Innovator in Electronics

Datasheet of SAW Device

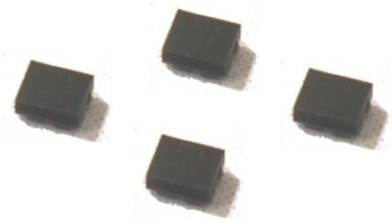
SAW Duplexer

for Band17 / Unbalanced / LR /1814

Murata PN: SAYEY710MBA0F0A

■ Feature

- Smallest size
- Tx low I.L.
- High Rx Isolation



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

SAYEY710MBA0F0A (Band17 / Unbalanced / LR / 1814)

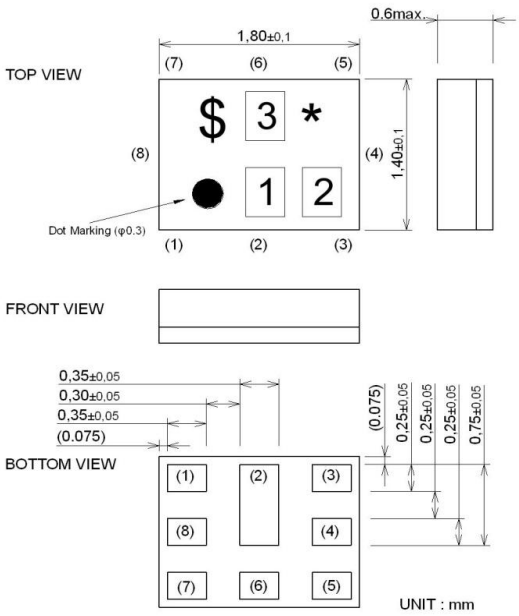
Revision No.	Date	Description
SAYEY710MBA0F0A_rev. A	Oct-29-2013	■ Initial Release

- 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 : 10M ohm
- RoHS compliance : Yes

Package Dimensions & Recommended Land Pattern

unit: mm

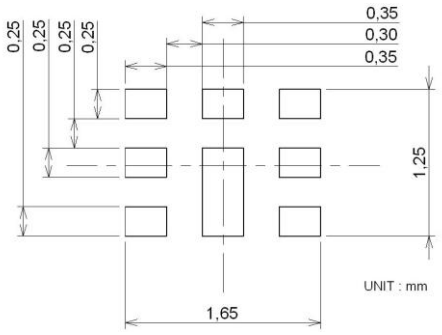
Dimensions



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

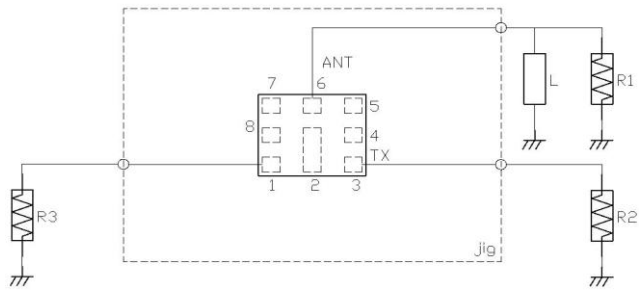
Terminal Number
(6) : ANT.
(3) : TX
(1) : RX
Others : GND.

Land Pattern



Measurement Circuit (Top View)

R1 : 50 ohm L1 : 9.5 nH(Ideal inductor)
R2 : 50 ohm
R3 : 50 ohm



SAYEY710MBA0F0A (Band17 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

Item				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.	max.		
Center Frequency					710		MHz	
Insertion Loss	704. to 716.		MHz		1.2	2.5	dB	
	704. to 716.		MHz		1.2	2.5	dB	+23 to +27deg.C
Ripple Deviation	704. to 716.		MHz		0.23	2	dB	
VSWR	704. to 716.		MHz		1.3	2		TX
	704. to 716.		MHz		1.2	2		ANT.
Absolute Attenuation	680. to 698.		MHz	0.5	2.1		dB	
	722. to 728.		MHz	2.5	6.3		dB	Average over ch56
	729. to 734.		MHz	6	25		dB	
	734. to 746.		MHz	42	62		dB	RX band Att.
	746. to 768.		MHz	30	41		dB	
	768. to 805.		MHz	25	37		dB	
	824. to 849.		MHz	30	35		dB	B5 TX CA
	869. to 894.		MHz	30	35		dB	
	1408. to 1432.		MHz	30	40		dB	2f
	1559. to 1563.		MHz	35	42		dB	Compass
	1565.42 to 1573.37		MHz	35	42		dB	Wideband GPS lower side
	1573.37 to 1577.47		MHz	35	42		dB	Regular GPS, main lobe
	1577.47 to 1585.42		MHz	35	42		dB	Wideband GPS upper side
	1597.55 to 1605.89		MHz	35	42		dB	GLONASS
	1710. to 1755.		MHz	30	46		dB	B4 TX CA
	1805. to 1880.		MHz	30	47		dB	DCS 1800
	1850. to 1910.		MHz	30	49		dB	DCS 1800
	1930. to 1990.		MHz	30	51		dB	PCS
	2110. to 2155.		MHz	45	53		dB	3f
	2155. to 2170.		MHz	30	52		dB	IMT
	2400. to 2484.		MHz	35	44		dB	ISM2.4
	2816. to 2864.		MHz	15	40		dB	4f
	4900. to 5950.		MHz	15	26		dB	ISM 5G
	100. to 680.		MHz	30	35		dB	

* Typical value at 25±2deg.C

SAYEY710MBA0F0A (Band17 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX. >

Item					Characteristics (-20 to +85 deg.C)			Unit	Note
					min.	typ.	max.		
Center Frequency						740		MHz	
Insertion Loss	734.	to	746.	MHz		1.4	2.5	dB	
	734.	to	746.	MHz		1.4	2.5	dB	+23 to +27deg.C
Ripple Deviation	734.	to	746.	MHz		0.26	1.5	dB	
VSWR	734.	to	746.	MHz		1.7	2		ANT.
	734.	to	746.	MHz		1.7	2		RX
Absolute Attenuation	1.	to	704.	MHz	40	59		dB	OoB rejection
			30.	MHz	50	110		dB	RX-TX
	704.	to	716.	MHz	50	61		dB	Lower 700MHz TX Att.
	716.	to	727.	MHz	7	17		dB	(Rx+Tx)/2
	727.	to	728.	MHz	3	16		dB	
	776.	to	793.	MHz	32	38		dB	Upper 700 MHz TX Att.
	793.	to	805.	MHz	35	42		dB	PS mobile transmitters
	814.	to	6000.	MHz	28	37		dB	
	1710.	to	1755.	MHz	40	54		dB	B4 TX CA
	1850.	to	1910.	MHz	40	52		dB	B2 TX CA
	2202.	to	2238.	MHz	40	51		dB	3f
	2400.	to	2500.	MHz	40	50		dB	ISM2.4
	4900.	to	5950.	MHz	28	37		dB	ISM 5G
	6606.	to	6714.	MHz	28	38		dB	9f
	7340.	to	7460.	MHz	25	39		dB	10f
	8074.	to	8206.	MHz	20	37		dB	11f
	8808.	to	8952.	MHz	20	37		dB	12f
	9542.	to	9698.	MHz	15	37		dB	13f
	10276.	to	10244.	MHz	15	37		dB	14f
	11010.	to	11190.	MHz	15	25		dB	15f
	11744.	to	11936.	MHz	15	25		dB	16f
	12478.	to	12682.	MHz	15	25		dB	17f

* Typical value at 25±2deg.C

SAYEY710MBA0F0A (Band17 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→RX. >

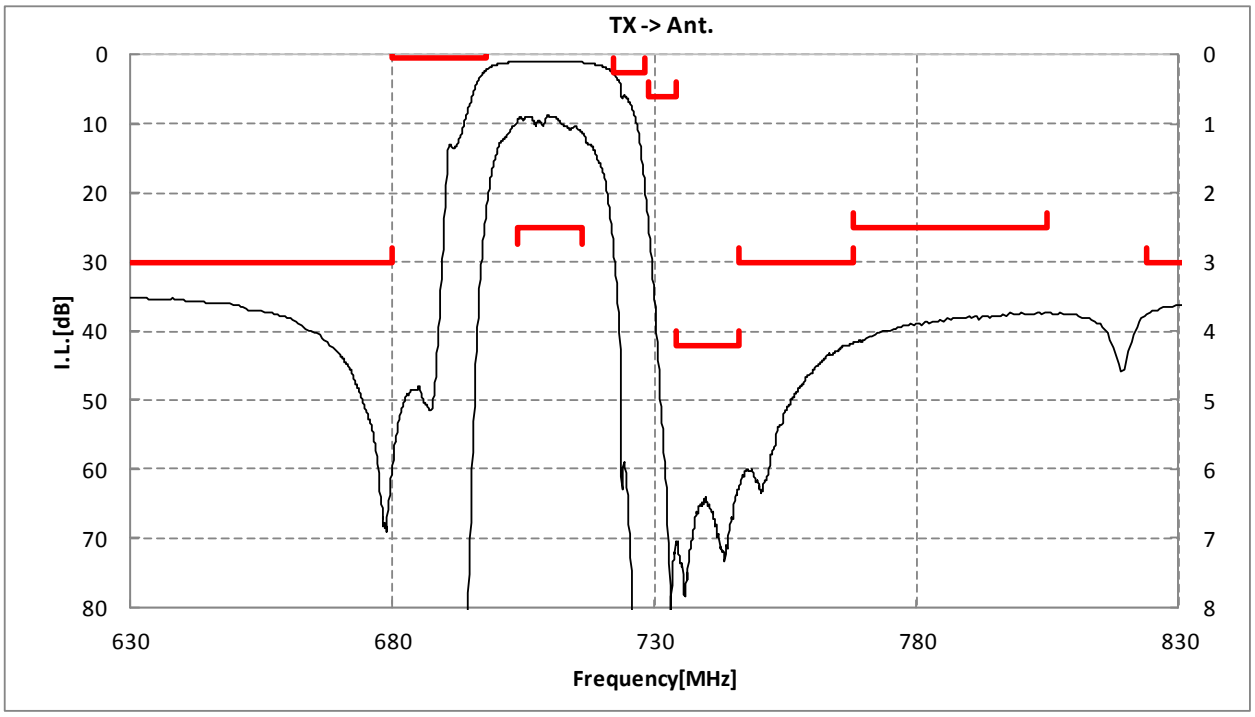
Item					Characteristics (-20 to +85 deg.C) min.	typ.	max.	Unit	Note
Isolation	704.	to	716.	MHz	60	62		dB	TX
	734.	to	738.	MHz	55	68		dB	RX1
	738.	to	742.	MHz	55	64		dB	RX2
	742.	to	746.	MHz	55	62		dB	RX3
	1408.	to	1432.	MHz	30	61		dB	2f
	2112.	to	2148.	MHz	30	53		dB	3f
	2816.	to	2864.	MHz	30	49		dB	4f

* Typical value at 25±2deg.C

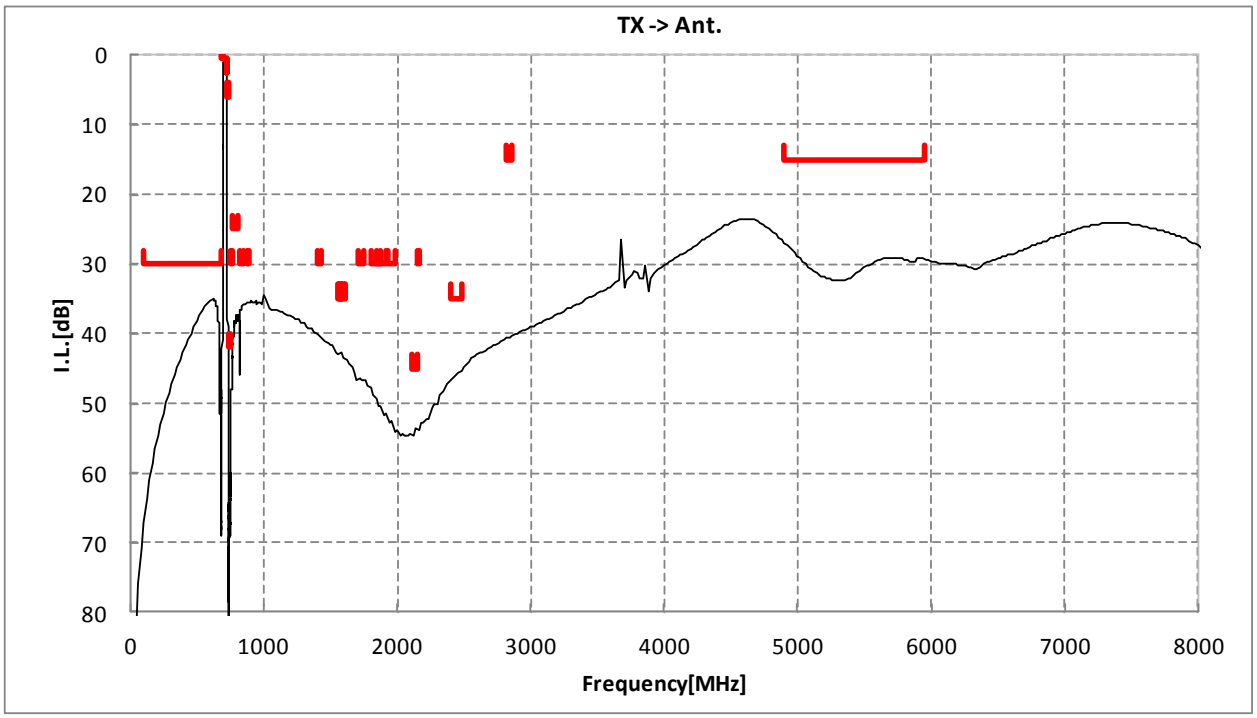
Electrical Characteristic

< TX→ANT. >

Narrow-Segment



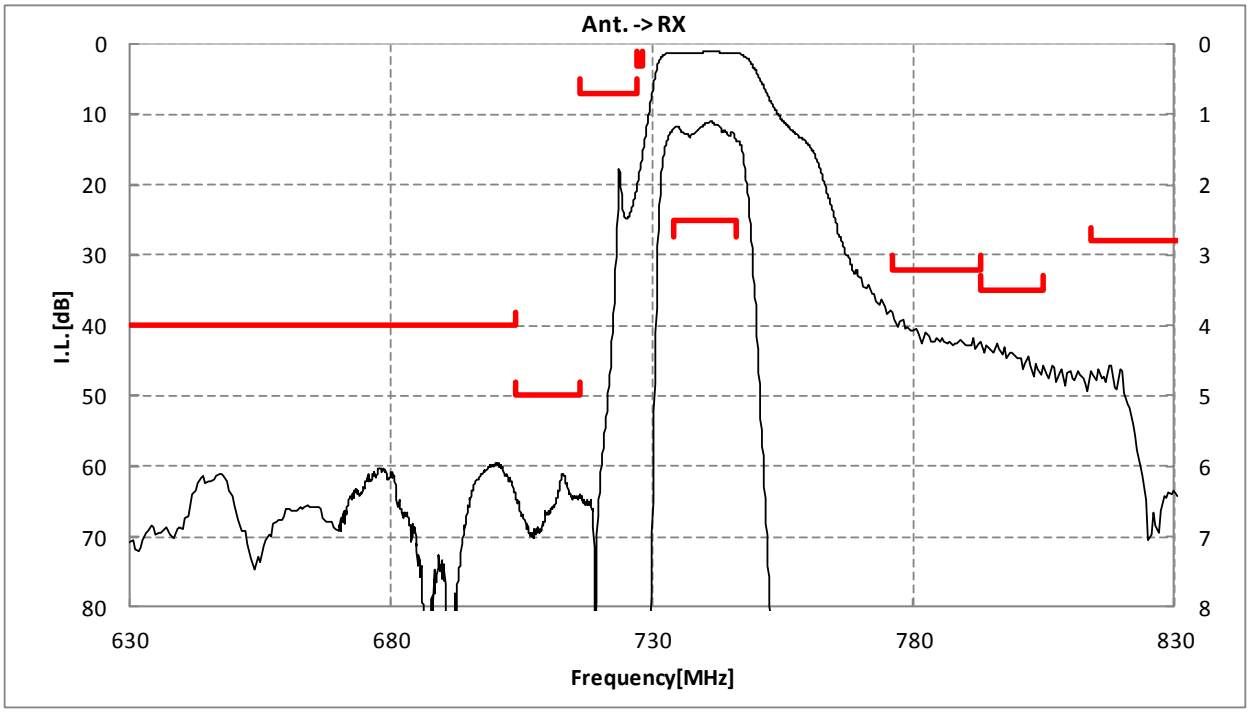
Wide-Segment



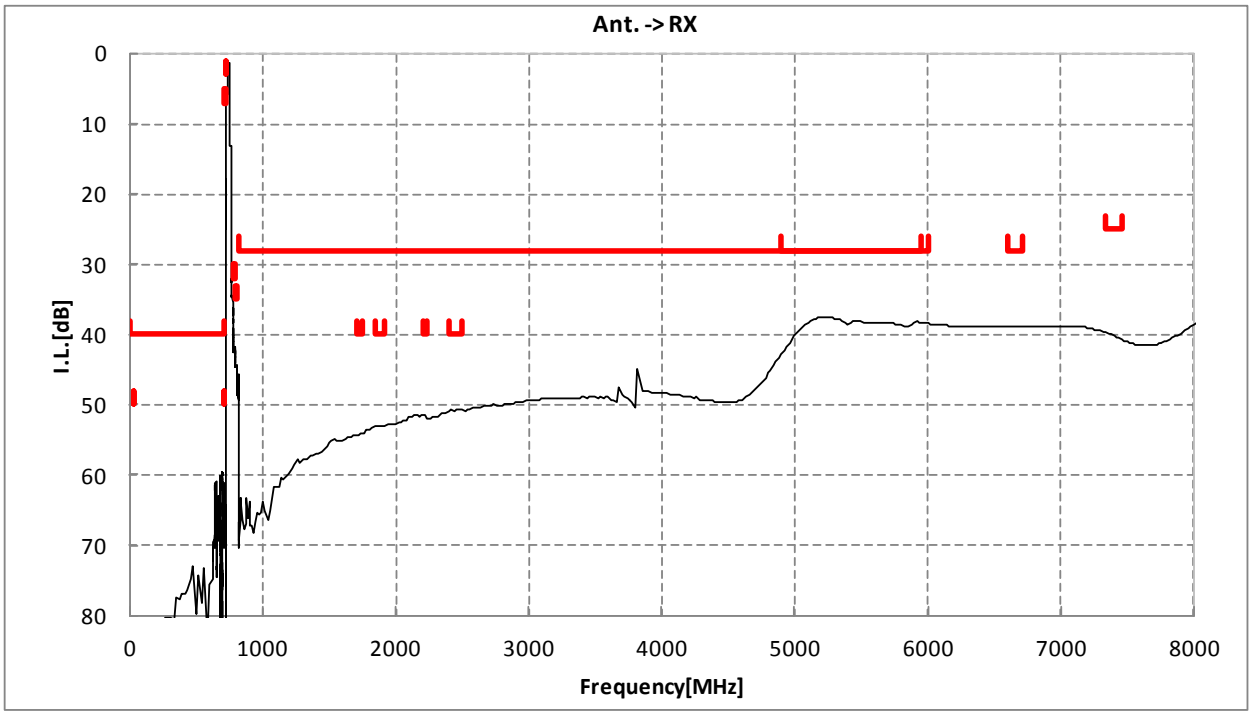
Electrical Characteristic

< ANT.→RX. >

Narrow-Segment



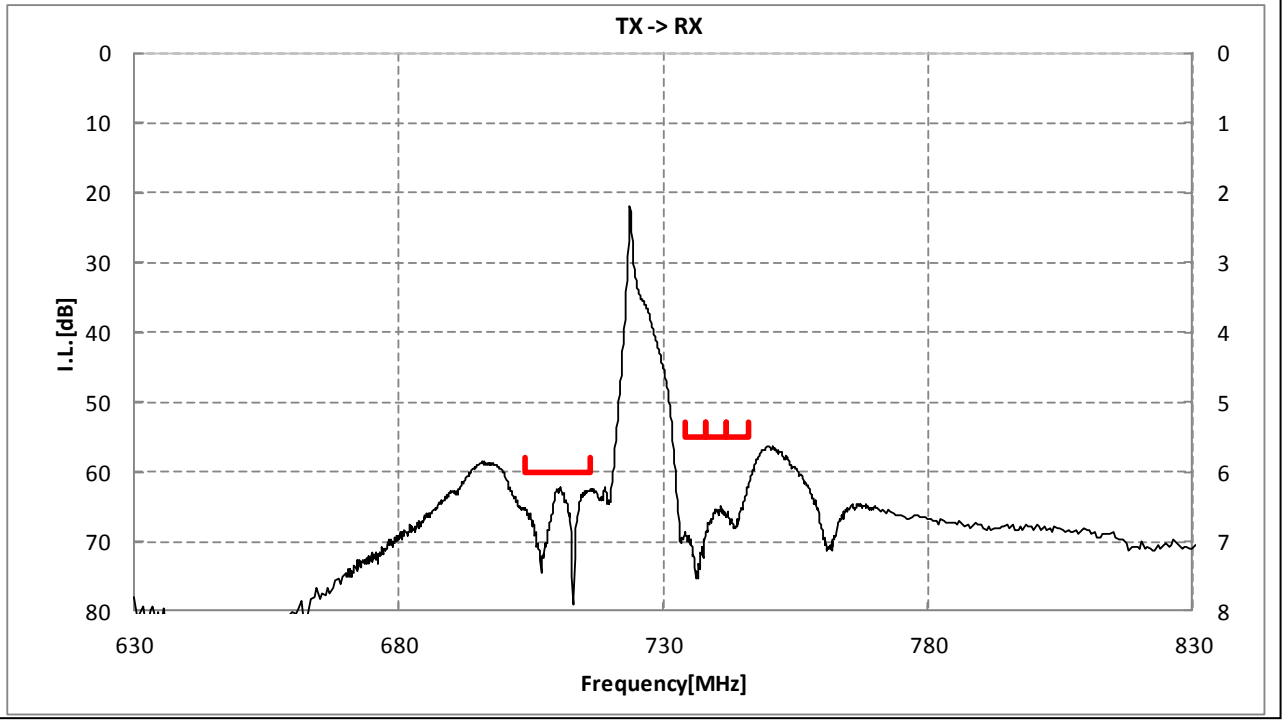
Wide-Segment



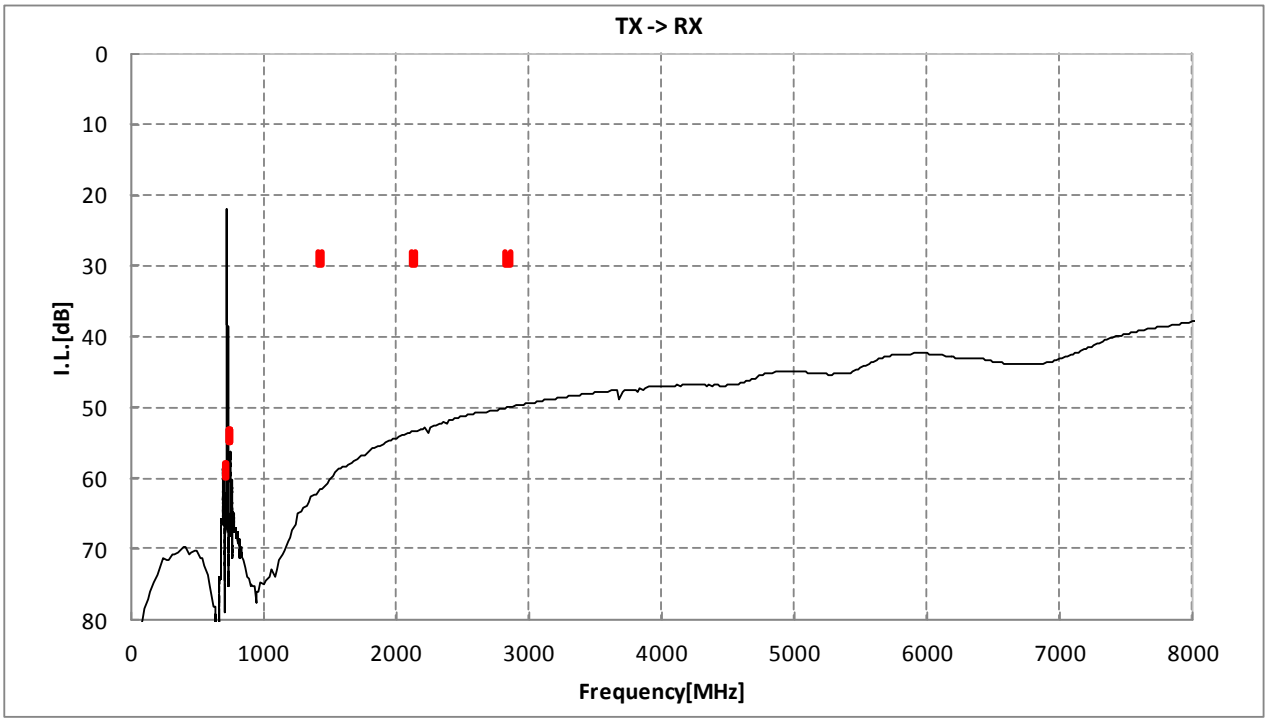
Electrical Characteristic

< TX→RX. >

Narrow-Segment



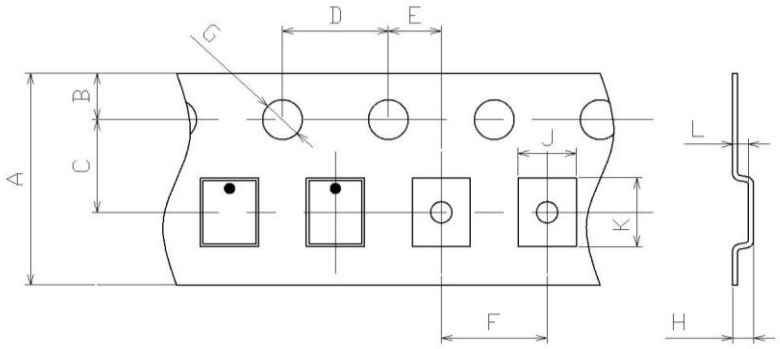
Wide-Segment



SAYEY710MBA0F0A (Band17 / Unbalanced / LR / 1814)

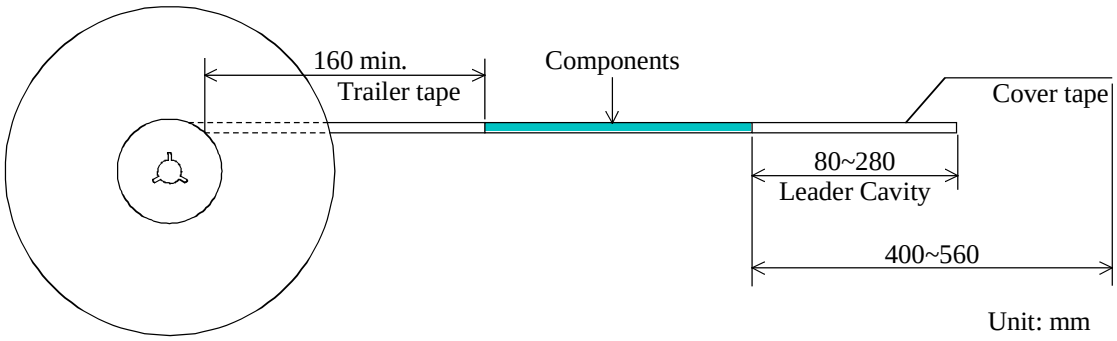
Dimensions of Tape & Reel unit: mm

Carrier Tape



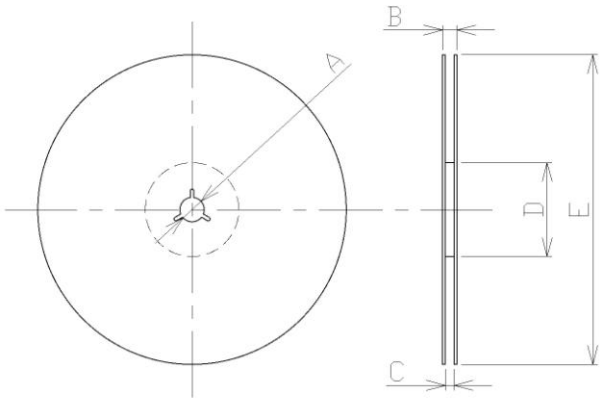
A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

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

SAYEY710MBA0F0AR00… 10000pcs (φ330)
SAYEY710MBA0F0AR05… 5000pcs (φ330)
SAYEY710MBA0F0AR1S… 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

Important Notice (1/2)

PLEASE READ THIS NOTICE BEFORE USING OUR PRODUCTS.

Please make sure that your product has been evaluated and confirmed from the aspect of the fitness for the specifications of our product when our product is mounted to your product.
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.
Please note that the only warranty that we provide regarding the products is its conformance to the specifications provided herein. Accordingly, we shall not be responsible for any defects in products or equipment incorporating such products, which are caused under the conditions other than those specified in this specification.

WE HEREBY DISCLAIMS ALL OTHER WARRANTIES REGARDING THE PRODUCTS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, THAT THEY ARE DEFECT-FREE, OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS.

The product shall not be used in any application listed below which requires especially high reliability for the prevention of such defect as may directly cause damage to the third party's life, body or property. You acknowledge and agree that, if you use our products in such applications, we will not be responsible for any failure to meet such requirements.

Important Notice (2/2)

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- Aircraft equipment.
- 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 our products, our technical information and other data provided by us for the purpose of developing of mass-destruction weapons and the purpose of military use.
Moreover, you must comply with "foreign exchange and foreign trade law", the "U.S. export administration regulations", etc.

Please note that we may discontinue the manufacture of our products, due to reasons such as end of supply of materials and/or components from our suppliers.

Customer acknowledges that Murata will, if requested by you, conduct a failure analysis for defect or alleged defect of Products only at the level required for consumer grade Products, and thus such analysis may not always be available or be in accordance with your request (for example, in cases where the defect was caused by components in Products supplied to Murata from a third party).

The product shall not be used in any other application/model than that of claimed to Murata.

Customer acknowledges that engineering samples may deviate from specifications and may contain defects due to their development status.
We reject any liability or product warranty for engineering samples.
In particular we disclaim liability for damages caused by

- the use of the engineering sample other than for evaluation purposes, particularly the installation or integration in the product to be sold by you,
- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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