Datasheet of SAW Device

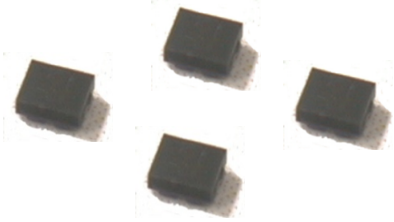
SAW Duplexer

for Band4 / Unbalanced / LR /1814

Murata PN: SAYEY1G73BA0F0A

■ Feature

- LTE-A
- High Power Durability



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

SAYEY1G73BA0F0A (Band04 / Unbalanced / LR / 1814)

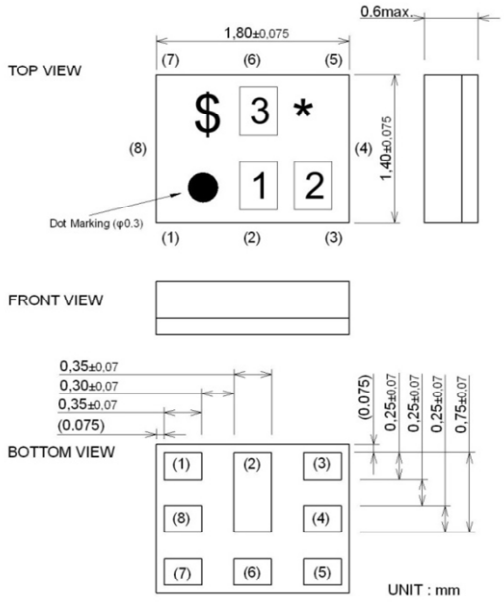
Revision Number	Date	Description
SAYEY1G73BA0F0A_rev. A	Feb-21-2014	■ Initial Release
SAYEY1G73BA0F0A_rev. B	Jul-04-2014	■ Updated the specification
SAYEY1G73BA0F0A_rev. C	Aug-25-2014	■ Updated the specification
SAYEY1G73BA0F0A_rev. D	Aug-04-2015	■ Updated Measurement Circuit
SAYEY1G73BA0F0A_rev. E	Sep-02-2015	■ Updated Feature
SAYEY1G73BA0F0A_rev. F	Aug-09-2016	■ Updated General Information
SAYEY1G73BA0F0A_rev. G	Oct-13-2016	■ Updated Measurement Circuit
SAYEY1G73BA0F0A_rev. H	Jun-16-2017	■ Updated General Information
SAYEY1G73BA0F0A_rev. I	Oct-18-2017	■ Updated Measurement Circuit
SAYEY1G73BA0F0A_rev. J	Nov-14-2017	■ Updated Input Power

- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29.5 dBm 5000 h +50 deg.C
  +30.0 dBm 2000 h +50 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

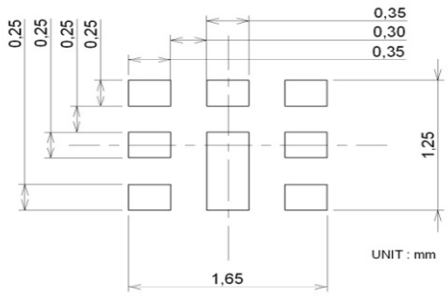


Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 6
2 : M
3 : A

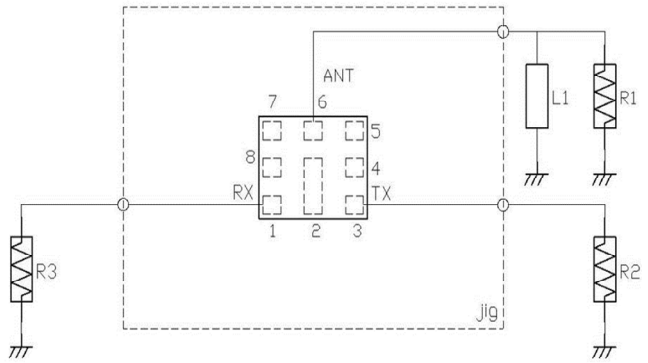
Terminal Number
(6) : Ant
(3) : TX
(1) : RX
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :3.3nH(Ideal inductor)
	:3.6nH(LQP03TN3N6) <Reference>
R2 : 50 ohm	
R3 : 50 ohm	

SAYEY1G73BA0F0A (Band04 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

TX → ANT.			Characteristics (-20 to +85 deg.C)			Unit	Note
			min.	typ.*	max.		
Center Frequency				1733		MHz	
Insertion Loss	1710. to 1755.	MHz		1.5	1.9	dB	
	1710.25 to 1754.75	MHz		1.5	1.9	dB	
	1712.5 to 1752.5	MHz		1.4	1.8	dB_{INT}	Any 4.5MHz
Ripple Deviation	1710. to 1755.	MHz		0.3	1.5	dB	Any 5MHz
VSWR	1710. to 1755.	MHz		1.4	2.0		TX
	1710. to 1755.	MHz		1.4	2.0		ANT.
Absolute Attenuation	10. to 728.	MHz	30	48		dB	
	699. to 716.	MHz	30	48		dB	B12 TX
	704. to 716.	MHz	30	48		dB	B17 TX
	716. to 746.	MHz	40	47		dB	700MHz RX Rejection
	777. to 787.	MHz	30	47		dB	B13 TX
	824. to 849.	MHz	30	46		dB	B5 TX
	851. to 894.	MHz	37	46		dB	BC10 RX
	1226. to 1250.	MHz	34	42		dB	GPS L2
	1559. to 1563.	MHz	42	50		dB	COMPASS
	1565.42 to 1573.37	MHz	43	51		dB	Lower GPS
	1573.37 to 1577.46	MHz	45	53		dB	Regular GPS
	1577.46 to 1585.42	MHz	45	53		dB	Upper GPS
	1597.55 to 1605.89	MHz	43	53		dB	GLONASS
	1805. to 1880.	MHz	42	49		dB	DCS RX
	1930. to 1990.	MHz	41	47		dB	PCS RX
	2110. to 2155.	MHz	44	52		dB	RX
	2350. to 2360.	MHz	40	49		dB	WCS RX
	2400. to 2500.	MHz	35	46		dB	ISM2.4
	2440. to 2494.	MHz	40	47		dB	WLAN co-ex
	2500. to 2570.	MHz	39	49		dB	B7 TX
	3410. to 3520.	MHz	25	42		dB	2f
	4900. to 5950.	MHz	10	15		dB	ISM 5G
	4905. to 5267.	MHz	10	15		dB	WLAN co-ex
	6830. to 7030.	MHz	10	18		dB	4f
	8540. to 8785.	MHz	12	18		dB	5f
	10250. to 10540.	MHz	10	18		dB	6f
	11960. to 12295.	MHz	2.0	18.0		dB	7f

* Typical value at 25±2deg.C

SAYEY1G73BA0F0A (Band04 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX >

ANT. → RX			Characteristics (-20 to +85 deg.C)			Unit	Note
			min.	typ.*	max.		
Center Frequency				2133		MHz	
Insertion Loss	2110. to 2155.	MHz		1.8	2.3	dB	
	2110.25 to 2154.75	MHz		1.8	2.3	dB	
	2112.5 to 2152.5	MHz		1.8	2.3	dB_{INT}	Any 4.5MHz
Ripple Deviation	2110. to 2155.	MHz		0.2	1.2	dB	Any 5MHz
VSWR	2110. to 2155.	MHz		2.0	2.2		RX
	2110. to 2155.	MHz		1.7	2.2		ANT.
Absolute Attenuation	10. to 699.	MHz	40	53		dB	
	400. to 400.	MHz	50	62		dB	RX - TX
	699. to 714.	MHz	45	52		dB	B12 TX
	777. to 787.	MHz	40	51		dB	B13 TX
	824. to 849.	MHz	40	50		dB	B5 TX
	1310. to 1355.	MHz	38	44		dB	2TX - RX
	1710. to 1755.	MHz	45	53		dB	TX
	1755. to 2025.	MHz	15	38		dB	
	1910. to 1955.	MHz	30	41		dB	(RX + TX) / 2
	1955. to 2255.	MHz	1.0	1.2		dB	
	2305. to 2315.	MHz	29	35		dB	WCS TX
	2400. to 2500.	MHz	35	41		dB	ISM2.4
	2500. to 3820.	MHz	32	38		dB	
	3820. to 3910.	MHz	33	38		dB	RX + TX
	4420. to 4310.	MHz	25	34		dB	2f
	4900. to 5950.	MHz	21	26		dB	ISM 5G
	5510. to 5685.	MHz	21	26		dB	WLAN co-ex
	5530. to 5665.	MHz	21	26		dB	RX + 2TX
	6330. to 6465.	MHz	20	25		dB	3f
	8440. to 8620.	MHz	13	22		dB	4f
	10540. to 10785.	MHz	10	22		dB	5f
	12660. to 12930.	MHz	10	22		dB	6f

* Typical value at 25±2deg.C

SAYEY1G73BA0F0A (Band04 / Unbalanced / LR / 1814)

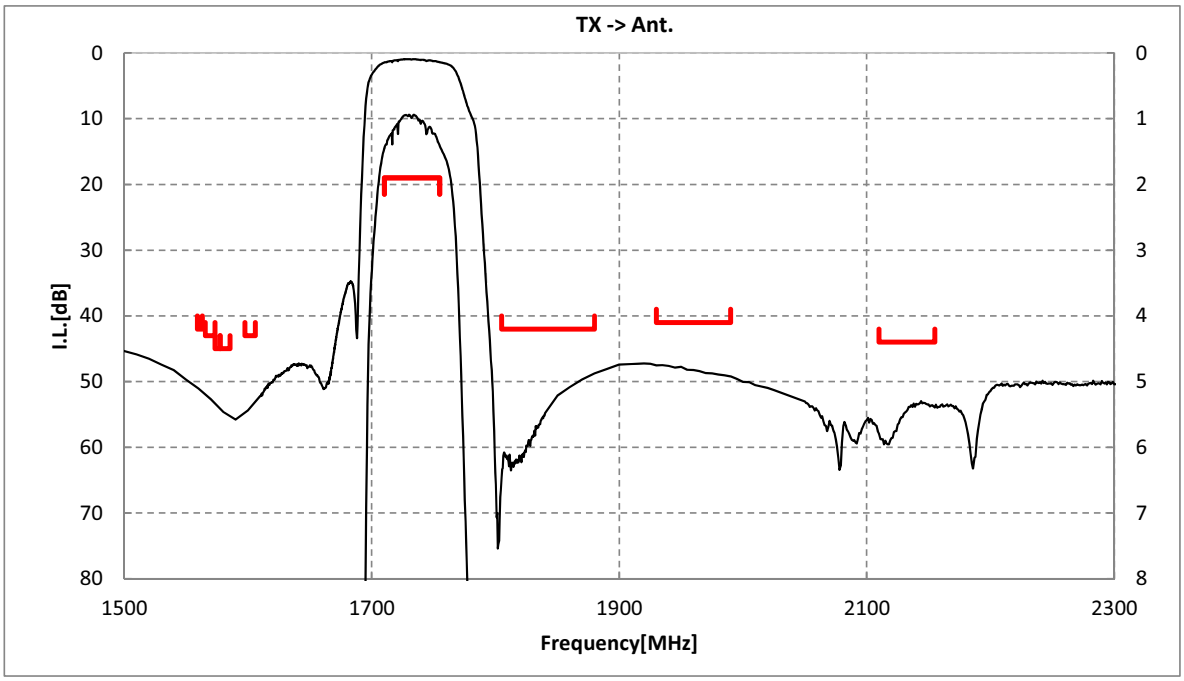
Electrical Characteristic < TX→RX. >

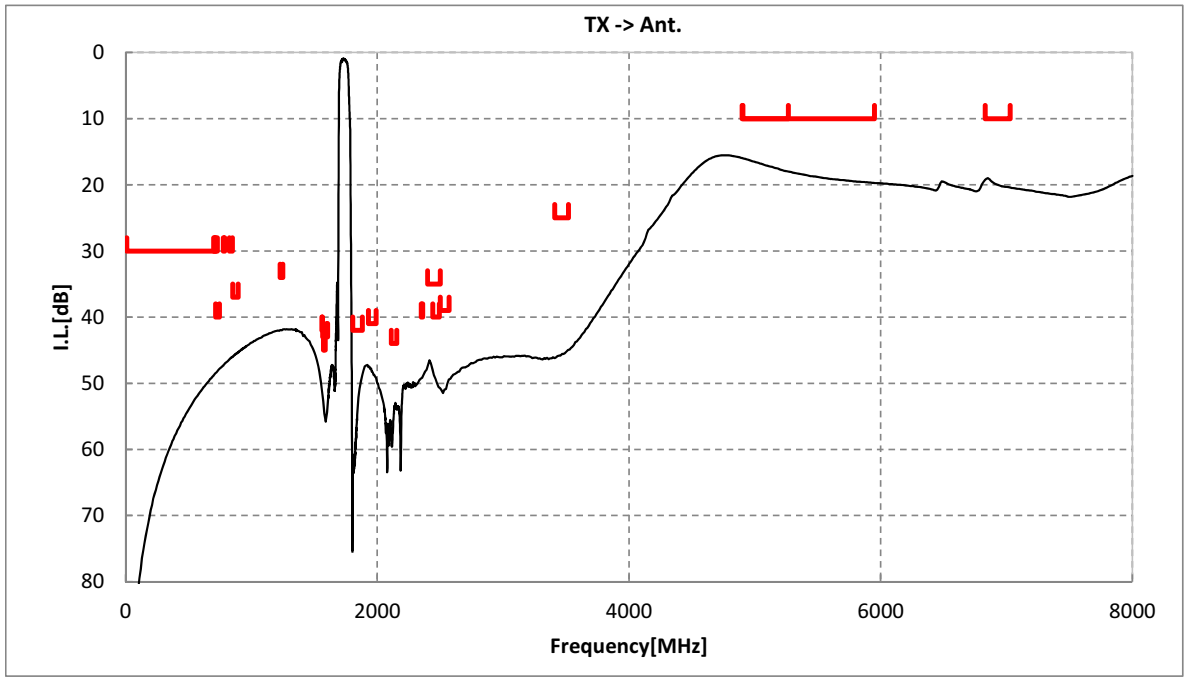
TX → RX				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Isolation	1710.	to	1755. MHz	54	57		dB	TX
	1712.5	to	1752.5 MHz	54	57		dB_{INT}	TX, Any 4.5MHz
	2110.	to	2155. MHz	51	54		dB	RX
	2112.5	to	2152.5 MHz	51	55		dB_{INT}	RX, Any 4.5MHz
	1574.	to	1577. MHz	40	62		dB	GPS
	3410.	to	3520. MHz	20	52		dB	2f
	5120.	to	5275. MHz	20	44		dB	3f

* Typical value at 25±2deg.C

Electrical Characteristic

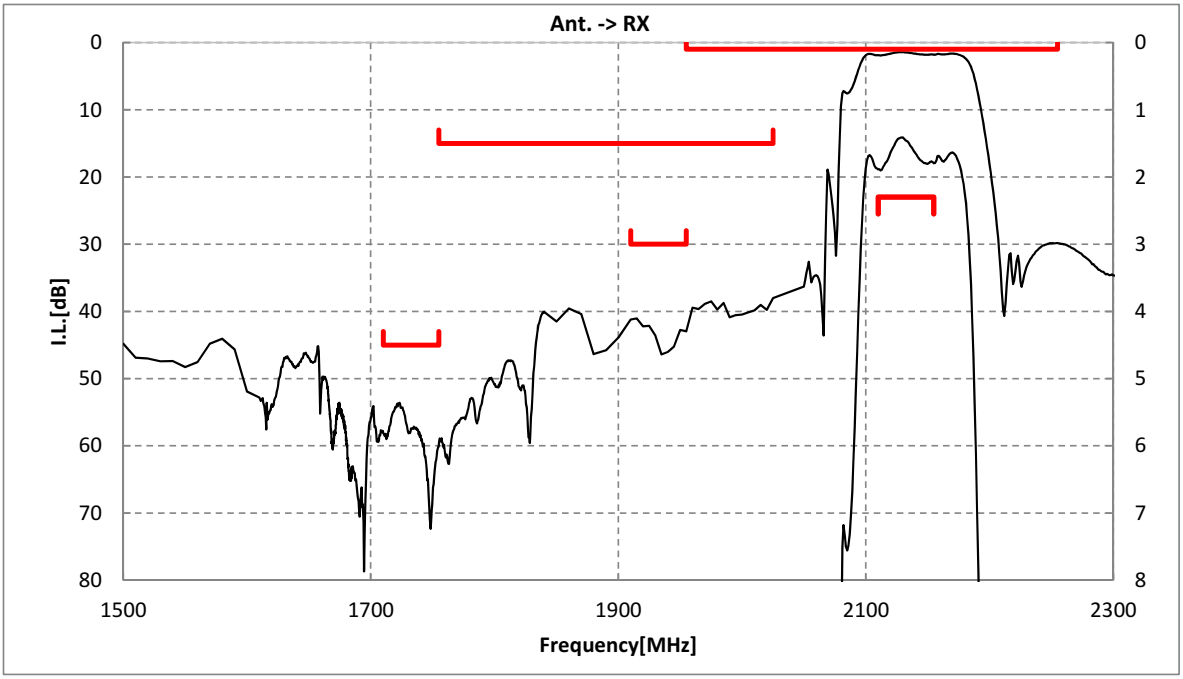
< TX→ANT. >

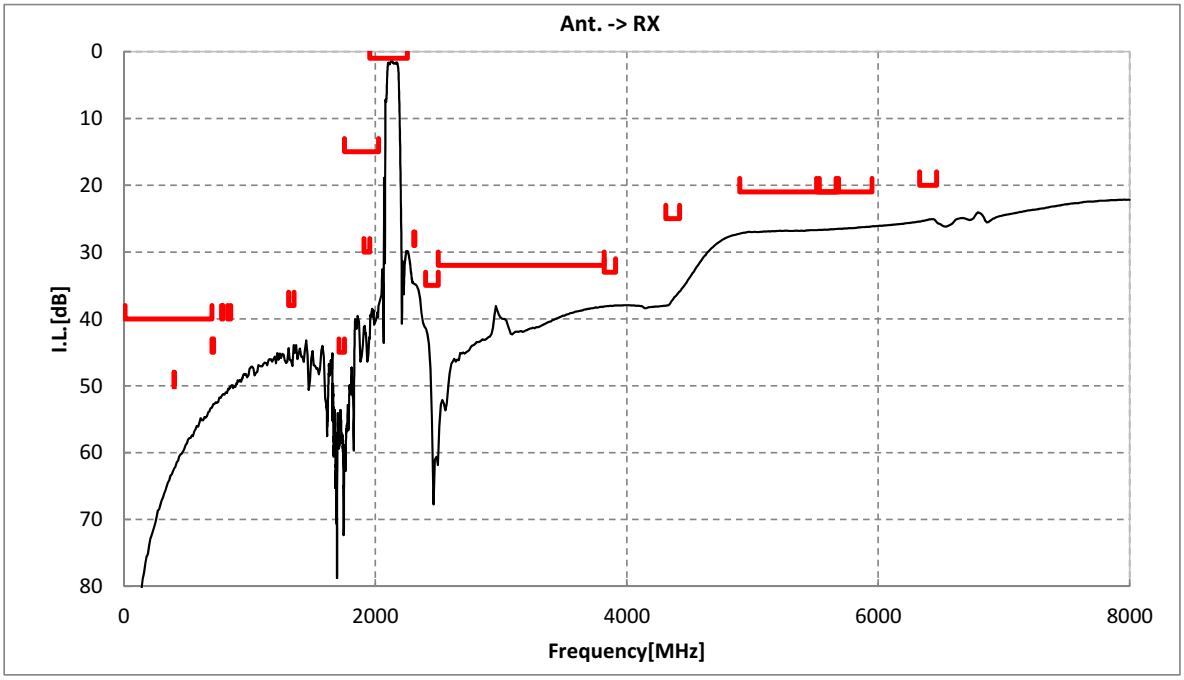




Electrical Characteristic

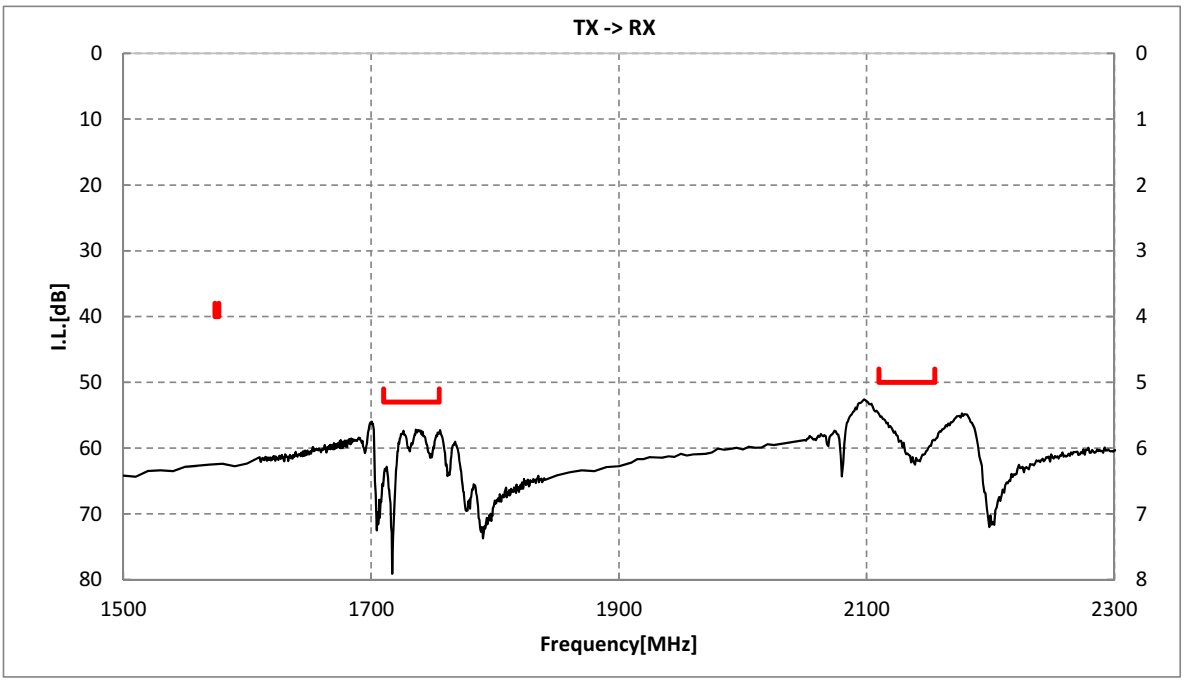
< ANT.→RX >

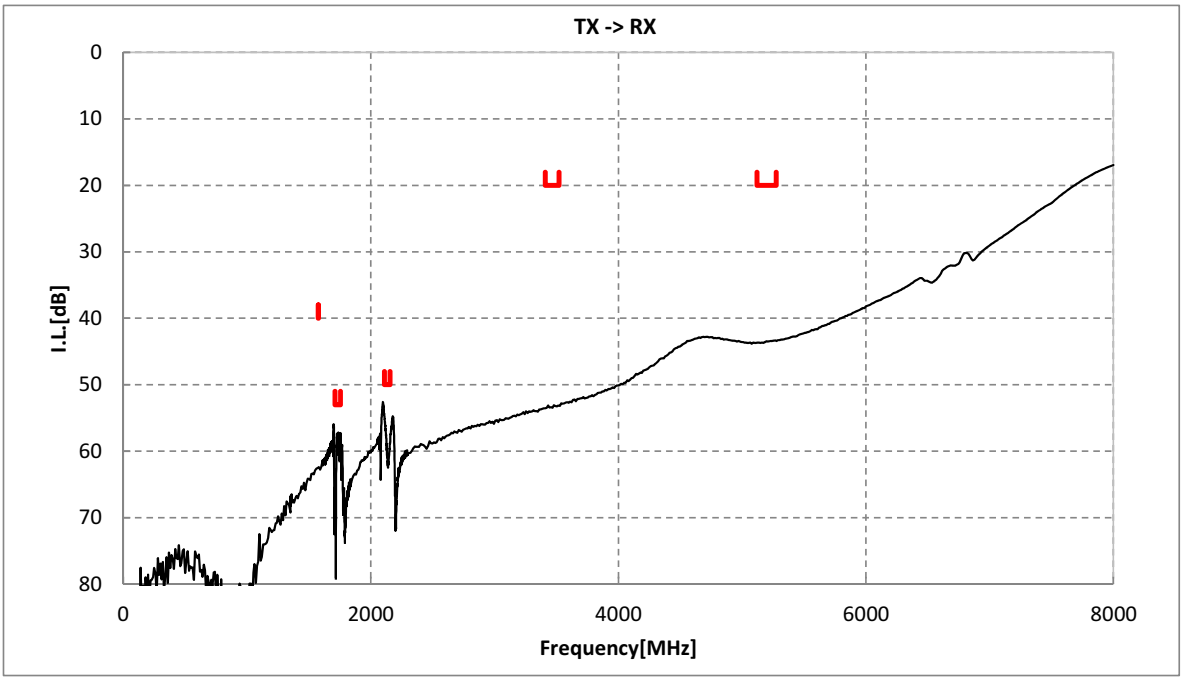




Electrical Characteristic

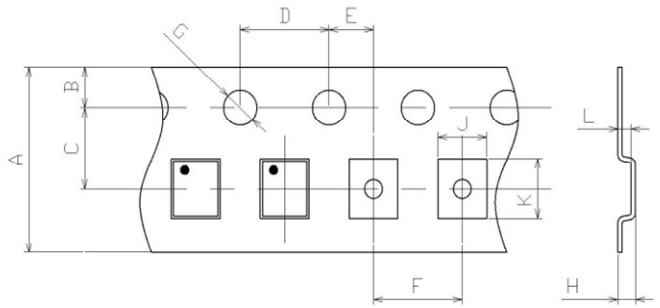
< TX→RX. >





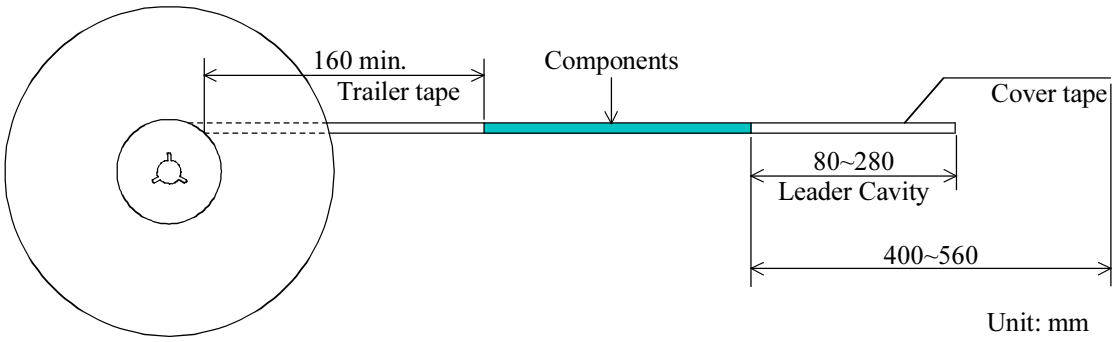
Dimensions of Tape & Reel unit: mm

Carrier Tape

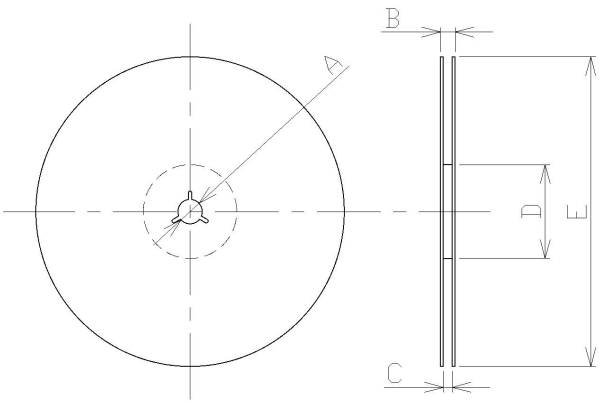


A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

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

SAYEY1G73BA0F0AR00… 10000pcs (φ330)
SAYEY1G73BA0F0AR1S… 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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- Undersea equipment.
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- Transportation equipment (vehicles, trains, ships, elevator, etc.).
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- Disaster prevention / crime prevention equipment.
- Burning / explosion control equipment
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

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Please do not use the product in molding condition.

This product is ESD (ElectroStatic Discharge) sensitive device.
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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