840.	MHz	40	55		dB	4f
	4625. to 4800.	MHz	40	53		dB	5f
	4900. to 5950.	MHz	40	53		dB	ISM 5G, 6f
	6475. to 6720.	MHz	20	55		dB	7f
	7400. to 7680.	MHz	15	53		dB	8f
	8325. to 8640.	MHz	15	57		dB	9f
	9250. to 9600.	MHz	15	43		dB	10f
	10175. to 10560.	MHz	15	34		dB	11f
	11100. to 11520.	MHz	15	27		dB	12f
	12025. to 12480.	MHz	15	26		dB	13f

* Typical value at 25±2deg.C

SAYEY897MBA0B0A (Band8 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→RX. >

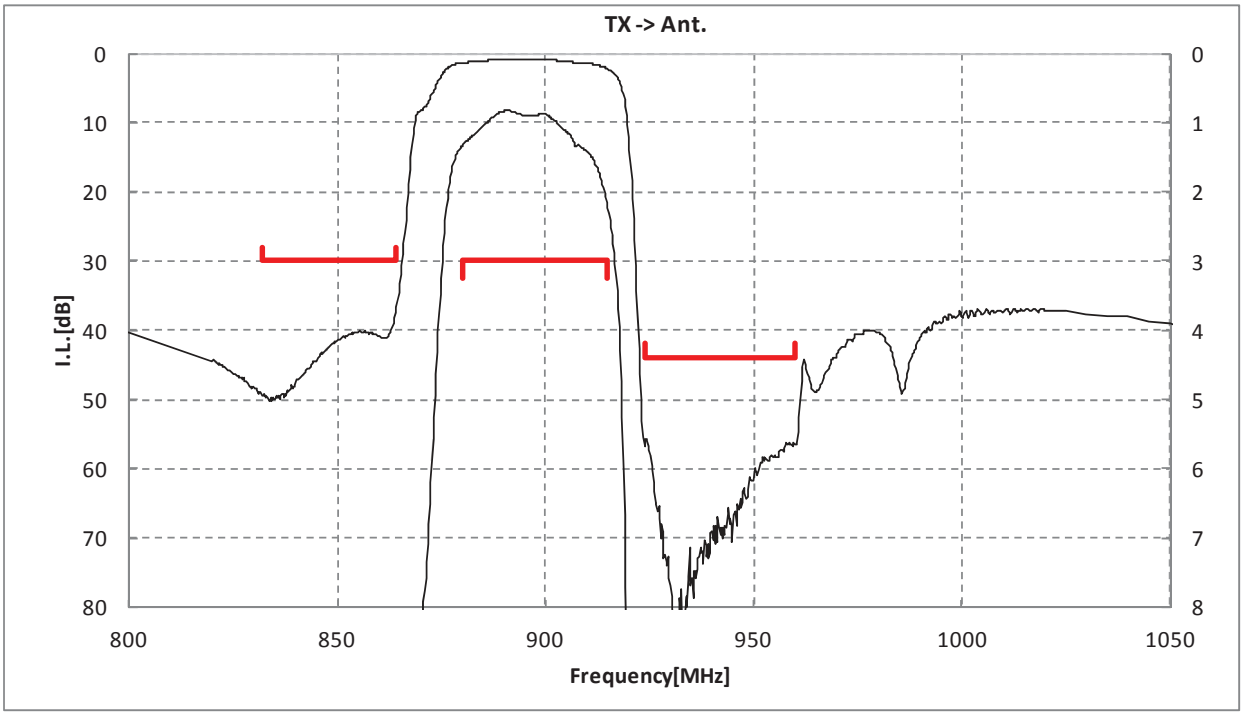
TX → RX		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
Isolation						
	882.5 to 912.5 MHz	55	64		dB_{INT}	Any 4.5MHz
	927.5 to 957.5 MHz	55	61		dB_{INT}	Any 4.5MHz

* Typical value at 25±2deg.C

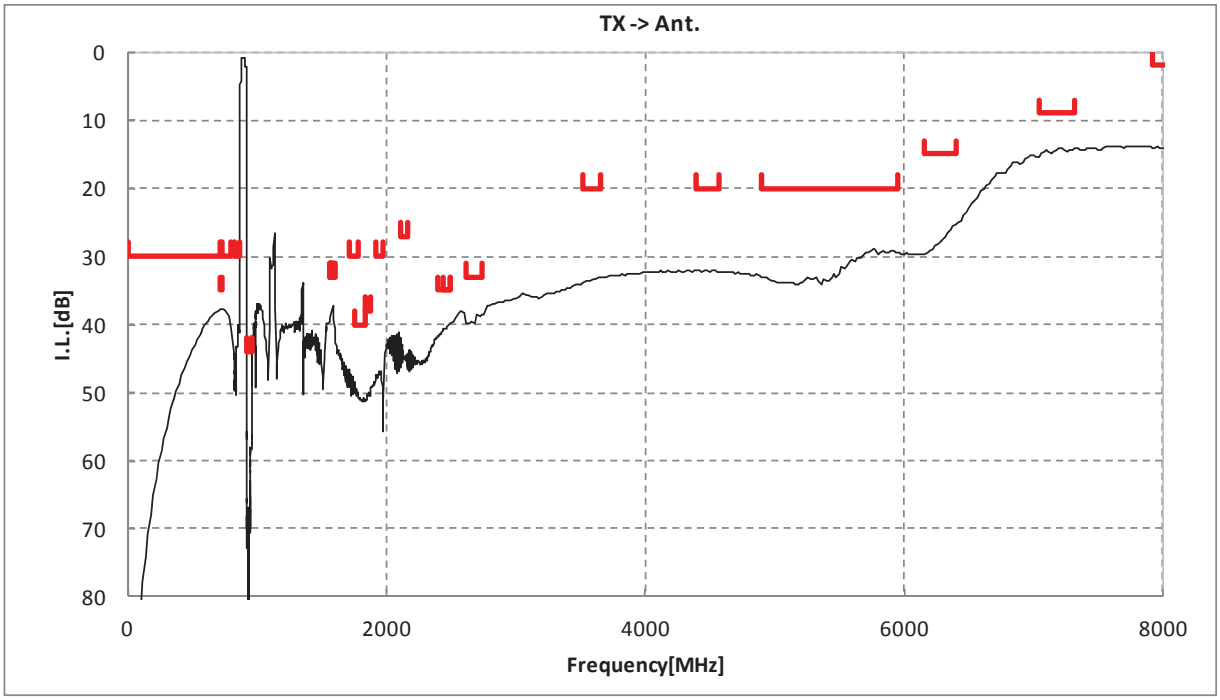
Electrical Characteristic

< TX→ANT. >

Narrow-Segment



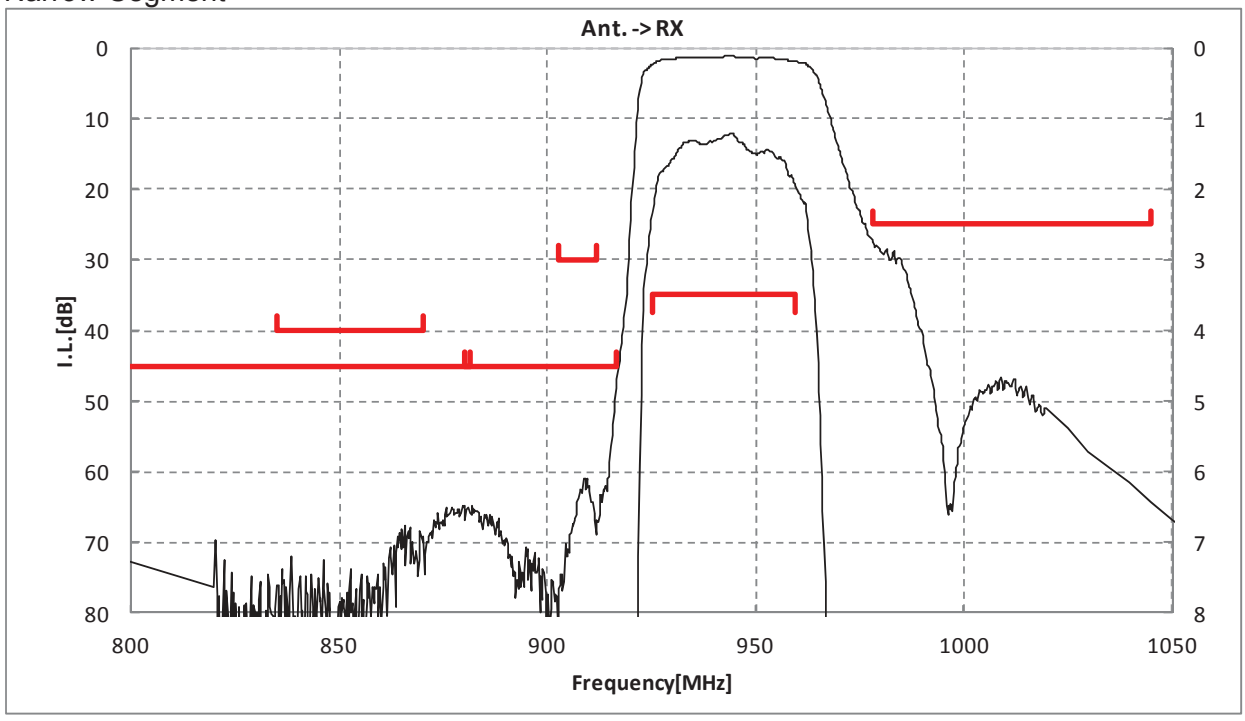
Wide-Segment



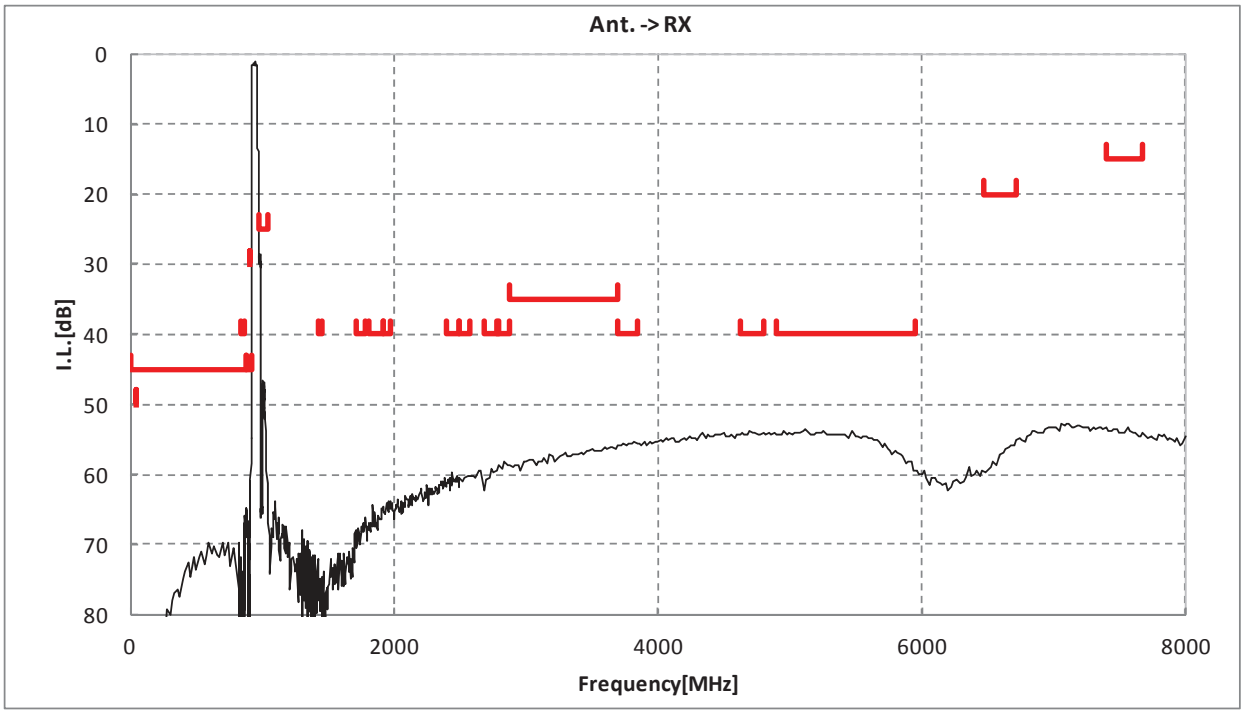
Electrical Characteristic

< ANT.→RX >

Narrow-Segment



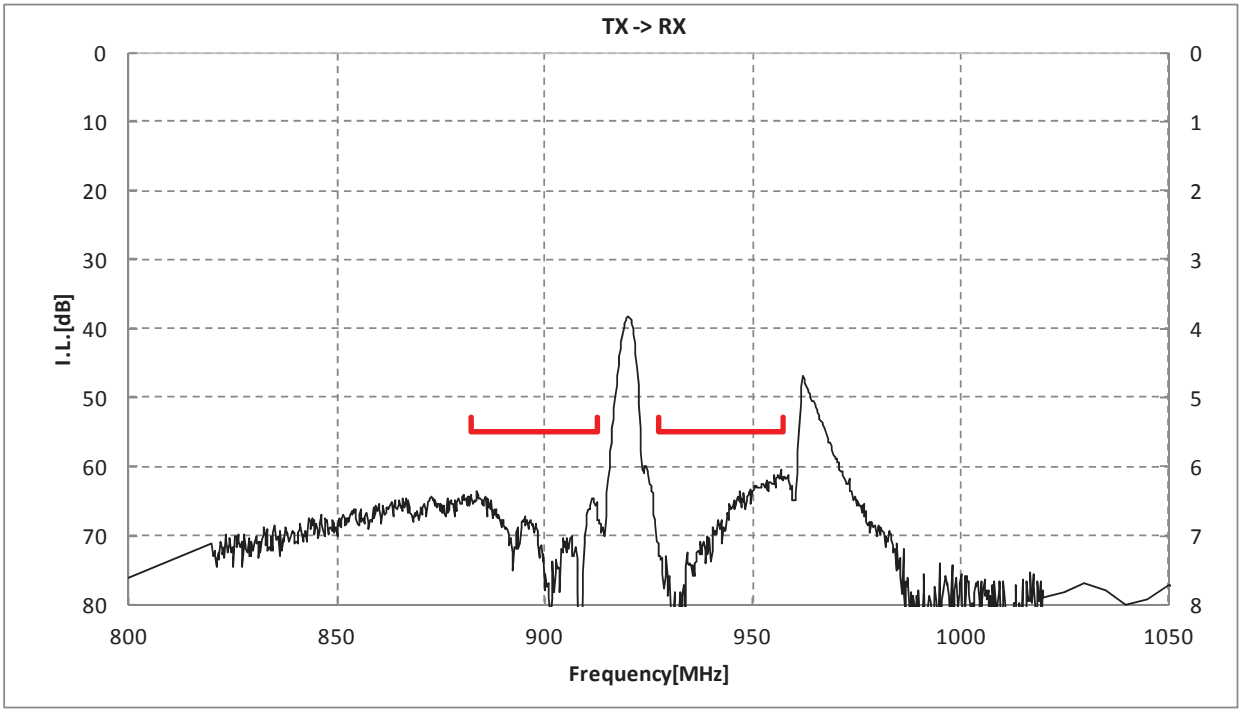
Wide-Segment



Electrical Characteristic

< TX→RX. >

Narrow-Segment



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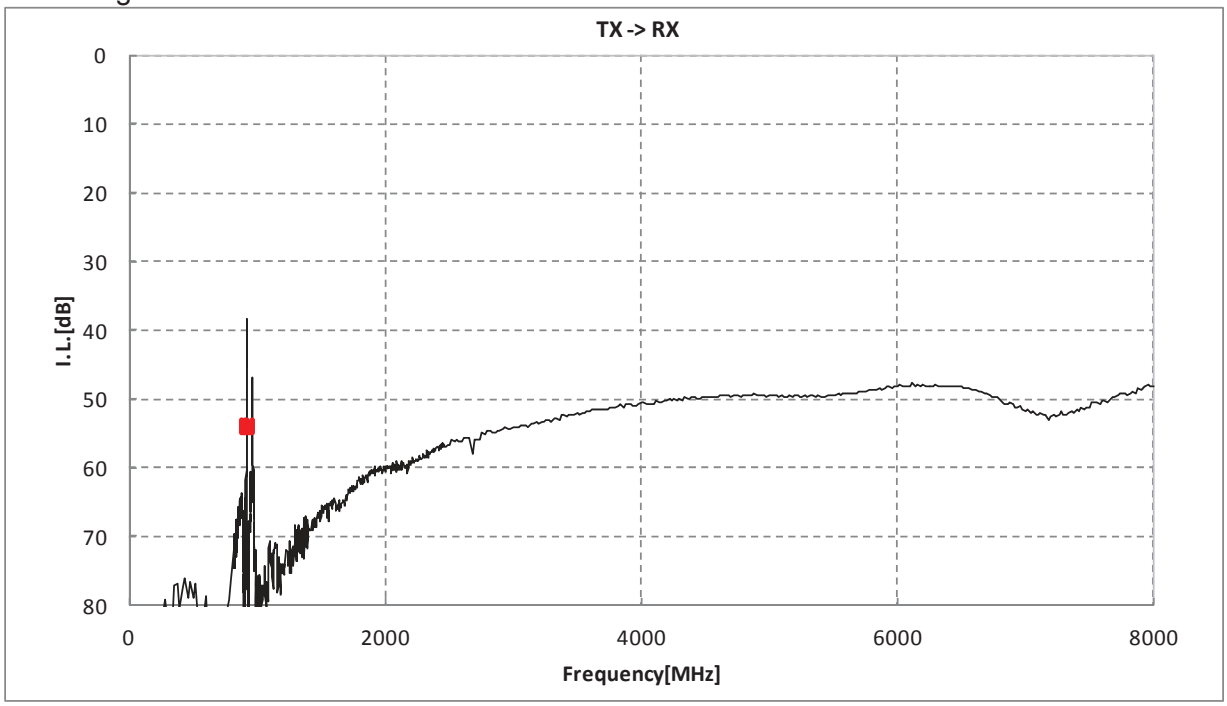
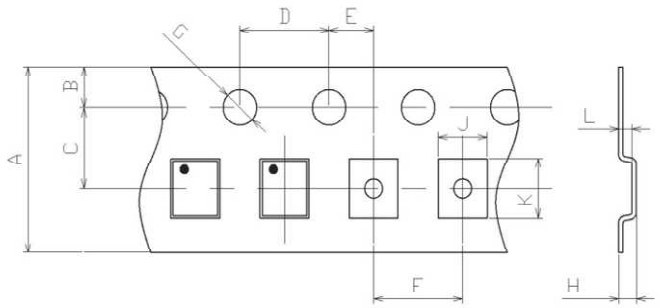


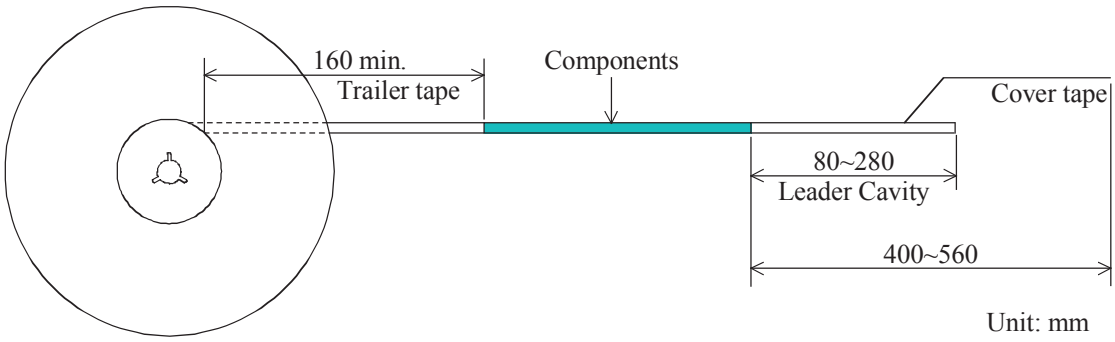
Dimensions of Tape & Reel unit: mm

Carrier Tape

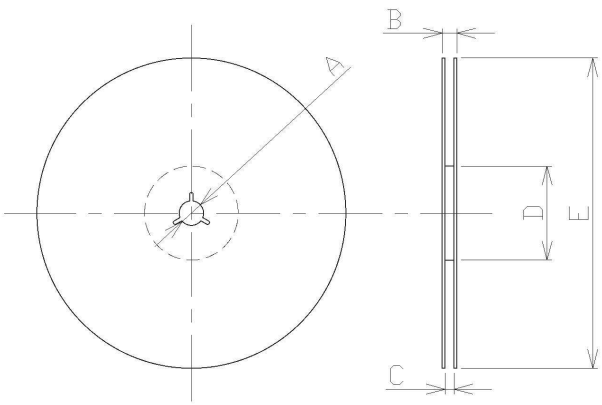


A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

Tape



Reel



φ178Reel		φ330Reel	
A:	φ13.0	A:	φ13.0
B:	13.5max	B:	15.5max
C:	9.0	C:	9.5
D:	φ60	D:	φ100
E:	φ178	E:	φ330

SAYEY897MBA0B0AR00… 10000pcs (φ330)
SAYEY897MBA0B0AR1S… Sample Order (φ178/330)

Marking Code

Table A: Month Code

2013 2017 2021	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	A	B	C	D	E	F	G	H	J	K	L	M
2014 2018 2022	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015 2019 2023	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	a	b	c̄	d	e	f	g	h	j	k	l	m
2016 2020 2024	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	n	p	q	r	s	t	u	v	w	x	y	z

Table B: 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

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- Burning / explosion control equipment
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Please do not use the product in molding condition.

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When you install or measure this, you should be careful not to add antistatic electricity or high voltage.
Please be advised that you had better check anti serge voltage.

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