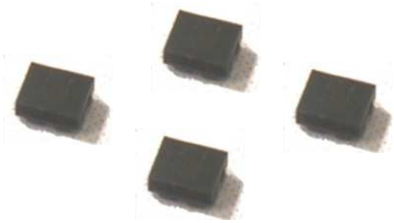
Innovator in Electronics

Datasheet of SAW Device

SAW Duplexer

for Band17 / Balanced / LR /1814

Murata PN: SAYEY710MCC0F0A



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

SAYEY710MCC0F0A (Band17 / Balanced / LR / 1814)

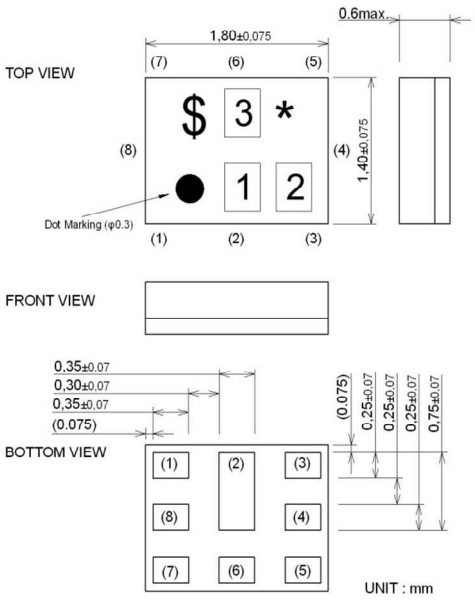
Revision No.	Date	Description
SAYEY710MCC0F0A_rev. A	Mar-12-2014	■ Initial Release

- 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 betweem the terminals : 10M ohm
- RoHS compliance : Yes

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions

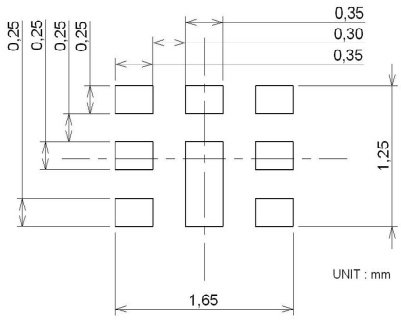


Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 6
2 : X
3 : A

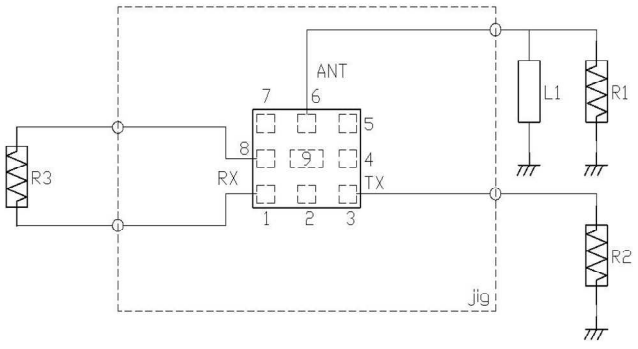
Terminal Number
(6) : ANT.
(3) : TX
(1)(8) : RX
Others : GND.

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

Land Pattern



Measurement Circuit (Top View)



R1 : 50 ohm	L : 9.1 nH(Ideal inductor)
R2 : 50 ohm	
R3 : 100 ohm	

SAYEY710MCC0F0A (Band17 / Balanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

Matching Impedance (nominal)

- : ANT. Port : 50 ohm // 9.1 nH(Ideal inductor)
- : TX Port : 50 ohm
- : RX Port : 100 ohm

Item				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.	max.		
Center Frequency					710		MHz	
Insertion Loss	704.5	to	715.5 MHz		1.3	1.9	dB	
	704.5	to	715.5 MHz		1.3	1.7	dB	+23 to +27deg.C
	704.	to	716. MHz		1.3	2.0	dB	
	704.	to	716. MHz		1.3	1.8	dB	+23 to +27deg.C
Ripple Deviation	704.	to	716. MHz		0.3	1.2	dB	
	704.	to	716. MHz		0.3	1.1	dB	+23 to +27deg.C
VSWR	704.	to	716. MHz		1.5	2.0		
Absolute Attenuation	0.1	to	680. MHz	30	38		dB	
	680.	to	698. MHz	0.6	2		dB	
	722.	to	728. MHz	7	14		dB	Average ch56 att.
	722.	to	728. MHz	10	14		dB	+23 to +27deg.C,Average ch56 att.
	722.	to	728. MHz	10	14		dB	+25 to +55deg.C,Average ch56 att.
	722.	to	728. MHz	12	14		dB	+55 to +85deg.C,Average ch56 att.
	728.	to	734. MHz	20	34		dB	
	734.	to	746. MHz	50	59		dB	
	746.	to	894. MHz	30	38		dB	
	1408.	to	1432. MHz	30	45		dB	
	1565.	to	1607. MHz	45	49		dB	
	1805.	to	1990. MHz	35	56		dB	
	2110.	to	2155. MHz	45	57		dB	
	2155.	to	2170. MHz	35	57		dB	
	2400.	to	2484. MHz	35	59		dB	
	2816.	to	2864. MHz	15	40		dB	
	5150.	to	5800. MHz	10	23		dB	

* Typical value at 25±2deg.C

SAYEY710MCC0F0A (Band17 / Balanced / LR / 1814)

Electrical Characteristic < ANT.→RX. >

Matching Impedance (nominal)

- - : ANT. Port : 50 ohm // 9.1 nH(Ideal inductor)
- - : TX Port : 50 ohm
- - : RX Port : 100 ohm

Item		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.	max.		
Center Frequency			740		MHz	
Insertion Loss	734.5 to 745.5 MHz		2.1	2.8	dB	
	734.5 to 745.5 MHz		2.1	2.5	dB	+23 to +27deg.C
	734. to 746. MHz		2.2	3.0	dB	
	734. to 746. MHz		2.2	2.7	dB	+23 to +27deg.C
Ripple Deviation	734. to 746. MHz		0.6	1.6	dB	
	734. to 746. MHz		0.6	1.5	dB	+23 to +27deg.C
VSWR	734. to 746. MHz		1.5	2.0		
Amplitude Balance	734. to 746. MHz	-1	0.3	+1	dB	
Phase Balance	734. to 746. MHz	170	183	190	deg.	
Absolute Attenuation	0.1 to 704. MHz	50	57		dB	
	704. to 716. MHz	52	63		dB	
	716. to 724. MHz	30	53		dB	
	724. to 727. MHz	15	35		dB	
	727. to 728. MHz	10	28		dB	
	776. to 788. MHz	25	31		dB	
	788. to 793. MHz	25	52		dB	
	793. to 805. MHz	45	56		dB	
	805. to 2500. MHz	40	52		dB	
	2500. to 6000. MHz	25	35		dB	

* Typical value at 25±2deg.C

SAYEY710MCC0F0A (Band17 / Balanced / LR / 1814)

Electrical Characteristic < TX→RX. >

Matching Impedance (nominal)

- : ANT. Port : 50 ohm // 9.1 nH(Ideal inductor)
- : TX Port : 50 ohm
- : RX Port : 100 ohm

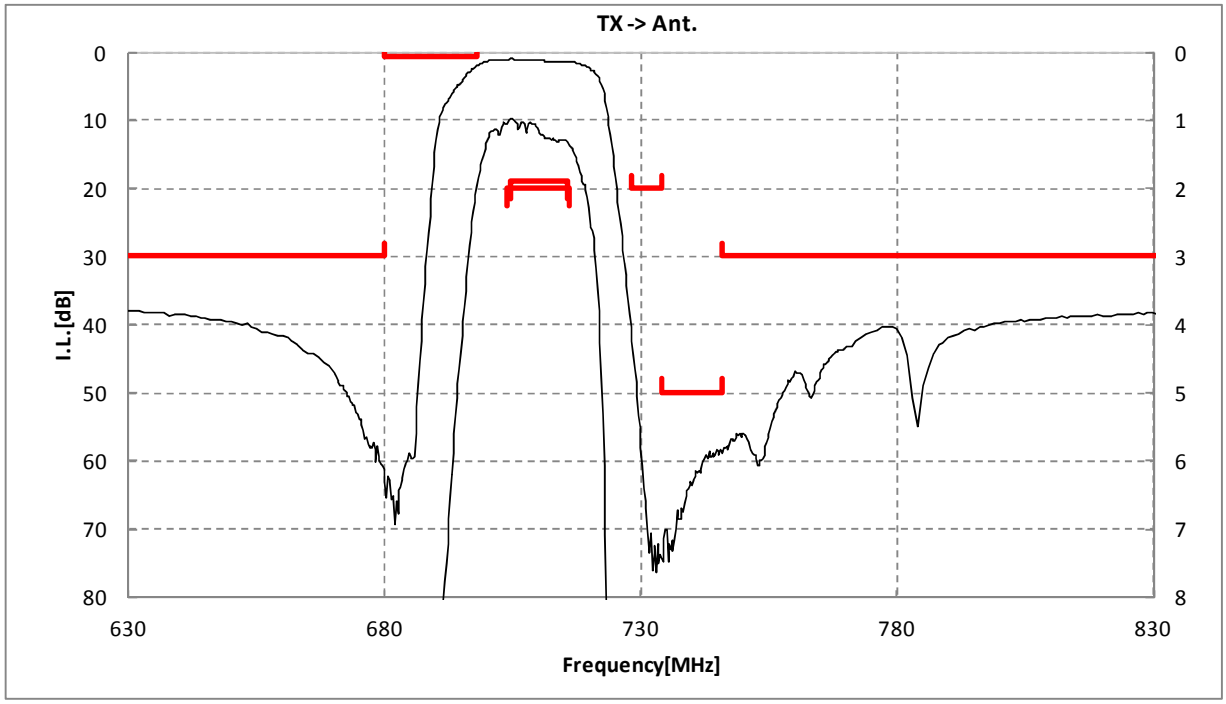
Item		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.	max.		
Isolation						
	704. to 716. MHz	58	61		dB	
	734. to 738. MHz	60	75		dB	
	738. to 742. MHz	55	64		dB	
	742. to 746. MHz	50	59		dB	

* Typical value at 25±2deg.C

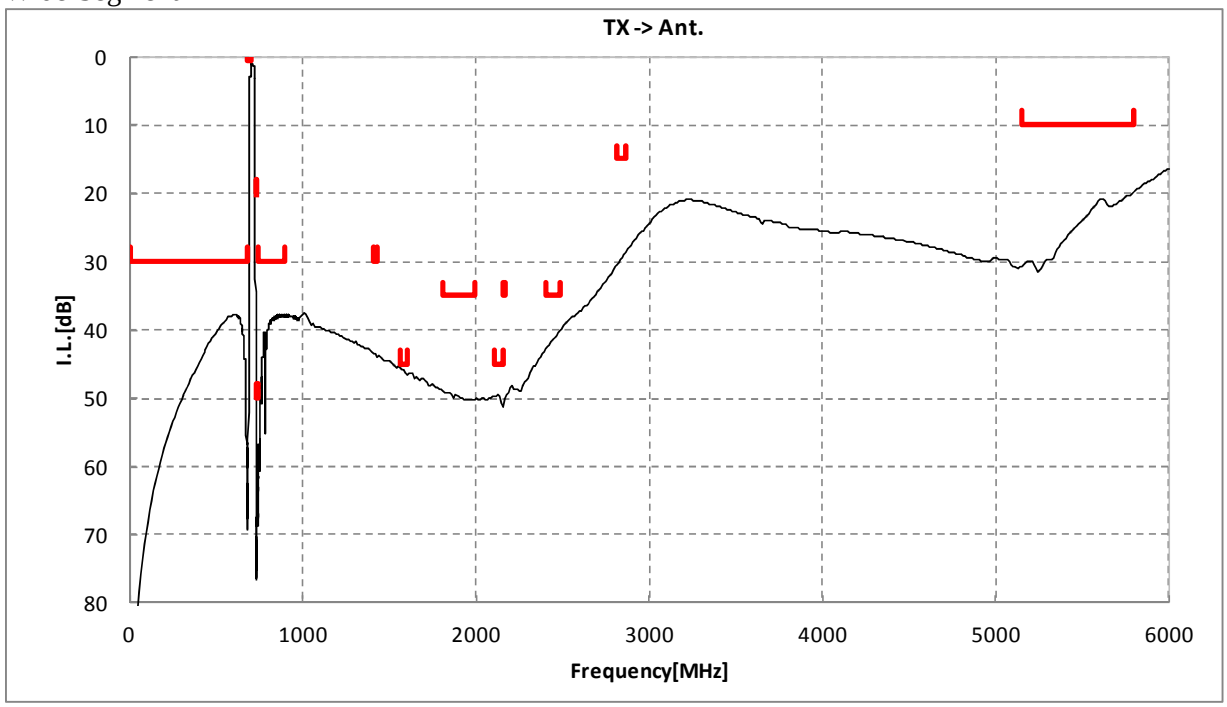
Electrical Characteristic

< TX→ANT. >

Narrow-Segment



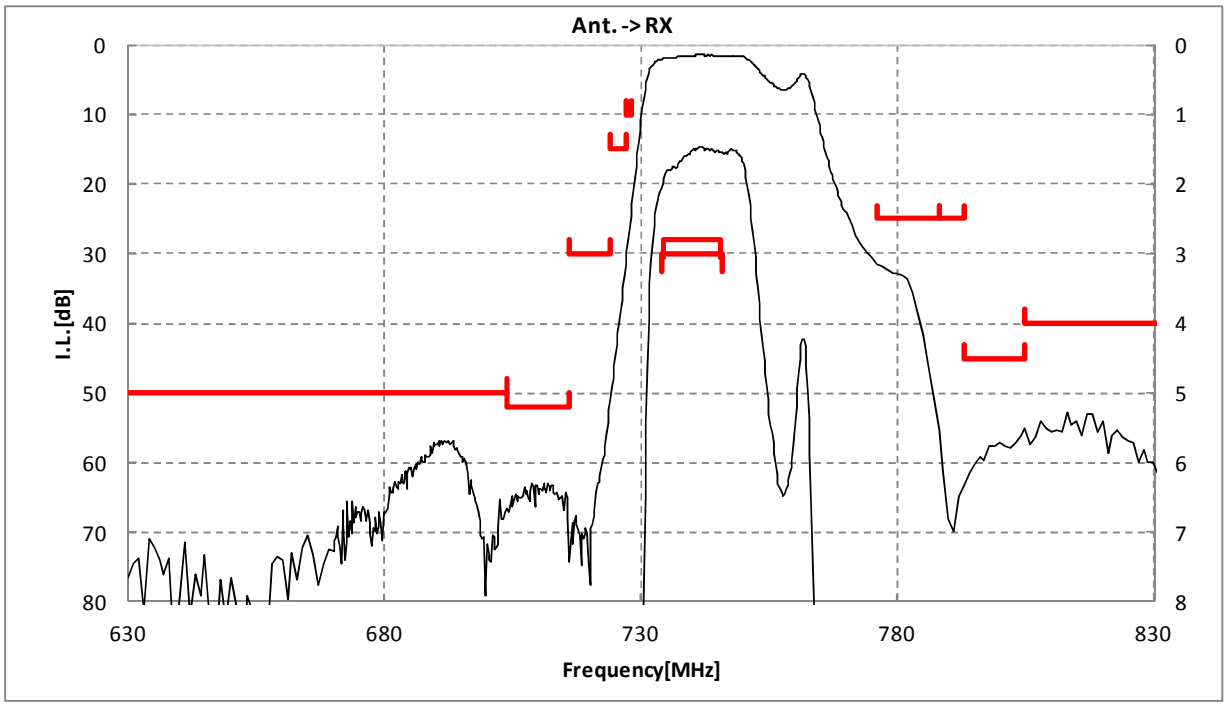
Wide-Segment



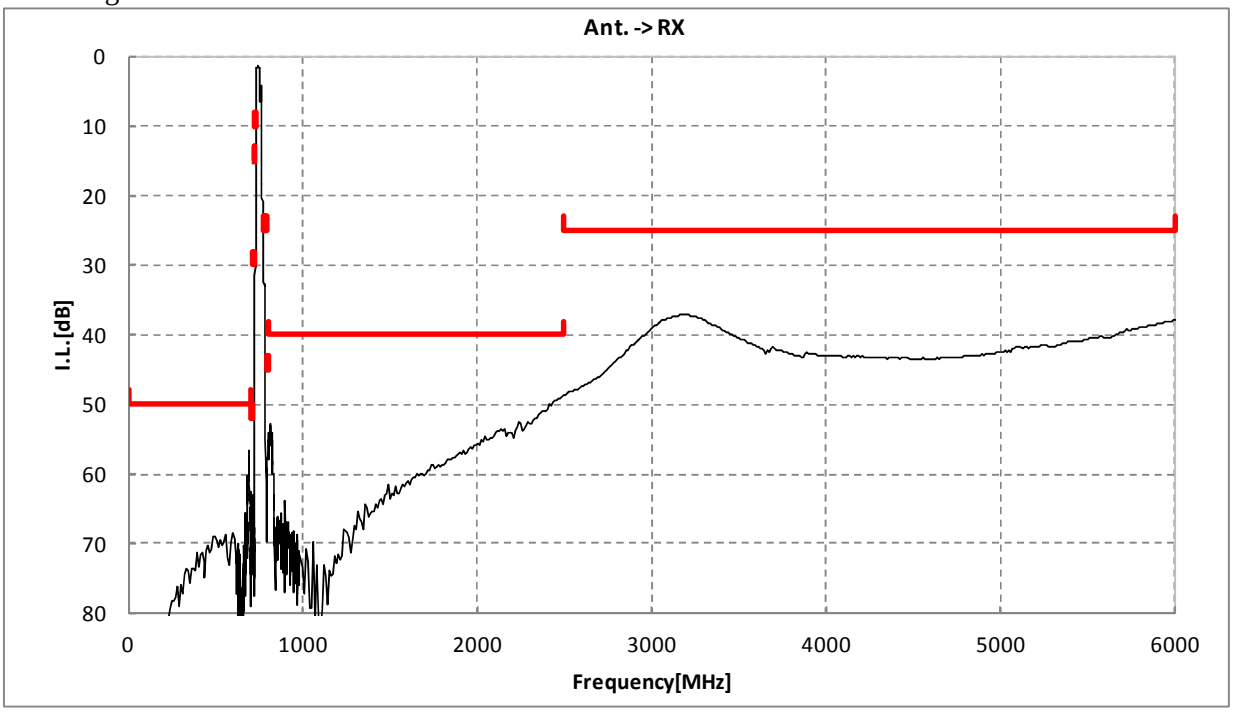
Electrical Characteristic

< ANT.→RX. >

Narrow-Segment



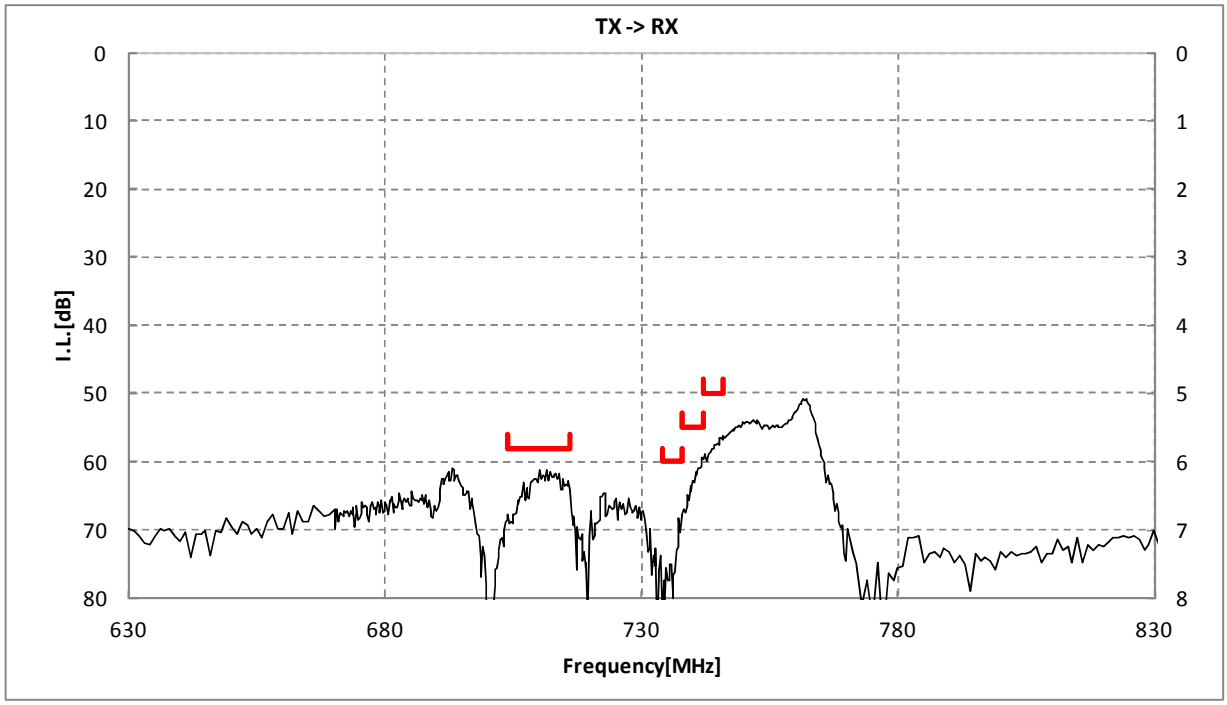
Wide-Segment



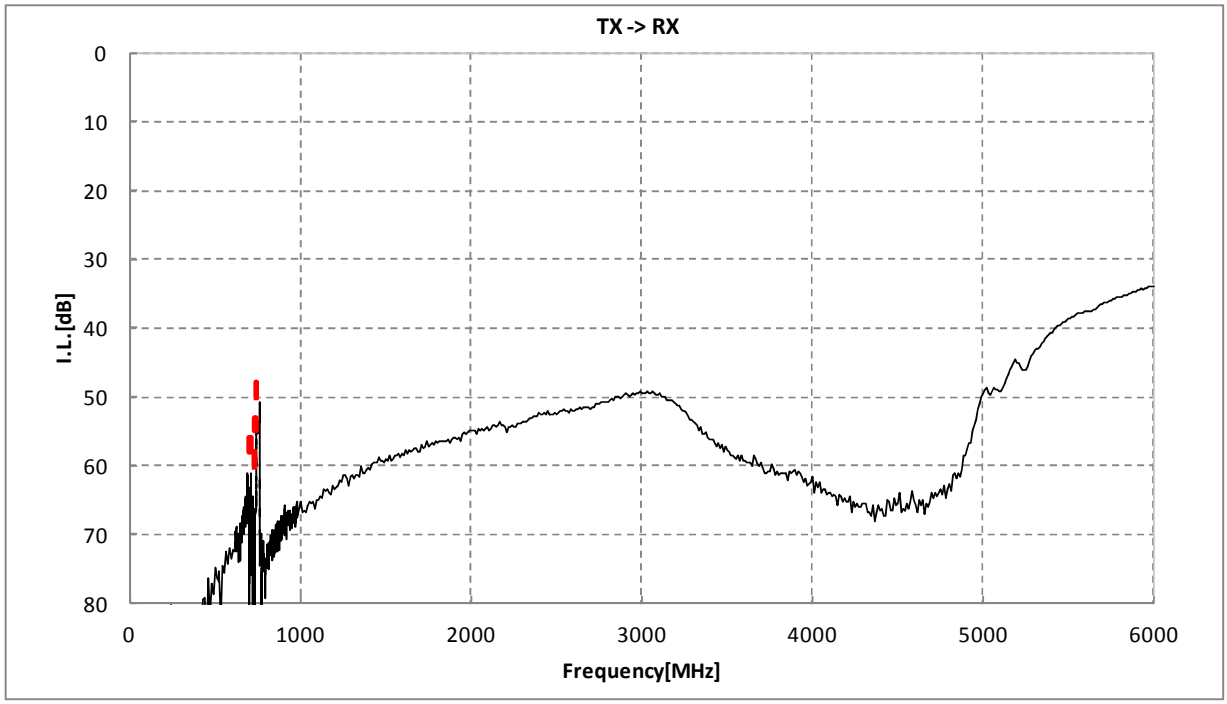
Electrical Characteristic

< TX→RX. >

Narrow-Segment



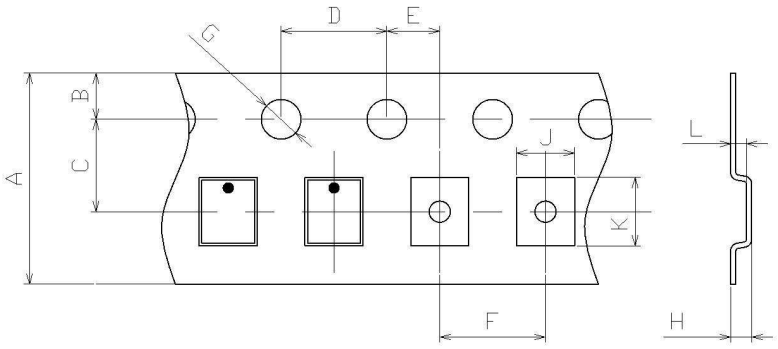
Wide-Segment



SAYEY710MCC0F0A (Band17 / Balanced / LR / 1814)

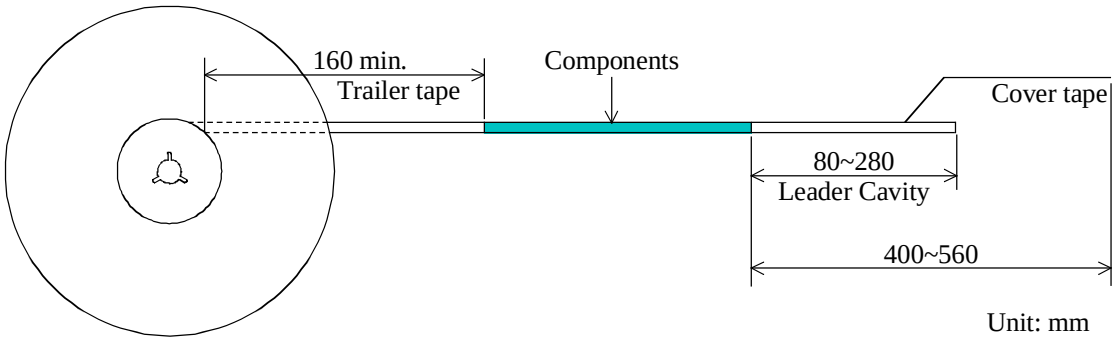
Dimensions of Tape & Reel unit: mm

Carrier Tape



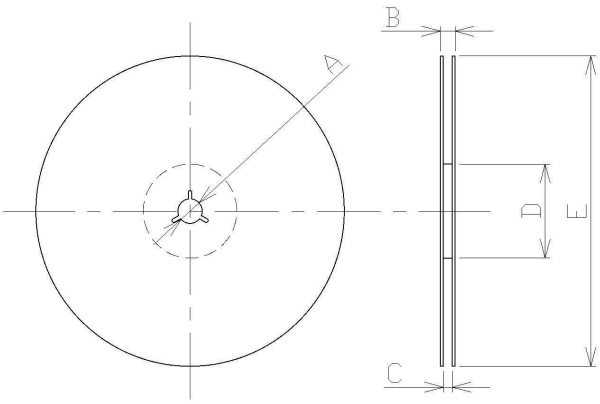
A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

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

SAYEY710MCC0F0AR00… 10000pcs (φ330)
SAYEY710MCC0F0AR05… 5000pcs (φ330)
SAYEY710MCC0F0AR1S… sample Order (φ178/330)

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)

Furthermore, YOU AGREE TO INDEMNIFY AND DEFEND US AND OUR AFFILIATES AGAINST ALL CLAIMS, DAMAGES, COSTS, AND EXPENSES THAT MAY BE INCURRED, INCLUDING WITHOUT LIMITATION, ATTORNEY FEES AND COSTS, DUE TO THE USE OF OUR PRODUCTS IN SUCH APPLICATIONS.

- 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.

We expressly prohibit you from analyzing, breaking, Reverse-Engineering, remodeling altering, and reproducing our product. Our product cannot be used for the product which is prohibited from being manufactured, used, and sold by the regulations and laws in the world.

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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.

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We reject any liability or product warranty for engineering samples.
In particular we disclaim liability for damages caused by

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- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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