Datasheet of SAW Device

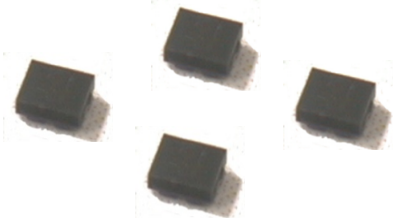
SAW Duplexer

for Band28A / Unbalanced / LR /1814

Murata PN: SAYEY718MBC0F0A

■ Feature

- LTE-A
- High Isolation
- For Envelope Tracking



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

Revision
H

SAYEY718MBC0F0A (Band28A / Unbalanced / LR / 1814)

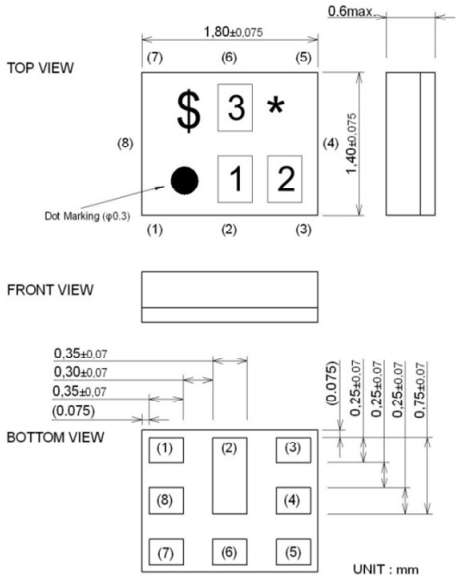
General Information

- Operating temperature	: -20 to +85 deg.C
- Storage temperature	: -40 to +85 deg.C
- Input Power	: +30 dBm 5000 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

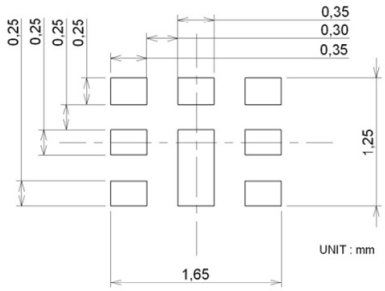


Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 7
2 : D
3 : A

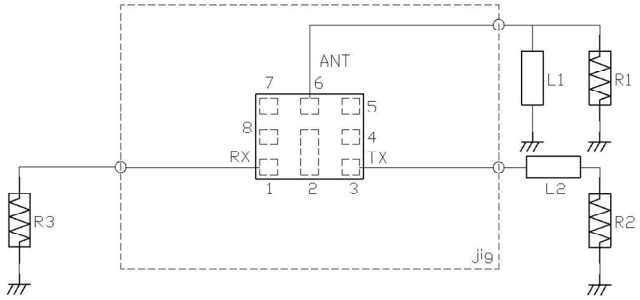
Terminal Number
(6) : Ant
(3) : TX
(1) : RX
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :8nH(Ideal inductor)
	:8.2nH(LQP03TN8N2) <Reference>
R2 : 50 ohm	L2 :11.4nH(Ideal inductor)
R3 : 50 ohm	

SAYEY718MBC0F0A (Band28A / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

TX → ANT.				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Center Frequency					718		MHz	
Insertion Loss	703.25	to	732.75 MHz		2.2	2.8	dB	
	705.5	to	730.5 MHz		1.9	2.3	dB_{INT}	Any 4.5MHz
Ripple Deviation	703.	to	733. MHz		0.7	1.7	dB	Any 5MHz
VSWR	703.	to	733. MHz		1.8	2.0		TX
	703.	to	733. MHz		1.5	2.0		ANT.
Absolute Attenuation	10.	to	670. MHz	30	34		dB	
	670.	to	694. MHz	30	36		dB	DTV rejection
	694.	to	695. MHz	25	36		dB	DTV rejection
	695.	to	698. MHz	5.0	11.0		dB	DTV rejection
	695.	to	698. MHz	8.0	11.0		dB	+23 to +27deg.C, DTV
	695.	to	698. MHz	7.0	11.0		dB	-15 to +70deg.C
	758.	to	788. MHz	43	48		dB	RX
	788.	to	803. MHz	20	25		dB	
	859.	to	894. MHz	30	36		dB	
	1225.	to	1250. MHz	35	39		dB	GPS L2
	1406.	to	1466. MHz	33	37		dB	2f
	1559.	to	1563. MHz	33	37		dB	Compass
	1565.42	to	1573.37 MHz	33	37		dB	Wideband GPS lower side
	1573.37	to	1577.47 MHz	33	37		dB	Regular GPS
	1577.47	to	1585.42 MHz	33	37		dB	Wideband GPS upper side
	1597.55	to	1605.89 MHz	33	38		dB	GLONASS
	1805.	to	1880. MHz	30	39		dB	DCS
	1930.	to	1995. MHz	30	40		dB	B2 / B25
	2010.	to	2025. MHz	30	41		dB	B34
	2109.	to	2199. MHz	28	35		dB	3f
	2400.	to	2484. MHz	23	30		dB	ISM 2.4
	2570.	to	2620. MHz	19	26		dB	B38
	2812.	to	2932. MHz	15	19		dB	4f
	4900.	to	5950. MHz	20	32		dB	ISM 5G

* Typical value at 25±2deg.C

SAYEY718MBC0F0A (Band28A / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX >

ANT. → RX			Characteristics (-20 to +85 deg.C)			Unit	Note
			min.	typ.*	max.		
Center Frequency				773		MHz	
Insertion Loss	758.25 to 787.75	MHz		2.2	2.6	dB	
	760.5 to 785.5	MHz		1.9	2.4	dB_{INT}	Any 4.5MHz
Ripple Deviation	758. to 788.	MHz		0.5	1.6	dB	Any 5MHz
VSWR	758. to 788.	MHz		1.8	2.1		RX
	758. to 788.	MHz		1.7	2.0		ANT.
Absolute Attenuation	10. to 699.	MHz	40	57		dB	DTV Rejection
	45. to 65.	MHz	50	78		dB	RX- TX
	703. to 733.	MHz	50	58		dB	TX
	733. to 748.	MHz	21	38		dB	Block-B TX
	814. to 6000.	MHz	33	38		dB	OoB Rejection
	2400. to 2483.	MHz	30	52		dB	ISM2.4
	6822. to 7092.	MHz	30	42		dB	9f
	7580. to 7880.	MHz	25	33		dB	10f
	8338. to 8668.	MHz	13	21		dB	11f
	9096. to 9456.	MHz	5.0	12.0		dB	12f
	9854. to 10244.	MHz	5.0	11.0		dB	13f
	10612. to 11032.	MHz	12	23		dB	14f
	11370. to 11820.	MHz	7.0	21.0		dB	15f
	12128. to 12750.	MHz	3.0	11.0		dB	16f

* Typical value at 25±2deg.C

SAYEY718MBC0F0A (Band28A / Unbalanced / LR / 1814)

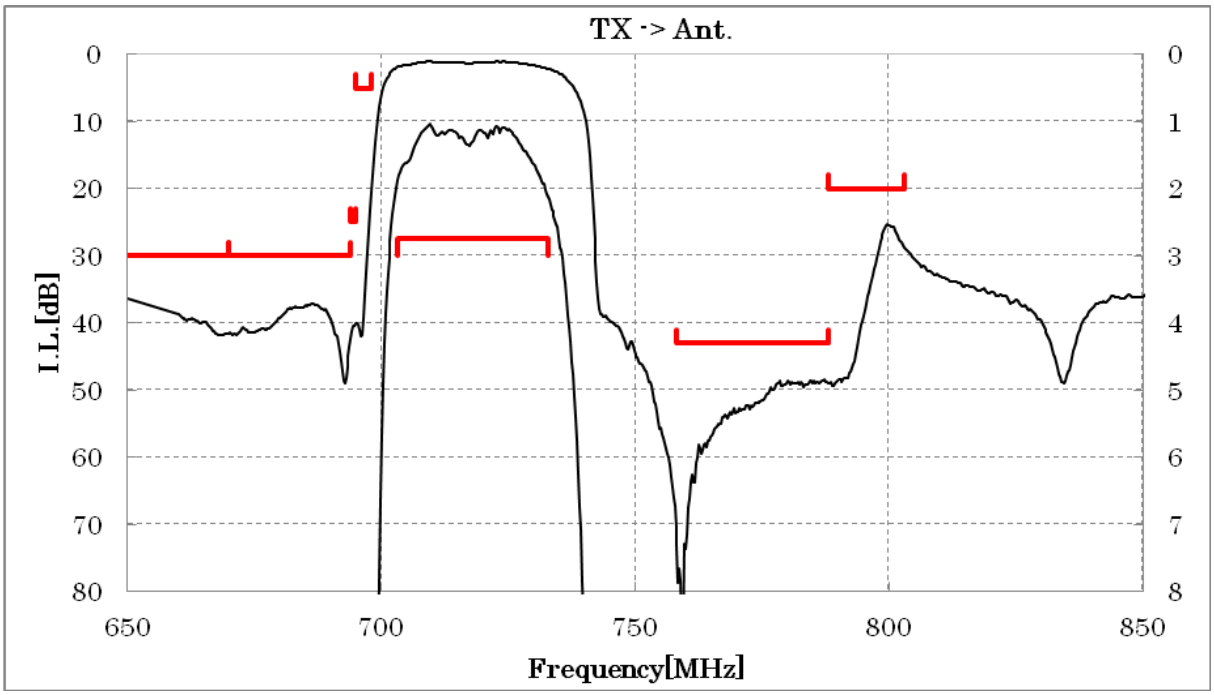
Electrical Characteristic < TX→RX. >

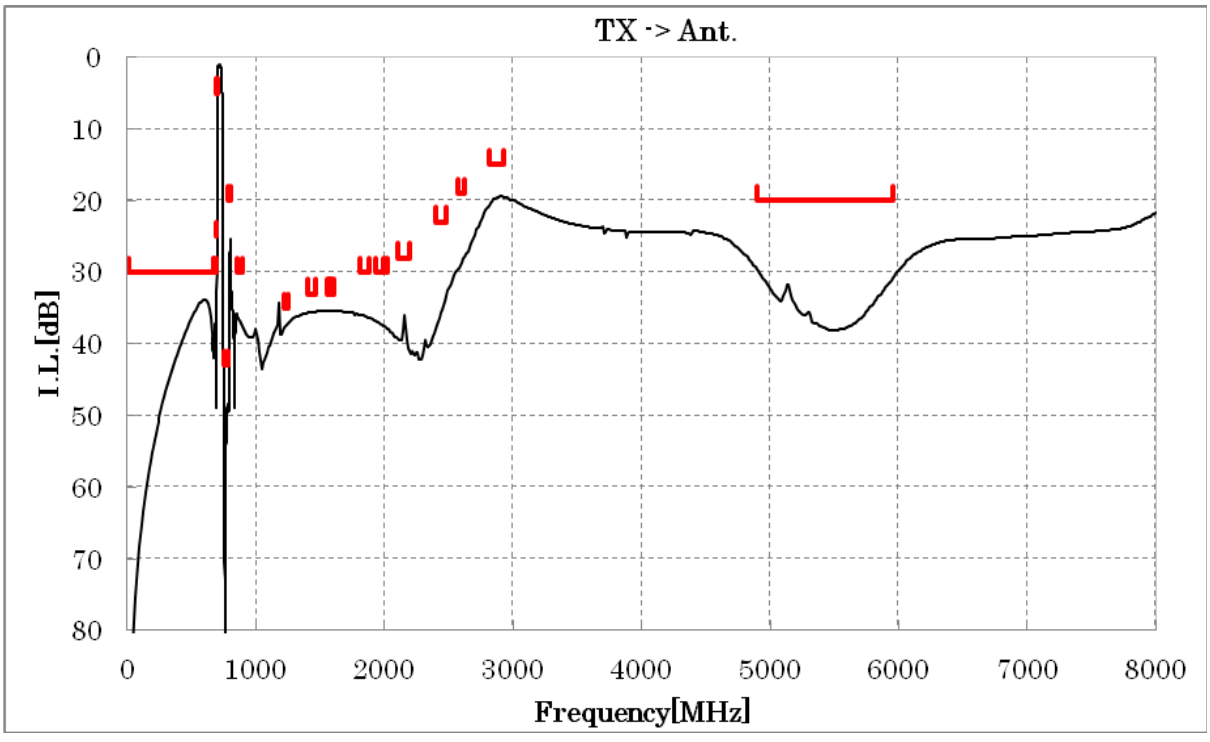
TX → RX		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
Isolation						
	703.25 to 732.75 MHz	58	61		dB	TX
	705.5 to 730.5 MHz	60	62		dB_{INT}	Any 4.5MHz, TX
	758.25 to 787.75 MHz	55	59		dB	RX
	760.5 to 785.5 MHz	55	60		dB_{INT}	Any 4.5MHz, RX
	1406. to 1466. MHz	40	63		dB	2f TX
	2109. to 2199. MHz	40	63		dB	3f TX
	2812. to 2932. MHz	40	59		dB	4f TX

* Typical value at 25±2deg.C

Electrical Characteristic

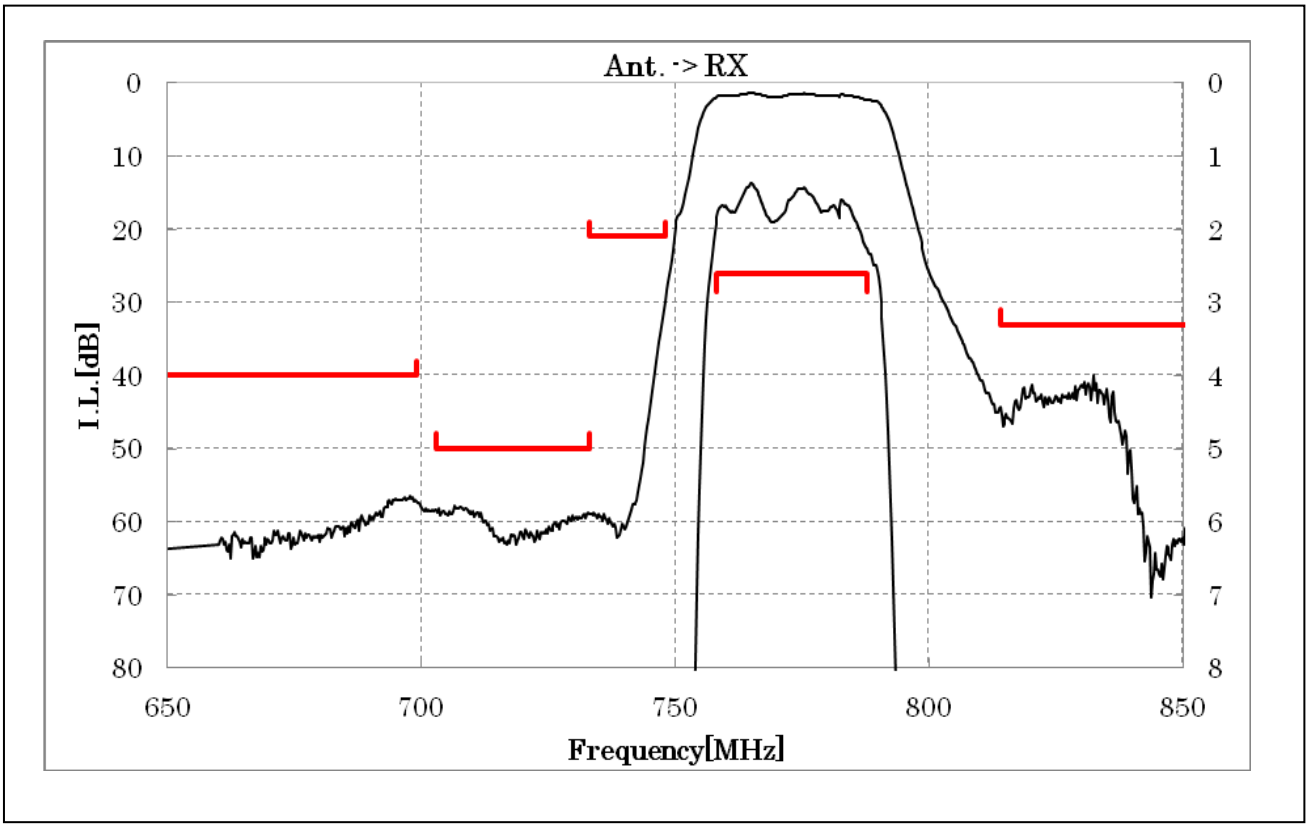
< TX→ANT. >

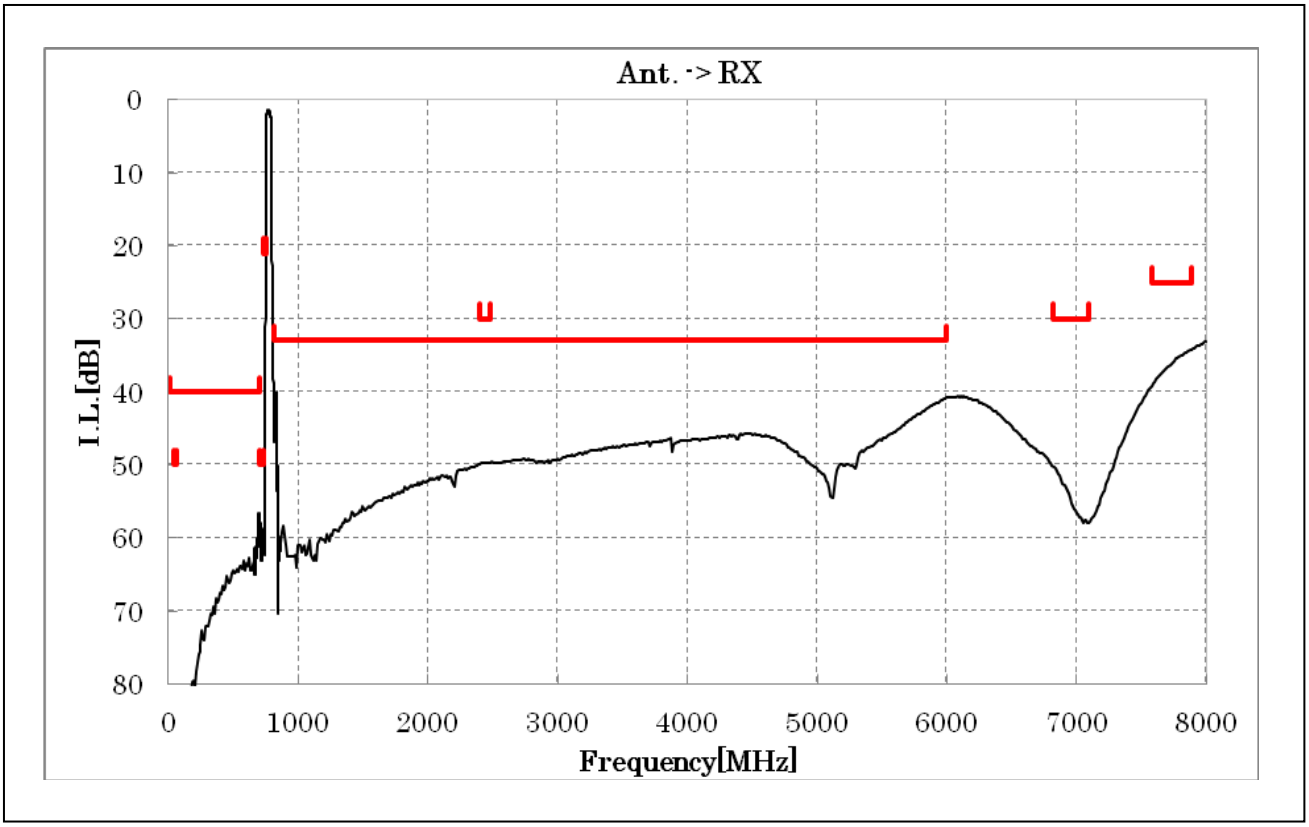




Electrical Characteristic

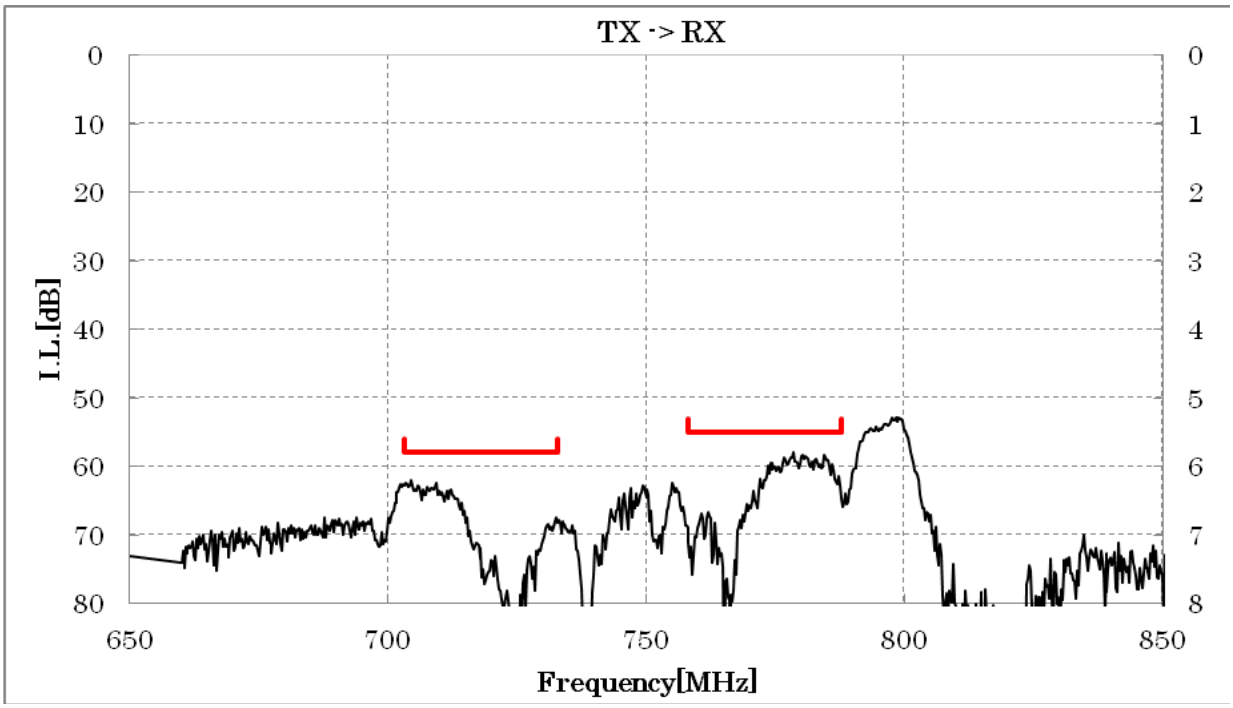
< ANT.→RX >

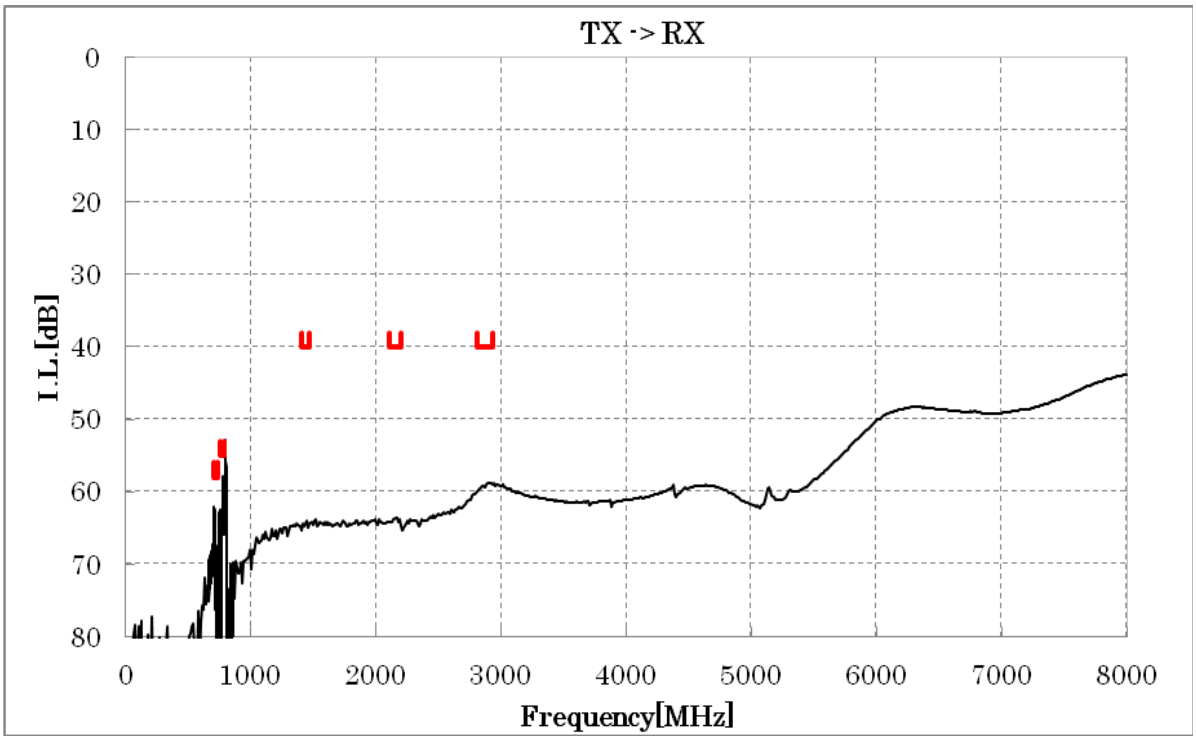




Electrical Characteristic

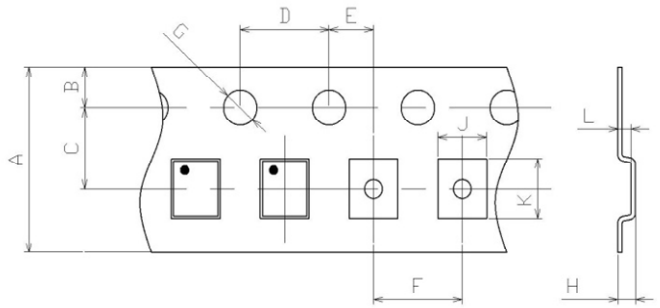
< TX→RX. >





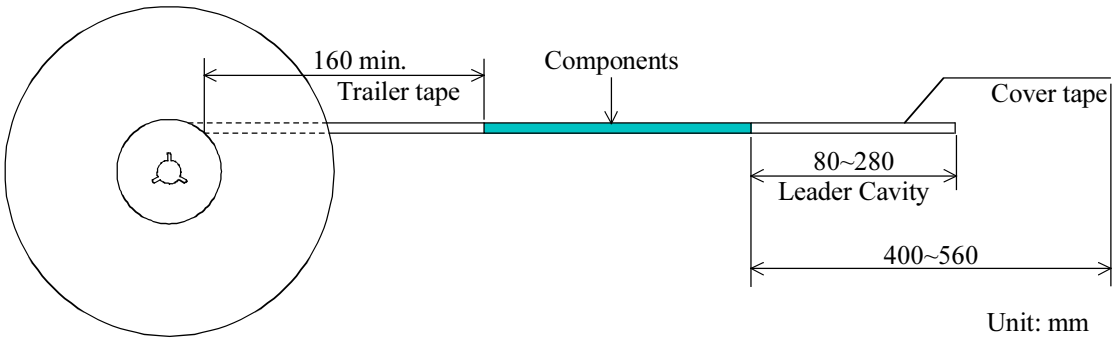
Dimensions of Tape & Reel unit: mm

Carrier Tape

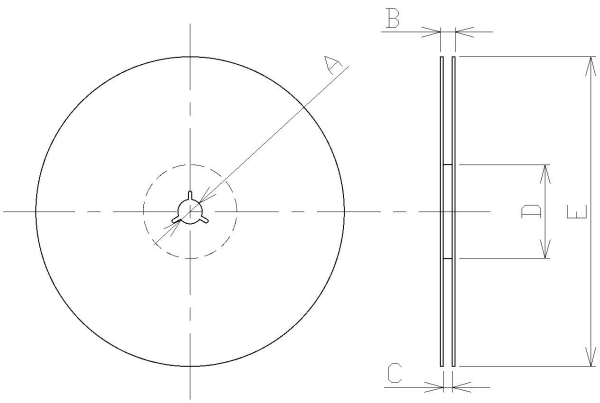


A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

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

SAYEY718MBC0F0AR00… 10000pcs (φ330)
SAYEY718MBC0F0AR1S… 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

Important Notice (1/2)

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All the items and parameters in this product specification/datasheet/catalog have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment specified in this specification. You are requested not to use our product deviating from the condition and the environment specified in this specification.
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- Aerospace equipment
- Undersea equipment.
- Power plant control equipment - Medical equipment.
- Transportation equipment (vehicles, trains, ships, elevator, etc.).
- Traffic signal equipment.
- 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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