Datasheet of SAW Device

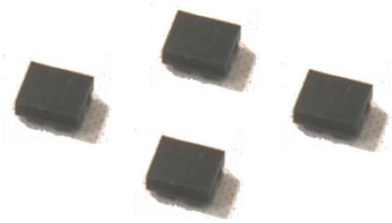
SAW Duplexer

for Band2 / Unbalanced / LR /1814

Murata PN: SAYEY1G88BA0B0A

■ Feature

- for LTE
- Low I.L
- Hi Iso



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

SAYEY1G88BA0B0A (Band2 / Unbalanced / LR / 1814)

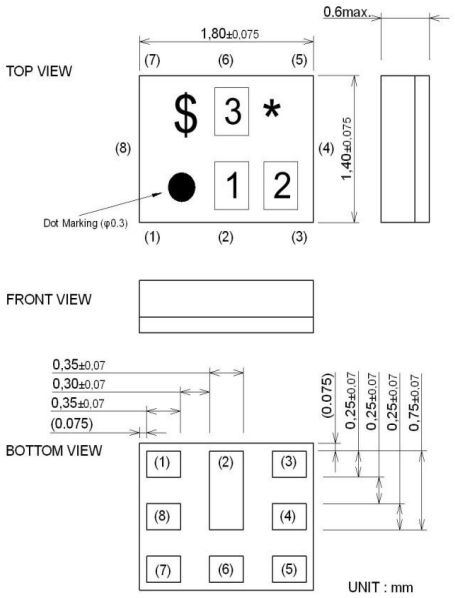
Revision No.	Date	Description
SAYEY1G88BA0B0A_rev. A	Aug-20-2013	■ Initial Release
SAYEY1G88BA0B0A_rev. B	Oct-18-2013	
SAYEY1G88BA0B0A_rev. C	Dec-17-2013	
SAYEY1G88BA0B0A_rev. D	Jan-30-2014	■ Updated MP Spec

- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h 50 deg.C
- D.C. Voltage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance betweem the terminals : 1M ohm
- RoHS compliance : Yes

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions

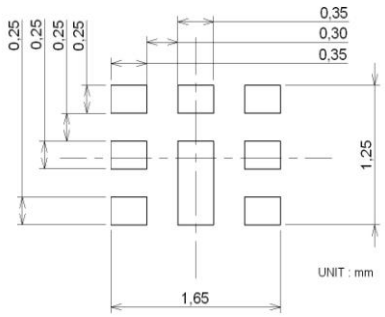


Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 5
2 : P
3 : A

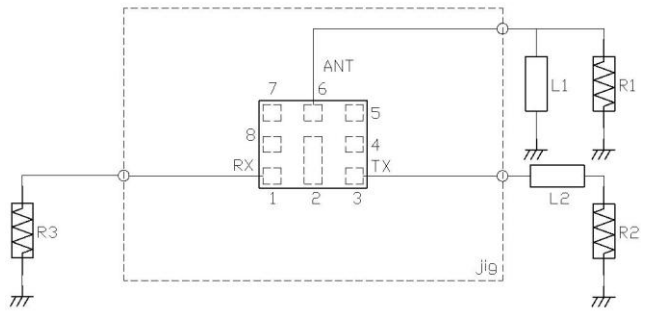
Terminal Number
(6) : ANT.
(3) : TX
(1) : RX
Others : GND.

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

Land Pattern



Measurement Circuit (Top View)



R1 : 50 ohm	L1 : 4.3 nH
R2 : 50 ohm	L2 : 1.5 nH
R3 : 50 ohm	

SAYEY1G88BA0B0A (Band2 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

Item		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.	max.		
Center Frequency			1880		MHz	
Insertion Loss	1850.48 to 1909.52 MHz		2	2.8	dB	
	1852.4 to 1907.6 MHz		1.9	2.4	dB_{INT}	Any 3.84MHz
	1852.5 to 1907.5 MHz		1.9	2.4	dB_{INT}	Any 4.5MHz
	1850.48 to 1909.52 MHz		2	2.25	dB	+23 to +27deg.C
	1852.4 to 1907.6 MHz		1.9	2.05	dB_{INT}	+23 to +27deg.C Any 3.84MHz
Ripple Deviation	1850.48 to 1909.52 MHz		0.29	1.2	dB	Any 5MHz
	1850.48 to 1909.52 MHz		0.29	0.8	dB	+23 to +27deg.C Any 5MHz
VSWR	1850.48 to 1909.52 MHz		1.4	1.9		Ant
	1850.48 to 1909.52 MHz		1.5	1.9		TX
	1850.48 to 1909.52 MHz		1.4	1.85		+23 to +27deg.C ANT.
	1850.48 to 1909.52 MHz		1.5	1.85		+23 to +27deg.C TX
Absolute Attenuation	10. to 728. MHz	33	38		dB	
	704. to 716. MHz	34	39		dB	
	728. to 764. MHz	33	38		dB	
	777. to 787. MHz	32	37		dB	
	869. to 894. MHz	31	36		dB	
	1226. to 1250. MHz	28	33		dB	
	1559. to 1563. MHz	32	38		dB	
	1565.42 to 1573.37 MHz	32	39		dB	
	1573.37 to 1577.47 MHz	33	39		dB	
	1577.47 to 1585.42 MHz	32	39		dB	
	1597.55 to 1605.88 MHz	30	40		dB	
	1605.88 to 1680. MHz	24	35		dB	
	1930. to 1990. MHz	41	49		dB	
	1930. to 1990. MHz	43	49		dB	+23 to +27deg.C
	2010. to 2025. MHz	36	44		dB	
	2110. to 2155. MHz	25	38		dB	
	2350. to 2360. MHz	17	25		dB	
	2400. to 2500. MHz	18	26		dB	
	3700. to 3820. MHz	18	23		dB	
	4900. to 5850. MHz	5	10		dB	
	5254. to 5455. MHz	7	12		dB	
	5520. to 5845. MHz	5	10		dB	
	5540. to 5950. MHz	5	10		dB	
	7390. to 7650. MHz	3	6.1		dB	
	9240. to 9560. MHz	9	7.5		dB	
	11090. to 11470. MHz	12	7.5		dB	

* Typical value at 25±2deg.C

SAYEY1G88BA0B0A (Band2 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX. >

Item		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.	max.		
Center Frequency			1960		MHz	
Insertion Loss	1930.48 to 1989.52 MHz		2.6	3.2	dB	
	1932.4 to 1987.6 MHz		2.2	2.8	dB_{INT}	Any 3.84MHz
	1932.5 to 1987.5 MHz		2.2	2.8	dB_{INT}	Any 4.5MHz
	1930.48 to 1989.52 MHz		2.6	2.75	dB	+23 to +27deg.C
	1932.4 to 1987.6 MHz		2.2	2.4	dB_{INT}	+23 to +27deg.C Any 3.84MHz
Ripple Deviation	1930.48 to 1989.52 MHz		0.62	1.4	dB	Any 5MHz
	1930.48 to 1989.52 MHz		0.62	1.1	dB	+23 to +27deg.C Any 5MHz
VSWR	1930.48 to 1989.52 MHz		2	2.1		ANT.
	1930.48 to 1989.52 MHz		1.8	2.05		RX
	1930.48 to 1989.52 MHz		2	2.05		+23 to +27deg.C ANT
	1930.48 to 1989.52 MHz		1.8	2		+23 to +27deg.C RX
Absolute Attenuation	1. to 1850. MHz	30	46		dB	
	80. to 80. MHz	80	94		dB	
	699. to 716. MHz	51	57		dB	
	777. to 787. MHz	50	56		dB	
	824. to 849. MHz	48	55		dB	
	1770. to 1830. MHz	47	53		dB	
	1850. to 1910. MHz	45	56		dB	
	1910. to 1915. MHz	11	52		dB	
	2005. to 2050. MHz	2.5	7.4		dB	
	1850. to 1910. MHz	51	56		dB	+23 to +27deg.C
	1910. to 1915. MHz	24	52		dB	+23 to +27deg.C
	2005. to 2050. MHz	4	7.4		dB	+23 to +27deg.C
	2050. to 2075. MHz	25	50		dB	
	2075. to 6000. MHz	40	45		dB	
	2305. to 2315. MHz	42	47		dB	
	2400. to 2500. MHz	42	48		dB	
	3780. to 3900. MHz	48	60		dB	
	3860. to 3980. MHz	48	60		dB	
	3980. to 13025. MHz	15	38		dB	
	4900. to 5950. MHz	40	48		dB	
	5610. to 5845. MHz	40	48		dB	
	5630. to 5810. MHz	40	48		dB	
	5790. to 5970. MHz	40	48		dB	
	5970. to 7720. MHz	30	40		dB	
	7720. to 7960. MHz	30	38		dB	
	9650. to 9950. MHz	20	38		dB	
	11580. to 11940. MHz	15	38		dB	

* Typical value at 25±2deg.C

SAYEY1G88BA0B0A (Band2 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→RX. >

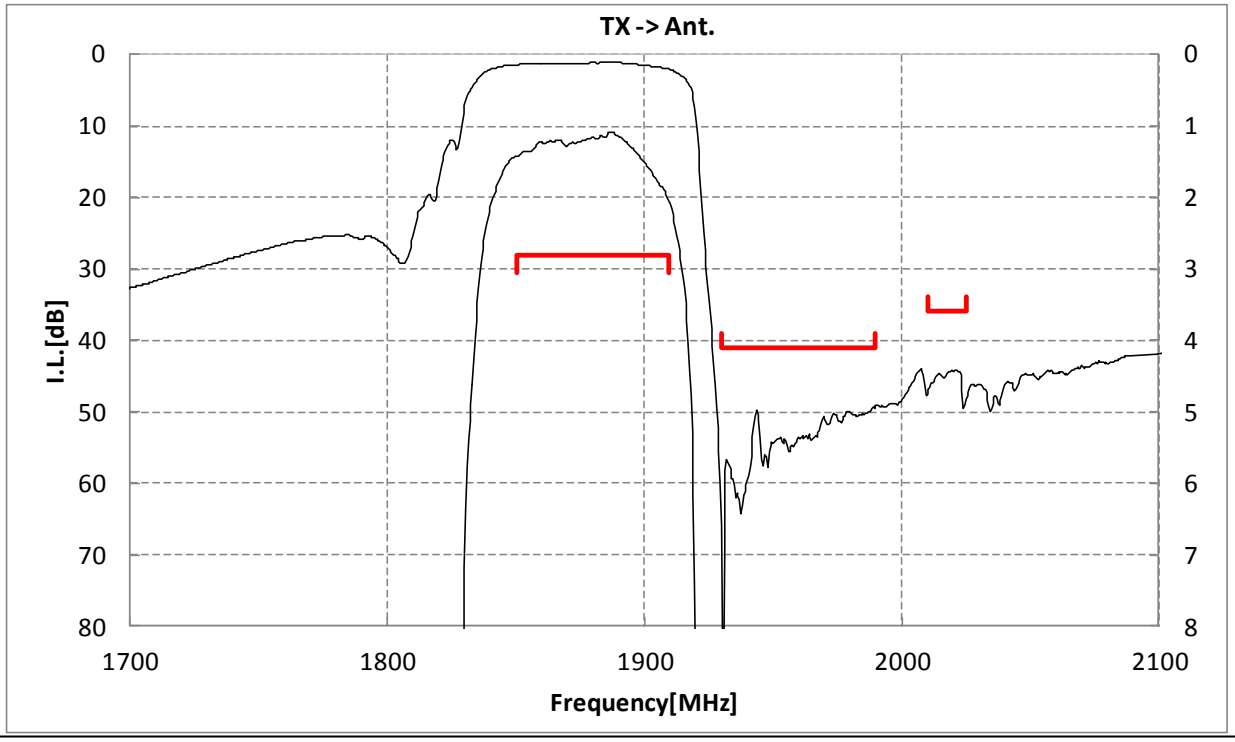
Item		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.	max.		
Isolation						
Isolation	1574. to 1577. MHz	40	66		dB	
	1850.25 to 1909.75 MHz	53	58		dB	
	1850.48 to 1909.52 MHz	53	58		dB	
	1852.4 to 1907.6 MHz	53	58		dB_{INT}	Any 3.84MHz
	1930.25 to 1989.75 MHz	48	54		dB	
	1932.4 to 1987.6 MHz	50	55		dB_{INT}	Any 3.84MHz
	1850.48 to 1909.52 MHz	53.5	58		dB	+23 to +27deg.C
	1852.4 to 1907.6 MHz	54	58		dB_{INT}	+23 to +27deg.C Any 3.84MHz
	1930.25 to 1989.75 MHz	48	54		dB	+23 to +27deg.C
	1932.4 to 1987.6 MHz	50	55		dB_{INT}	+23 to +27deg.C Any 3.84MHz
	3700. to 3820. MHz	45	53		dB	
	5550. to 5850. MHz	42	59		dB	

* Typical value at 25±2deg.C

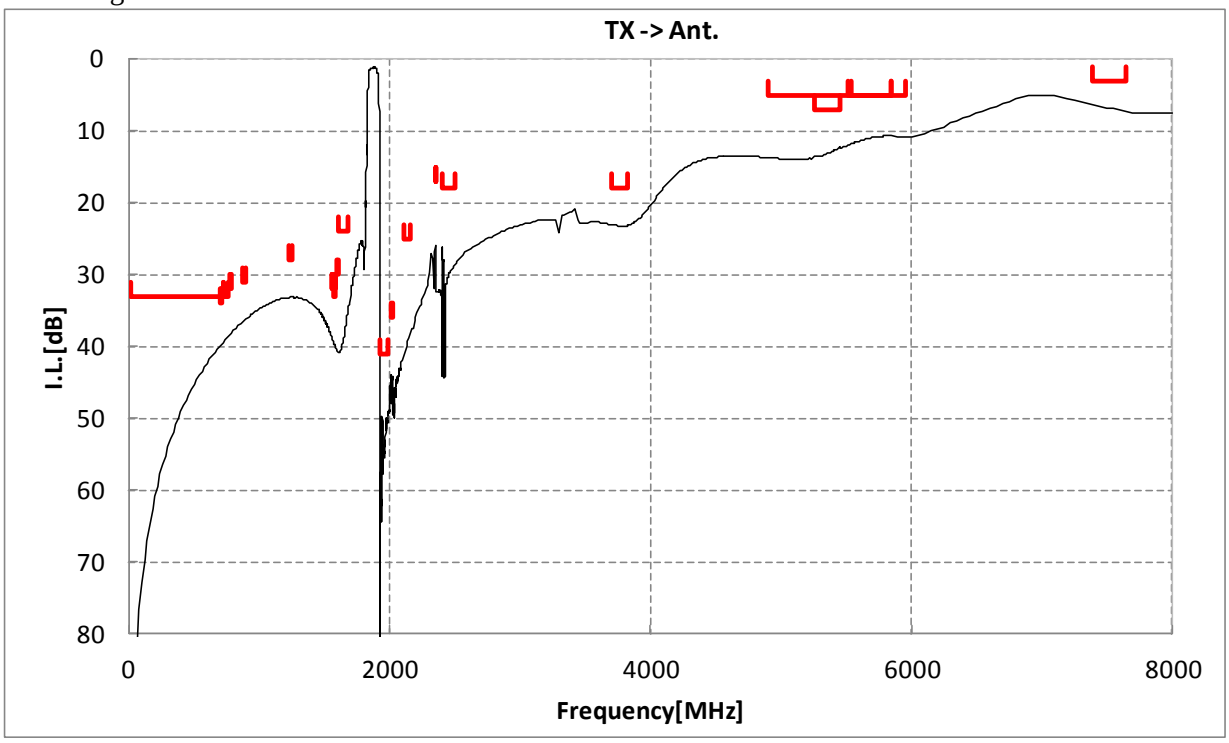
Electrical Characteristic

< TX→ANT. >

Narrow-Segment



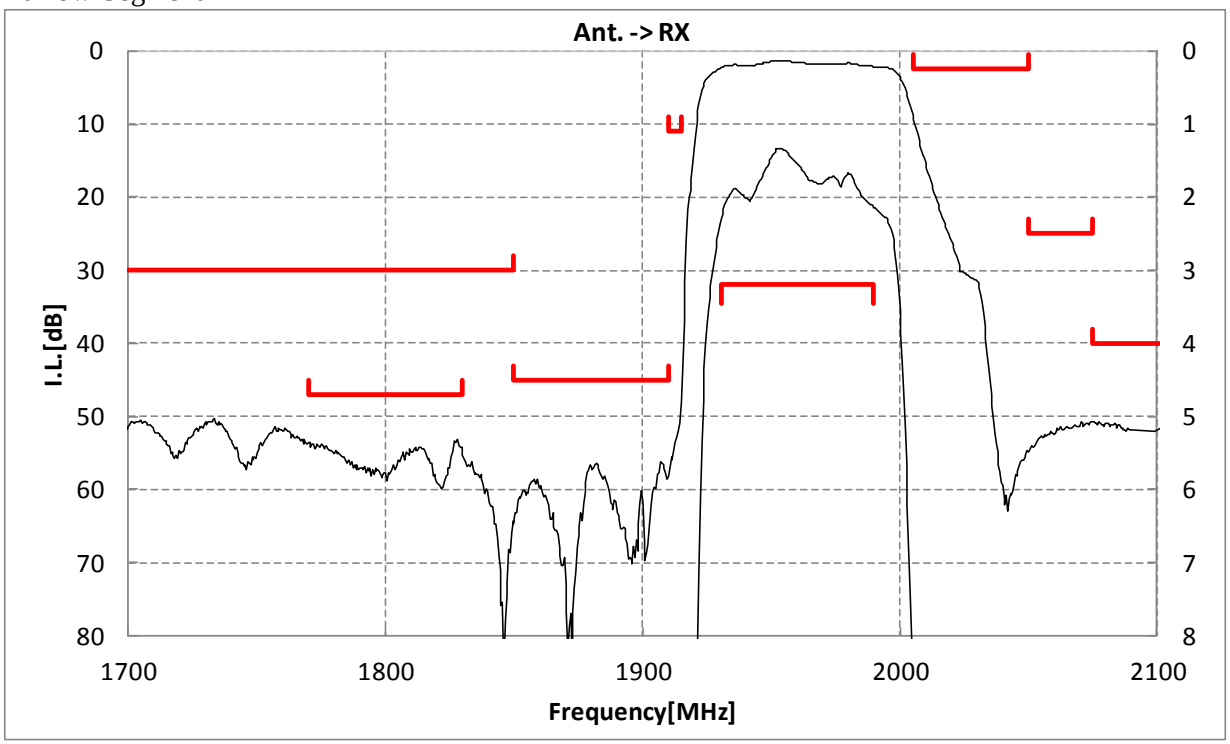
Wide-Segment



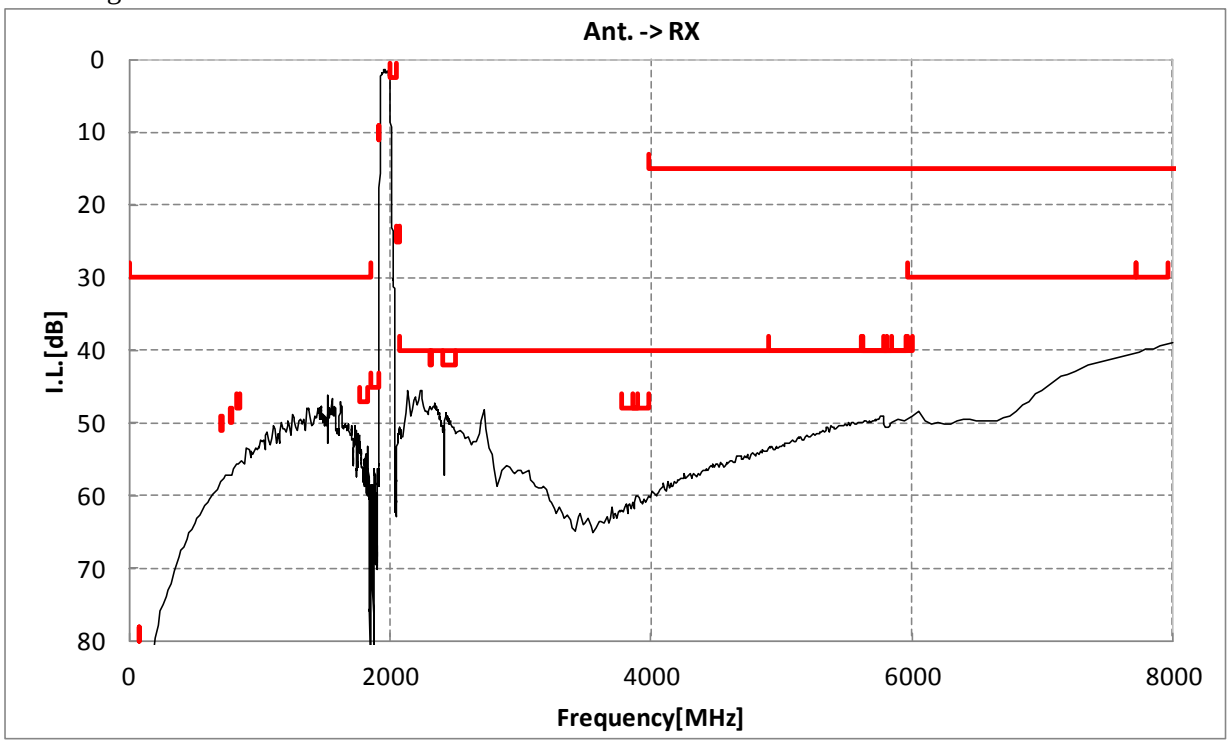
Electrical Characteristic

< ANT.→RX. >

Narrow-Segment



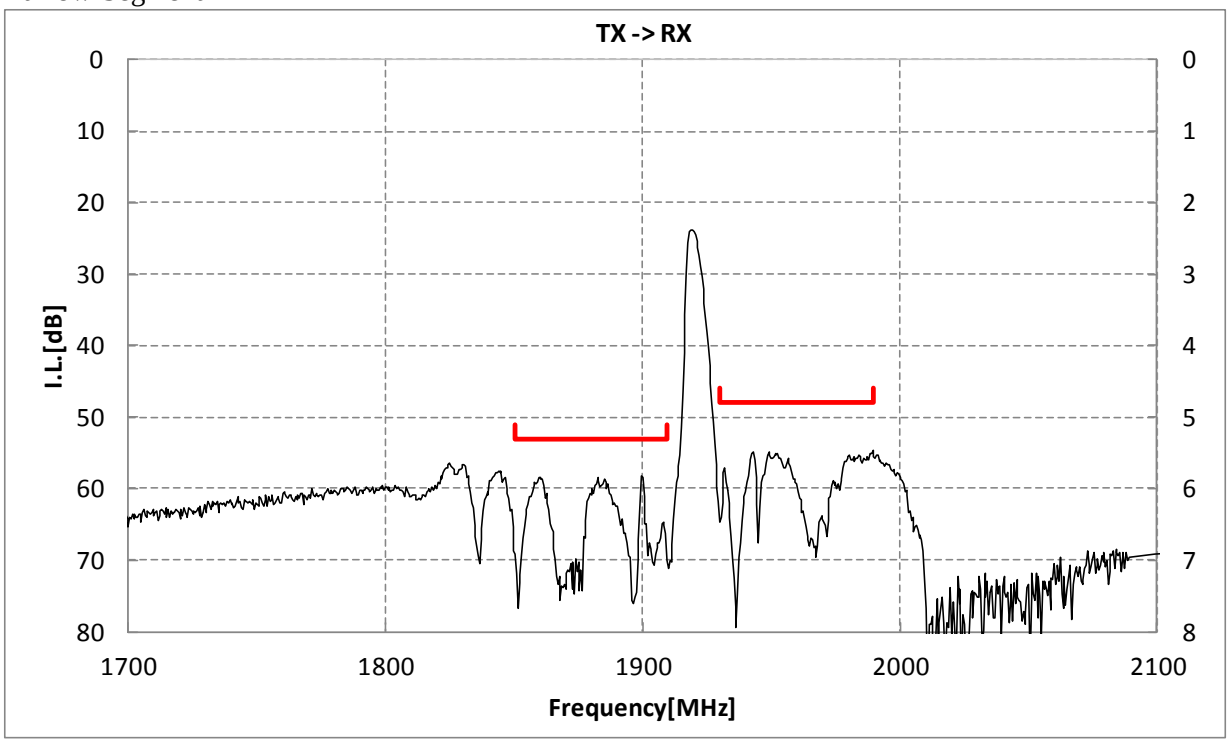
Wide-Segment



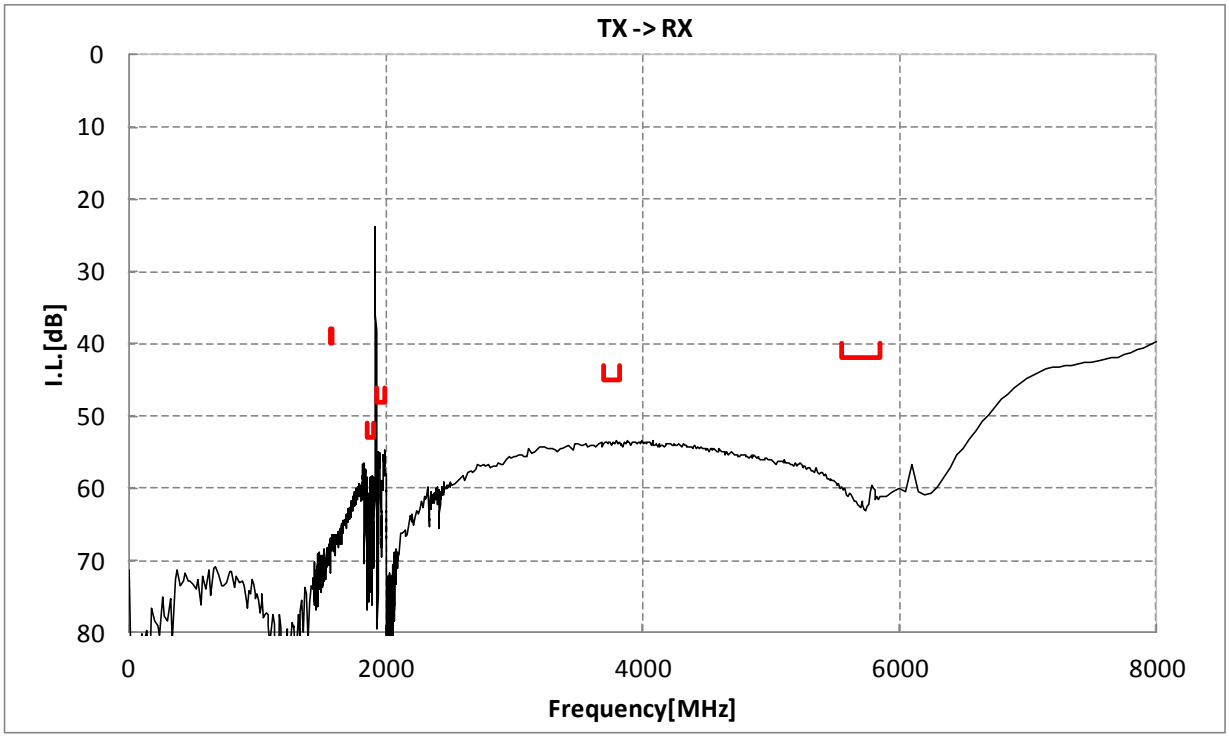
Electrical Characteristic

< TX→RX. >

Narrow-Segment



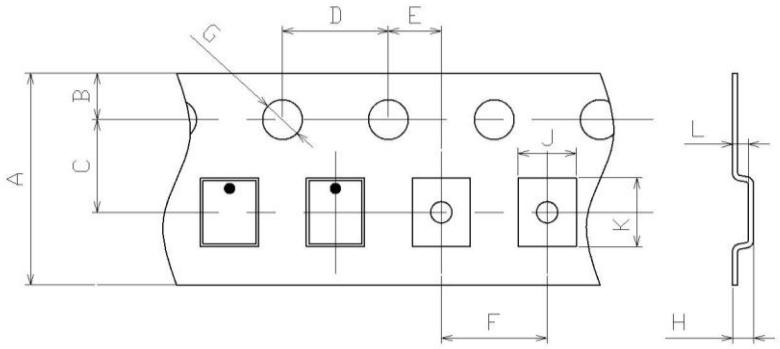
Wide-Segment



SAYEY1G88BA0B0A (Band2 / Unbalanced / LR / 1814)

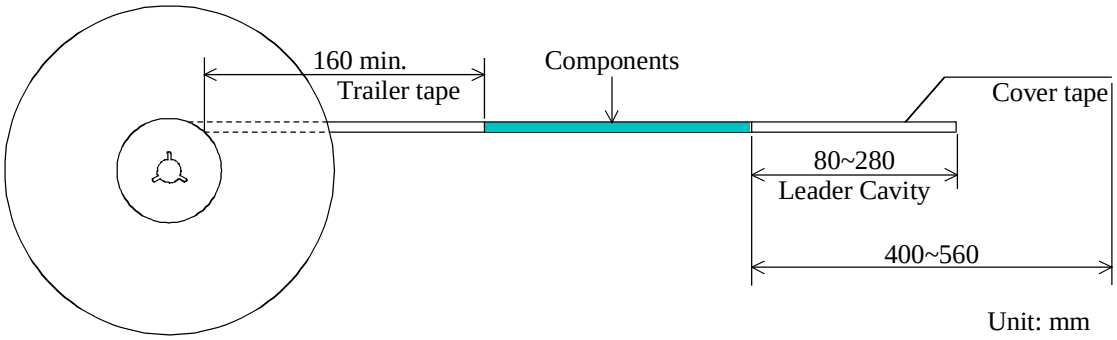
Dimensions of Tape & Reel unit: mm

Carrier Tape



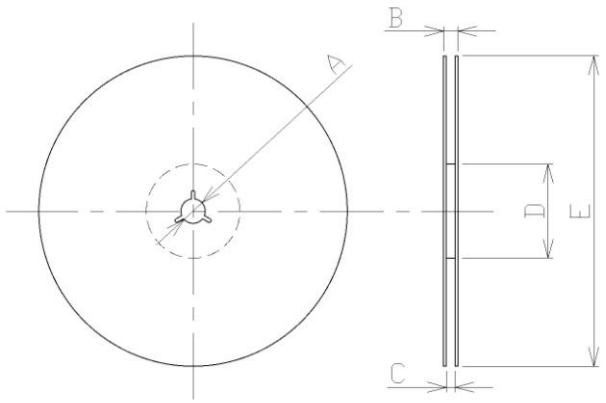
A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

Tape



Unit: mm

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

SAYEY1G88BA0B0AR00… 10000pcs (φ330)
SAYEY1G88BA0B0AR05… 5000pcs (φ330)
SAYEY1G88BA0B0AR1S… Sample Order (φ178)

Marking Code

Table A: Month Code

2009 2013 2017	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	A	B	C	D	E	F	G	H	J	K	L	M
2010 2014 2018	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	N	P	Q	R	S	T	U	V	W	X	Y	Z
2011 2015 2019	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	a	b	c̄	d	e	f	g	h	j	k	l	m
2012 2016 2020	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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- 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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- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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