

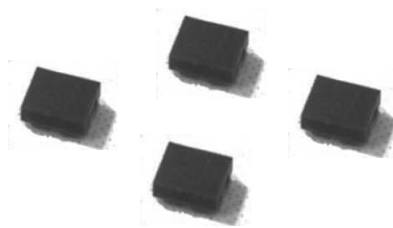
Datasheet of SAW Device

SAW Duplexer
for Band25 / Unbalanced / LR /1814

Murata PN: SAYPE1G88BA1G0A

■ Feature

- I.H.P. SAW
- Low Insertion Loss
- High-Q Performance



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
L

SAYPE1G88BA1G0A (Band25 / Unbalanced / LR / 1814)

General Information

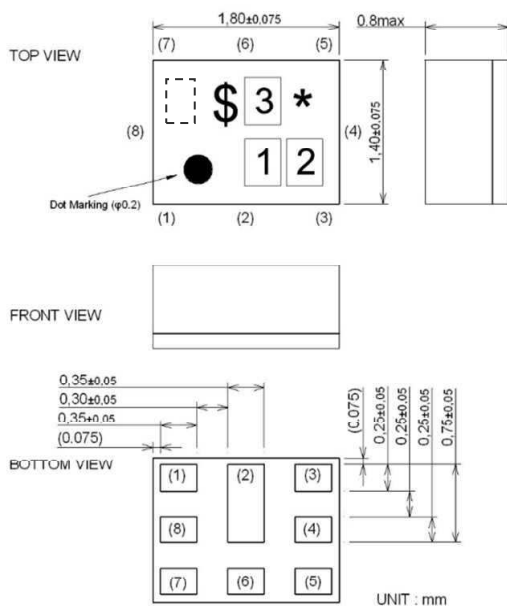
- Operating temperature	: -20 to +85 deg.C
- Storage temperature	: -40 to +85 deg.C
- Input Power	: +29.0dBm 5000h +50deg.C (1) (1) applicable for W-CDMA, SC-FDMA, DFT-s-OFDM
- D.C. Volatage between the terminals	: 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals	: 10M ohm
- RoHS compliance	: Yes
- ESD (ElectroStatic Discharge) sensitive device	

SAYPE1G88BA1G0A (Band25 / Unbalanced / LR / 1814)

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 : 8

2 : Y

3 : A

Terminal Number

(6) : Ant

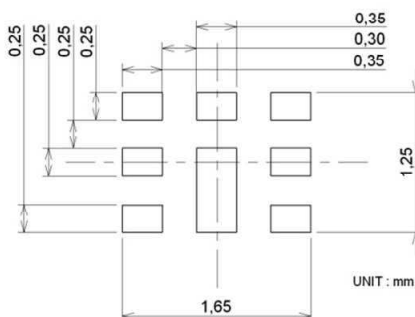
(3) : TX

(1) : RX

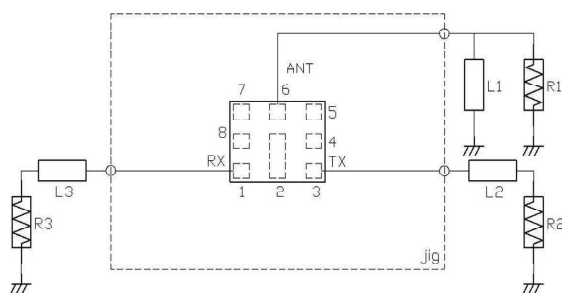
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :6.8nH(Ideal inductor)
	:7.5nH(LQW15AN7N5)
	<Reference>
R2 : 50 ohm	L2 :2nH(Ideal inductor)
R3 : 50 ohm	L3 :1nH(Ideal inductor)

SAYPE1G88BA1G0A (Band25 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

TX → ANT.				Characteristics (-20 to +85 deg.C)			Unit	Note	
				min.	typ.*	max.			
				Center Frequency					
Insertion Loss	1852.5	to	1912.5	MHz		1.5	2.5	dB _{INT}	Any 4.5MHz, B25
	1852.5	to	1907.5	MHz		1.1	2.2	dB _{INT}	Any 4.5MHz, B2
Ripple Deviation	1850.	to	1915.	MHz		1.0	2.6	dB	B25
	1850.	to	1910.	MHz		0.6	1.8	dB	B2
VSWR	1850.	to	1915.	MHz		1.4	2.0		ANT., B25
	1850.	to	1915.	MHz		1.4	2.0		TX, B25
	1850.	to	1910.	MHz		1.4	2.0		ANT., B2
	1850.	to	1910.	MHz		1.2	2.0		TX, B2
Absolute Attenuation	10.	to	728.	MHz	30	48		dB	
	728.	to	768.	MHz	42	47		dB	700MHz RX for SHDR
	859.	to	894.	MHz	40	45		dB	B5/26 RX
	1226.	to	1250.	MHz	35	43		dB	GPS L2
	1559.	to	1563.	MHz	41	47		dB	COMPASS
	1565.4	to	1573.4	MHz	41	47		dB	Lower GPS
	1573.4	to	1577.5	MHz	41	48		dB	Regular GPS
	1577.5	to	1585.4	MHz	41	48		dB	Upper GPS
	1579.6	to	1605.9	MHz	41	48		dB	GLONASS
	1605.88	to	1680.	MHz	35	48		dB	
	1932.5	to	1987.5	MHz	44	55		dB _{INT}	Any 4.5MHz, B2 RX
	1932.5	to	1992.5	MHz	44	55		dB _{INT}	Any 4.5MHz, B25 RX
	2110.	to	2200.	MHz	40	51		dB	B66 RX
	2350.	to	2360.	MHz	40	53		dB	B30 RX
	2400.	to	2700.	MHz	30	38		dB	
	3700.	to	3830.	MHz	28	39		dB	2f
	5150.	to	5350.	MHz	5.0	14.4		dB	
	5254.	to	5455.	MHz	5.0	11.1		dB	ISM5GHz
	5520.	to	5845.	MHz	3.0	9.8		dB	ISM5GHz, 3f
	7400.	to	7660.	MHz	5.0	13.0		dB	4f
	9250.	to	9575.	MHz	5.0	13.0		dB	5f
	11100.	to	11490.	MHz	10	17		dB	6f

* Typical value at 25±2deg.C

SAYPE1G88BA1G0A (Band25 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX >

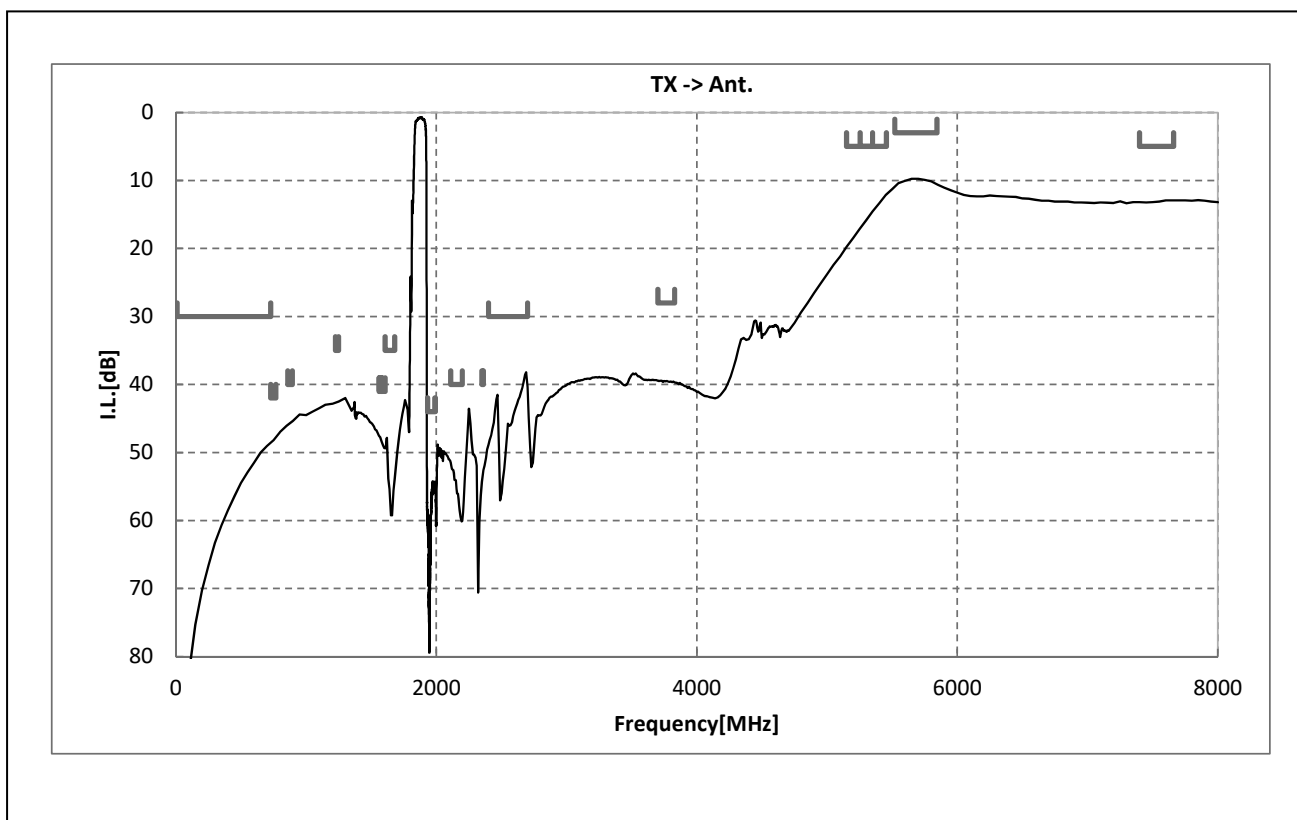
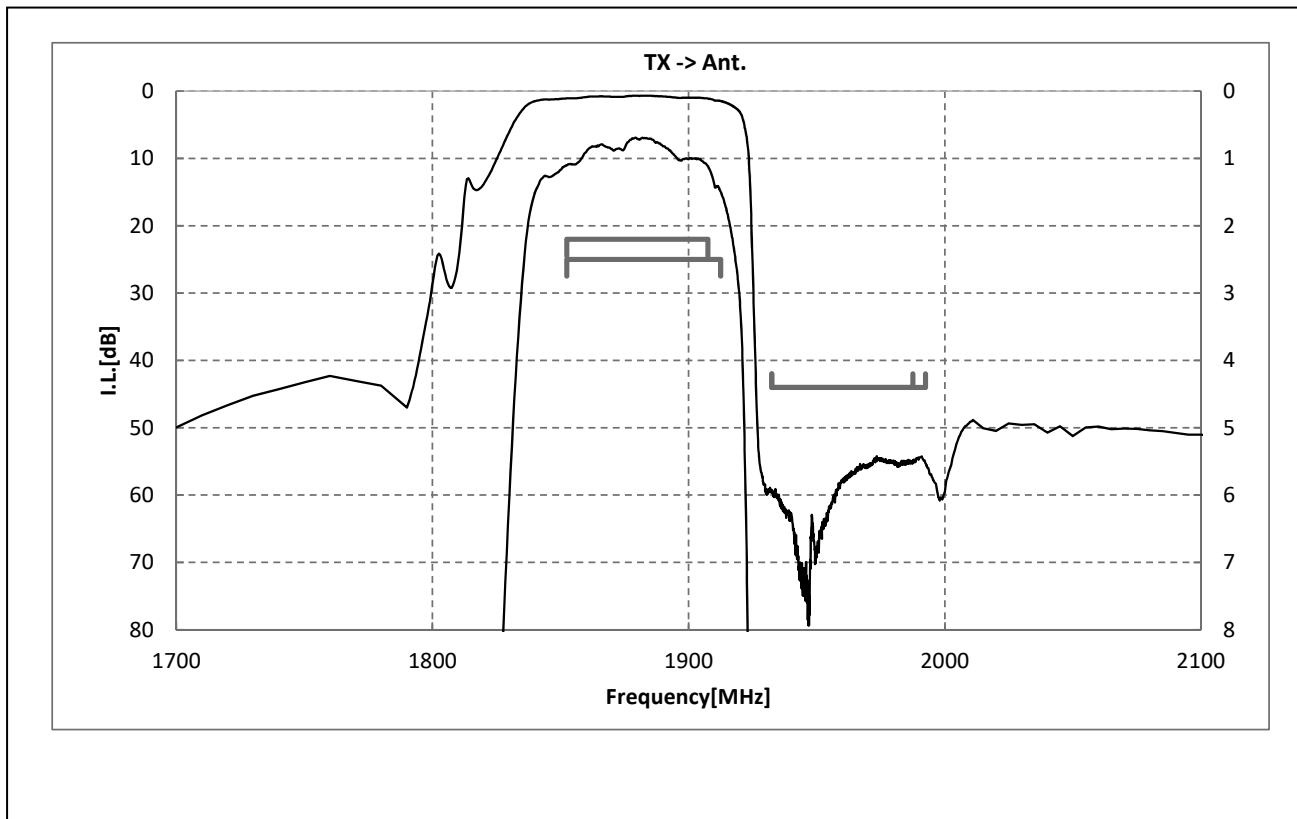
ANT. → RX		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
		Center Frequency		1962.5		
Insertion Loss	1932.5 to 1992.5 MHz		1.8	3.0	dB _{INT}	Any 4.5MHz, B25
	1932.5 to 1987.5 MHz		1.8	3.0	dB _{INT}	Any 4.5MHz, B2
Ripple Deviation	1930. to 1990. MHz		1.5	3.3	dB	B2
	1930. to 1995. MHz		1.5	3.3	dB	B25
VSWR	1930. to 1995. MHz		1.7	2.0		ANT., B25
	1930. to 1995. MHz		1.5	2.0		RX, B25
	1930. to 1990. MHz		1.7	2.0		ANT., B2
	1930. to 1990. MHz		1.5	2.0		RX, B2
Absolute Attenuation	10. to 1850. MHz	35	47		dB	
	80. MHz	50	95		dB	RX - TX
	699. to 716. MHz	40	61		dB	B12 TX
	777. to 787. MHz	40	59		dB	B13 TX
	814. to 849. MHz	40	59		dB	B26 TX
	1852.5 to 1907.5 MHz	45	52		dB _{INT}	Any 4.5MHz B2 TX
	1852.5 to 1912.5 MHz	45	52		dB _{INT}	Any 4.5MHz B25 TX
	2055. to 2080. MHz	25	51		dB	OoB Jammer
	2080. to 6000. MHz	28	40		dB	
	2305. to 2315. MHz	40	54		dB	B30 TX
	2400. to 2500. MHz	34	40		dB	ISM2.4
	4900. to 5950. MHz	40	58		dB	ISM5G
	5610. to 5845. MHz	40	59		dB	ISM5G with DL CA
	5790. to 5985. MHz	40	63		dB	3f
	6000. to 12750. MHz	15	38		dB	
	7720. to 7980. MHz	25	38		dB	4f
	9650. to 9975. MHz	20	38		dB	5f
	11580. to 11970. MHz	15	38		dB	6f

* Typical value at 25±2deg.C

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Electrical Characteristic

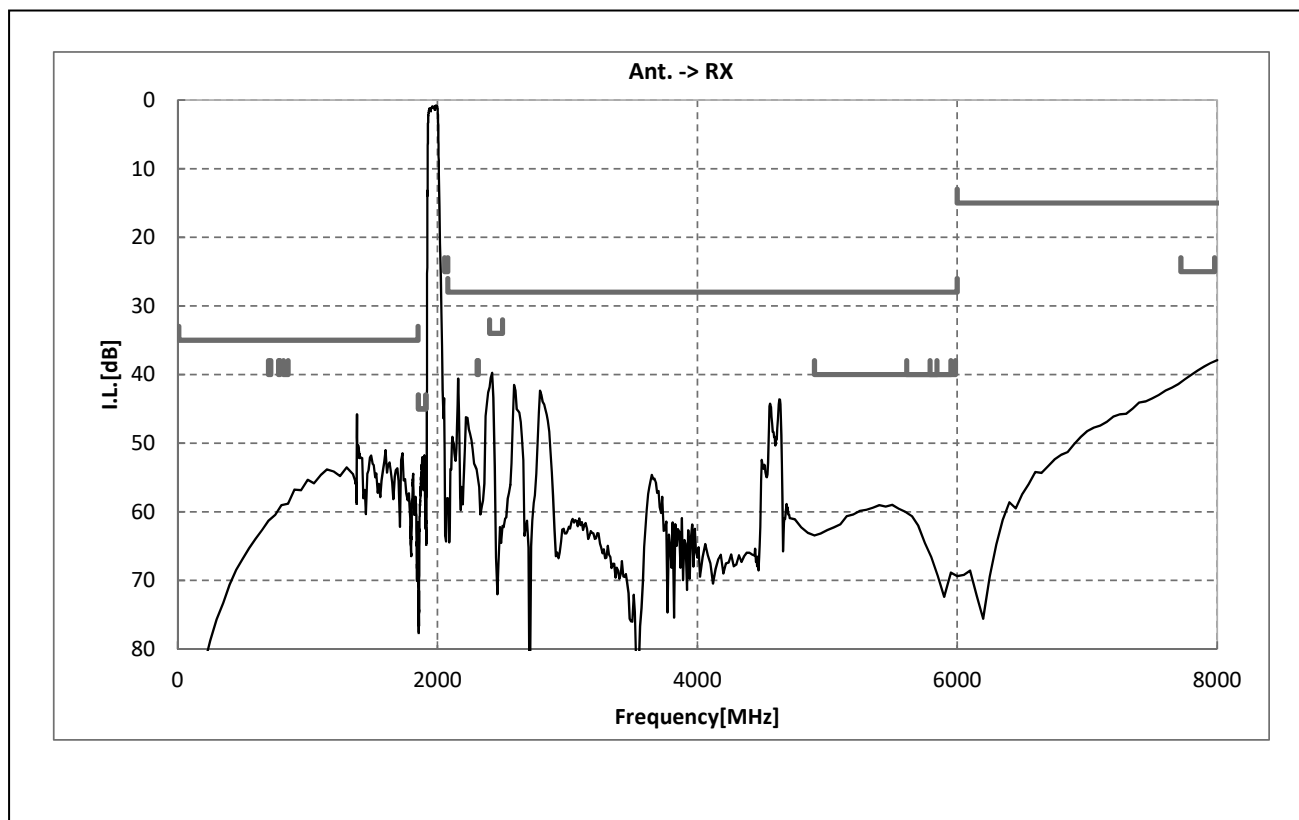
< TX→ANT. >



SAYPE1G88BA1G0A (Band25 / Unbalanced / LR / 1814)

Electrical Characteristic

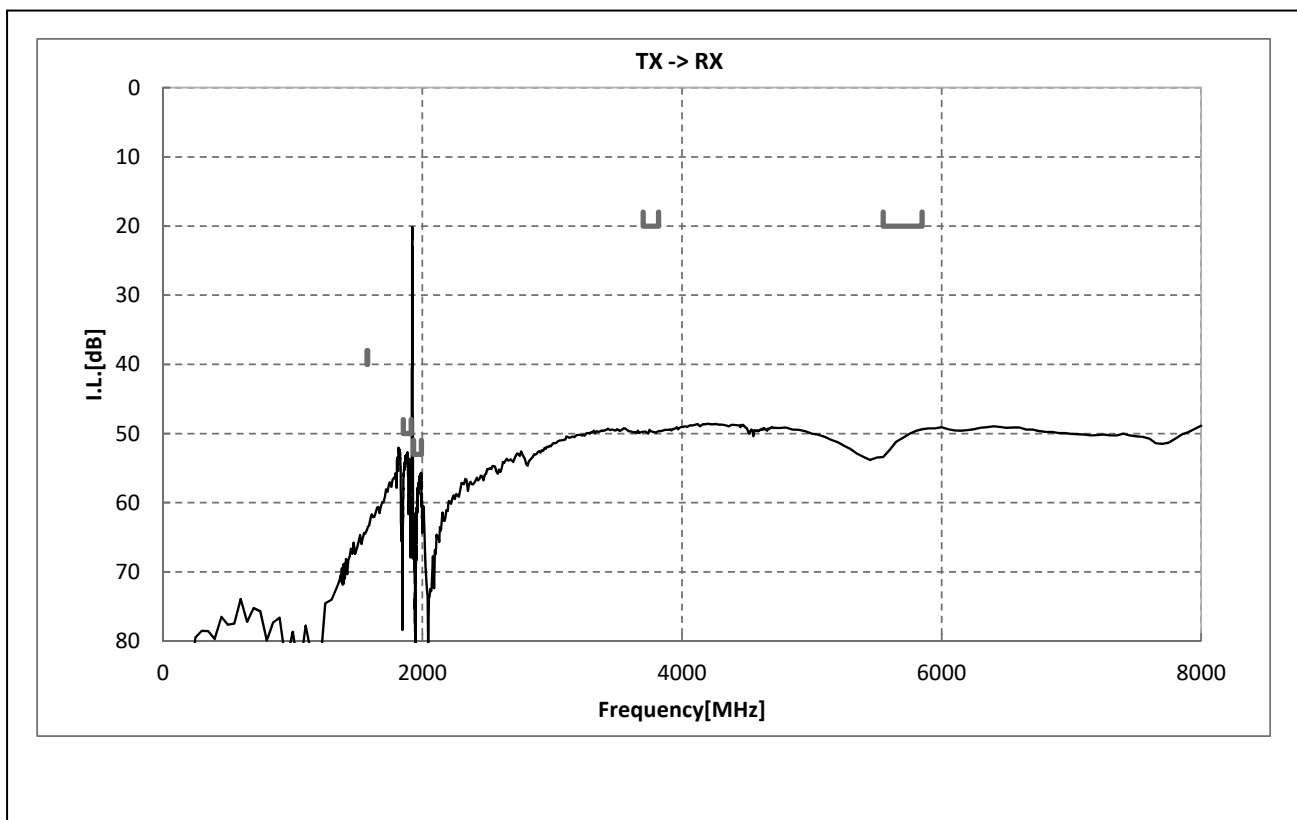
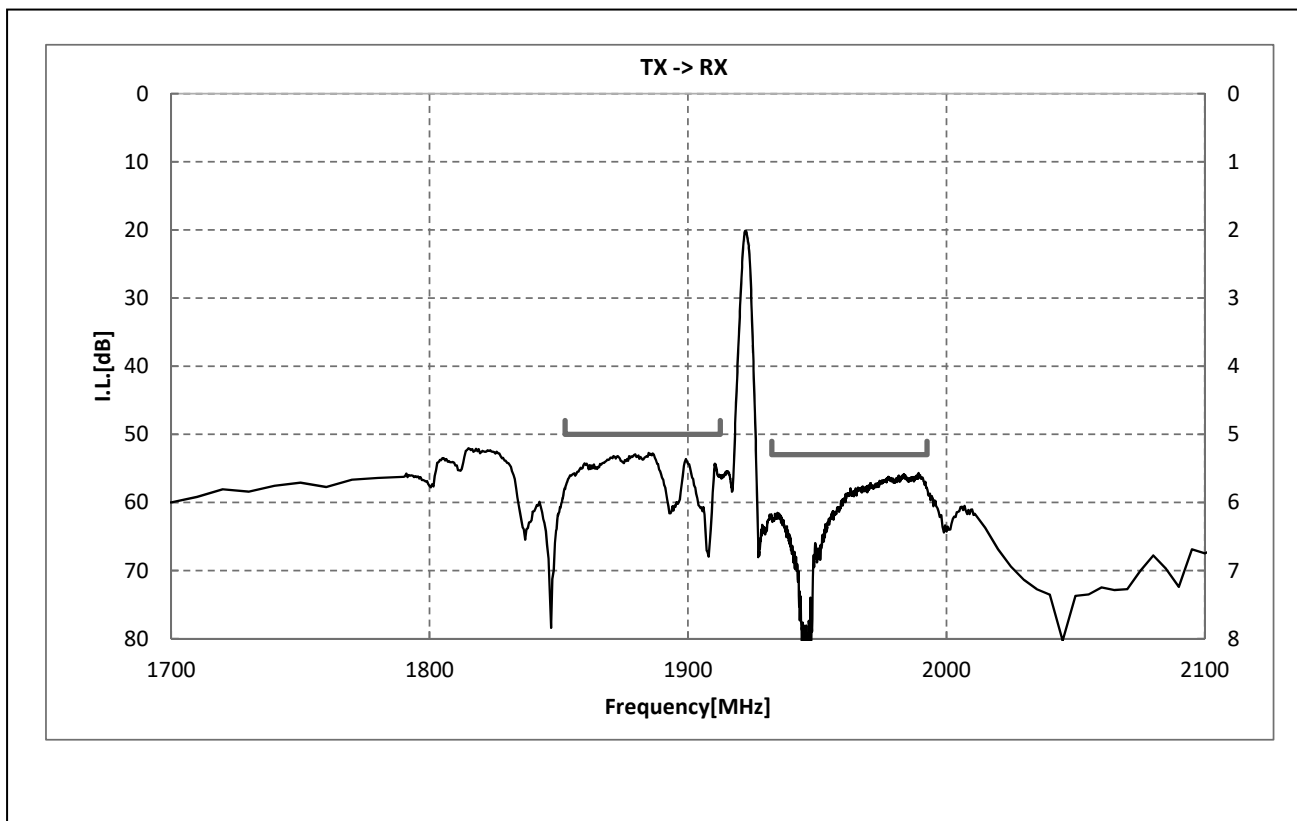
< ANT. → RX >



SAYPE1G88BA1G0A (Band25 / Unbalanced / LR / 1814)

Electrical Characteristic

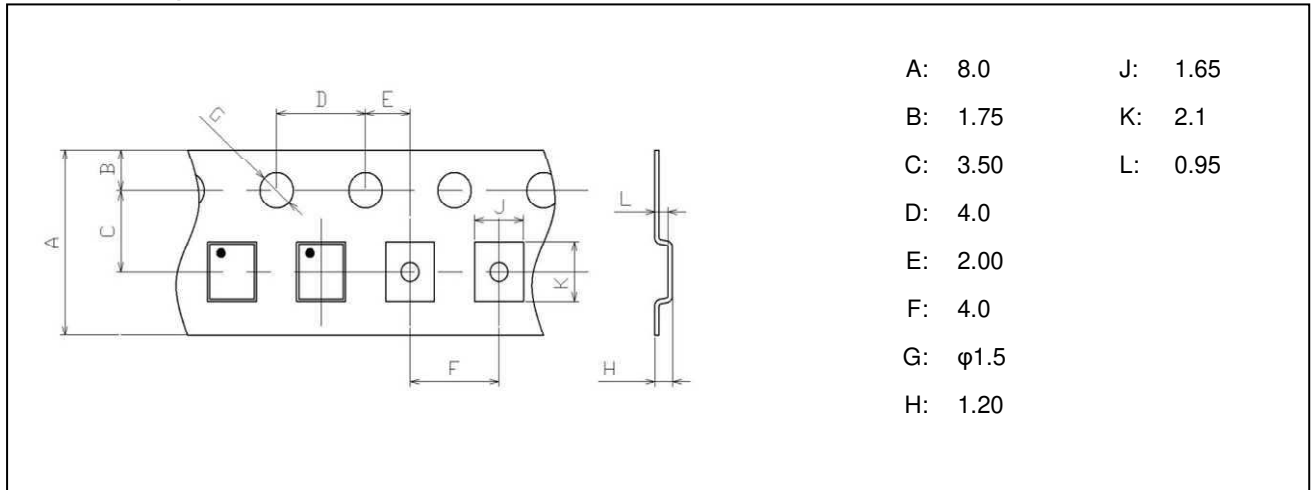
< TX→RX. >



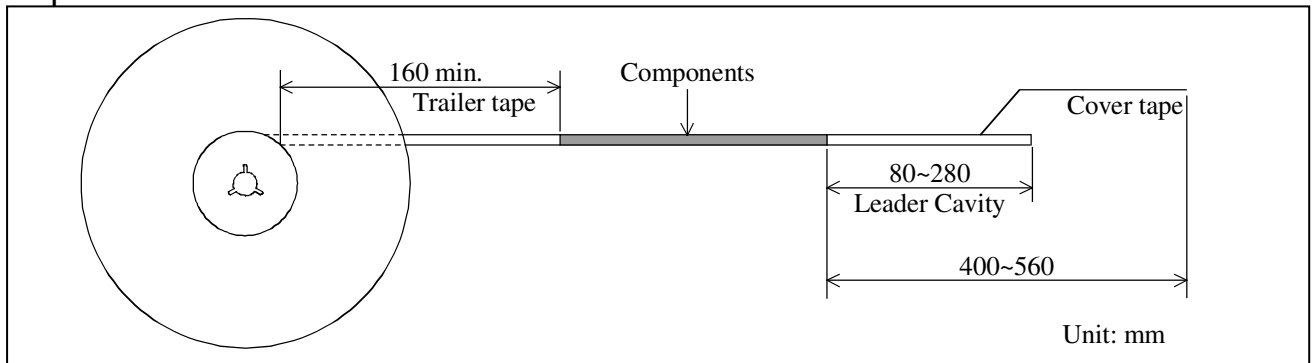
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Dimensions of Tape & Reel unit: mm

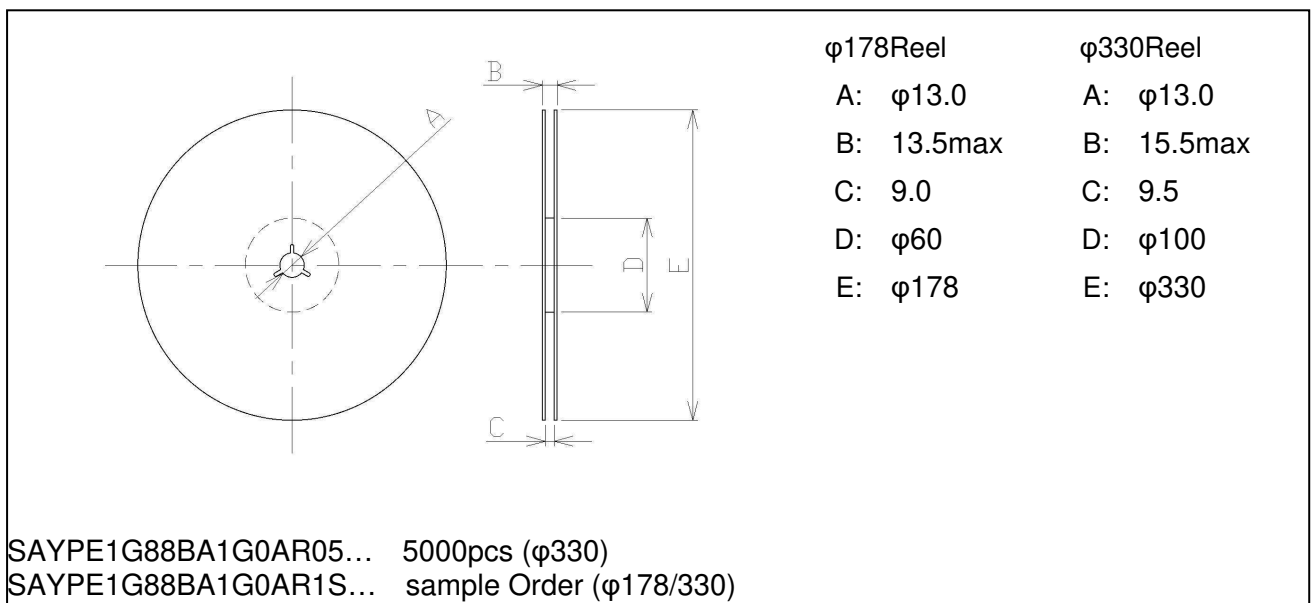
Carrier Tape



Tape



Reel



Marking Code

Table A: Month Code

2017 2021 2025	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	A	B	C	D	E	F	G	H	J	K	L	M
2018 2022 2026	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019 2023 2027	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	a	b	c̄	d	e	f	g	h	j	k	l	m
2020 2024 2028	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.

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.

Important Notice (2/2)

- 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.

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 surge voltage.

We do not warrant or represent that any license, either express or implied, is granted under any our patent right, copyright, mask work right, or our other intellectual property right relating to any combination, machine, or process in which our products or services are used. Information provided by us regarding third-party products or services does not constitute a license from us to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from us under our patents or other intellectual property.

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

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

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