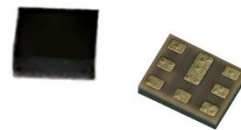


Data Sheet for SAW Components



Band8

Duplexer

Product ID: RBD0943G2S

Date: Feb. 7, 2023

Revision: 1.1

Features

- ◆ Package Size: 1.6 x 1.2 x 0.6max mm
- ◆ Single-Ended Input and Output
- ◆ Terminating Impedance: 50 Ω
- ◆ Moisture Sensitivity Level 3
- ◆ ESD Sensitive Device
- ◆ TC-SAW
- ◆ Low Insertion Loss

Electrical Specifications Band8 Duplexer

Temperature Range for Specification: -30 to +85 °C

Tx to Ant					Min.	Typ.	Max.	Unit
Insertion Loss								
	880.25	-	914.75	MHz	-	1.5	2.7	dB
	880.25	-	914.75	MHz	-	1.5	2.2 ^{*1}	dB
Pass Band Ripple								
	880	-	915	MHz	-	1.0	2.6	dB
	880	-	915	MHz	-	1.0	2.1 ^{*1}	dB
VSWR Tx								
	880	-	915	MHz	-	1.4	2.0	-
	880	-	915	MHz	-	1.4	2.0 ^{*1}	-
VSWR Ant								
	880	-	915	MHz	-	1.4	2.0	-
	880	-	915	MHz	-	1.4	2.0 ^{*1}	-
Absolute Attenuation								
	10	-	716	MHz	30	37	-	dB
	716	-	728	MHz	30	37	-	dB
	728	-	793	MHz	30	37	-	dB
	832	-	862	MHz	30	42	-	dB
	925.25	-	959.75	MHz	45	57	-	dB
	1559	-	1563	MHz	33	47	-	dB
	1565.42	-	1573.37	MHz	33	47	-	dB
	1573.37	-	1577.47	MHz	33	47	-	dB
	1577.47	-	1585.42	MHz	33	47	-	dB
	1597.55	-	1605.89	MHz	33	48	-	dB
	1710	-	1785	MHz	30	48	-	dB
	1760	-	1840	MHz	40	45	-	dB
	1840	-	1880	MHz	38	43	-	dB
	1920	-	1980	MHz	30	42	-	dB
	2110	-	2170	MHz	30	39	-	dB
	2400	-	2500	MHz	30	36	-	dB
	2434	-	2494	MHz	30	36	-	dB
	2620	-	2745	MHz	30	34	-	dB

3520	-	3660	MHz	20	30	-	dB
4400	-	4575	MHz	10	25	-	dB
4900	-	5950	MHz	10	26	-	dB
6160	-	6405	MHz	10	40	-	dB
7040	-	7320	MHz	10	43	-	dB
7920	-	8235	MHz	10	41	-	dB

*1: Room Temperature 25°C

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Electrical Specifications Band8 Duplexer

Temperature Range for Specification: -30 to +85 °C

Ant to Rx	Min.	Typ.	Max.	Unit
Insertion Loss				
925.25 - 959.75 MHz	-	1.7	2.9	dB
925.25 - 959.75 MHz	-	1.7	2.7 ^{*1}	dB
Pass Band Ripple				
925 - 960 MHz	-	1.0	2.5	dB
925 - 960 MHz	-	1.0	2.3 ^{*1}	dB
VSWR Rx				
925 - 960 MHz	-	1.5	2.0	-
925 - 960 MHz	-	1.5	2.0 ^{*1}	-
VSWR Ant				
925 - 960 MHz	-	1.5	2.0	-
925 - 960 MHz	-	1.5	2.0 ^{*1}	-
Absolute Attenuation				
10 - 880 MHz	45	52	-	dB
45 - 880 MHz	50	118	-	dB
835 - 870 MHz	40	52	-	dB
880.25 - 914.75 MHz	45	64	-	dB
902.5 - 910 MHz	45	65	-	dB
980 - 1045 MHz	20	27	-	dB
1427 - 1448 MHz	40	55	-	dB
1710 - 1785 MHz	40	63	-	dB
1805 - 1920 MHz	40	63	-	dB
1920 - 1980 MHz	40	64	-	dB
2400 - 2500 MHz	40	68	-	dB
2500 - 2570 MHz	40	67	-	dB
2685 - 2790 MHz	40	67	-	dB
2775 - 2880 MHz	40	67	-	dB
2880 - 3700 MHz	35	58	-	dB
3700 - 3840 MHz	40	56	-	dB
4625 - 4800 MHz	35	44	-	dB
4900 - 5950 MHz	25	43	-	dB

6475	-	6720	MHz	20	46	-	dB
7400	-	7680	MHz	15	50	-	dB

*1: Room Temperature 25℃

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Electrical Specifications Band8 Duplexer

Temperature Range for Specification: -30 to +85 °C

Tx to Rx				Min.	Typ.	Max.	Unit
Isolation							
	880.25	-	914.75 MHz	55	62	-	dB
	925.25	-	959.75 MHz	53	58	-	dB

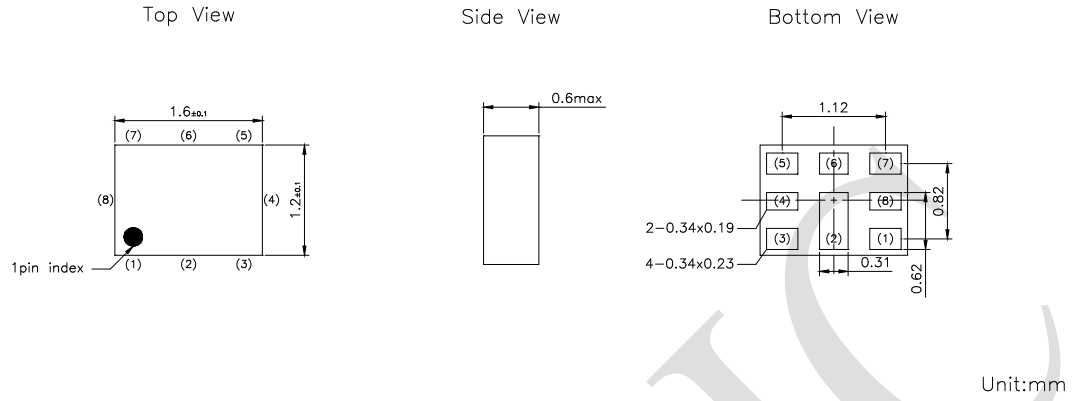
Maximum Ratings

Item	Rating	Condition / Remark
Storage Temperature	-40 to +85 °C	
DC Voltage	5 V	+25 °C
Input power	+30 dBm	LTE , +55 °C , 3000 h

Recommended Operating Conditions

Item	Rating	Condition / Remark
Operating Temperature, T _{CASE}	-30 to +85 °C	

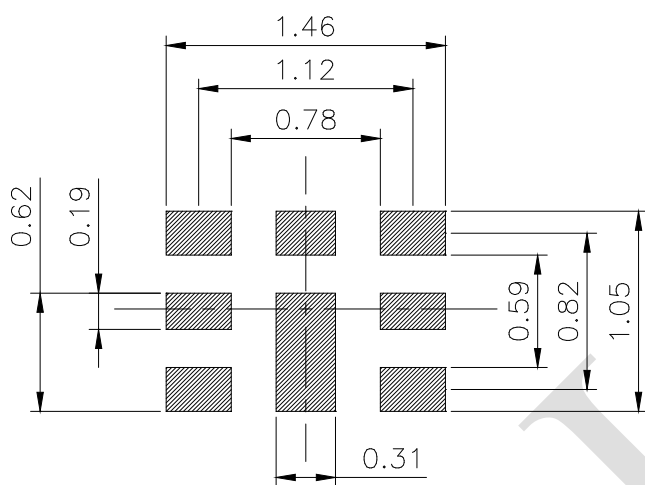
Package Information



Pin Configuration

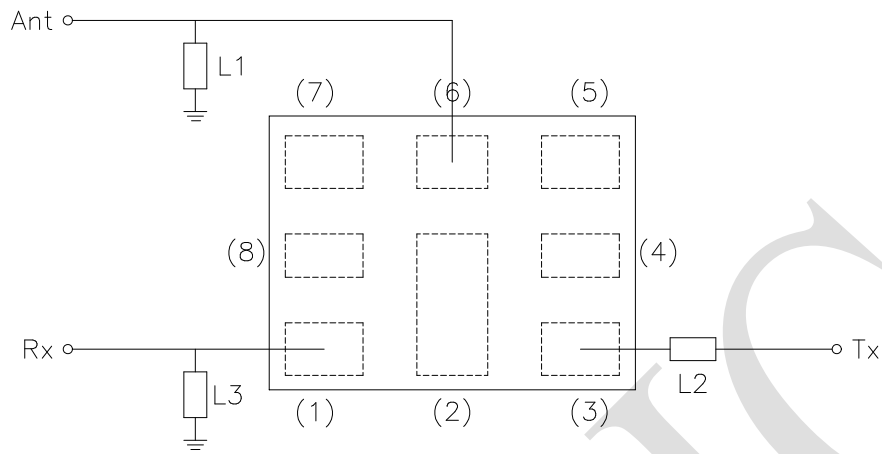
1 : Rx
 3 : Tx
 6 : Ant
 Other : GND

Land Pattern



Unit:mm

Application Circuit



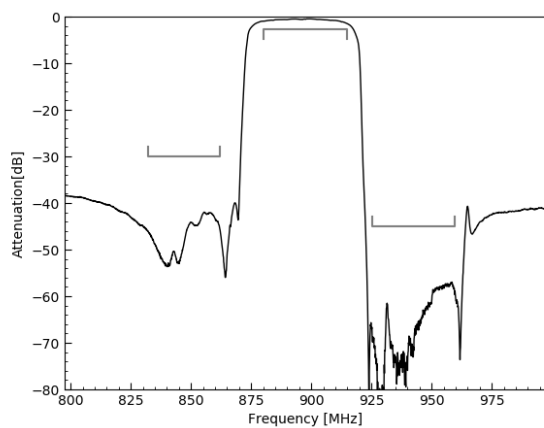
Port	Terminating Z	Matching Component
Ant	50 Ω	L1 : 10nH (Ideal inductor)
Tx	50 Ω	L2 : 4.7nH (Ideal inductor)
Rx	50 Ω	L3 : 40nH (Ideal inductor)

For ESD protection, external shunt inductor at all ports is recommended.

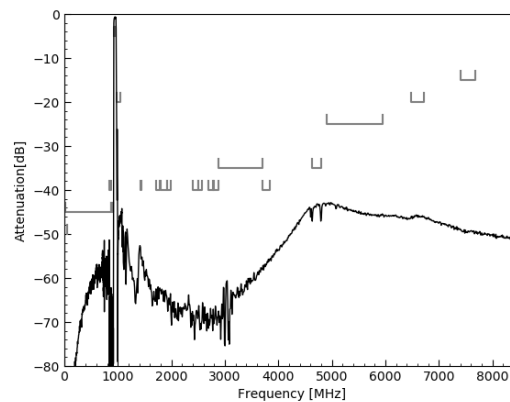
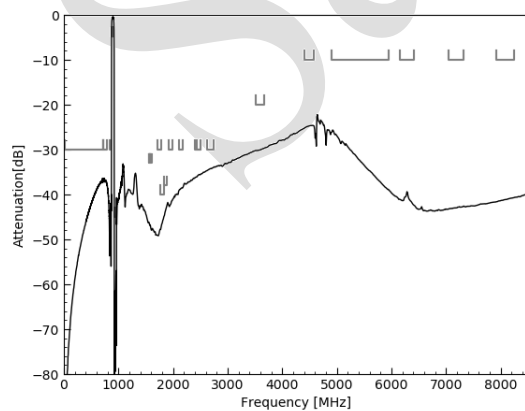
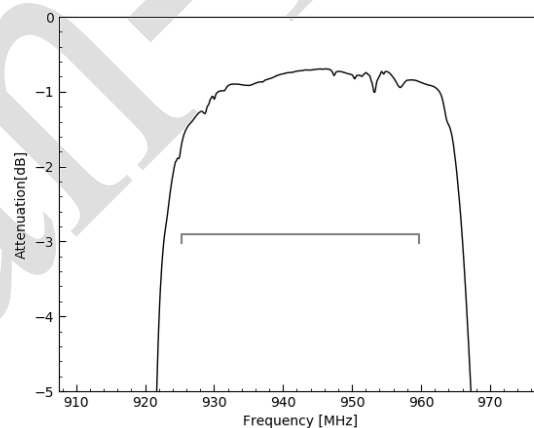
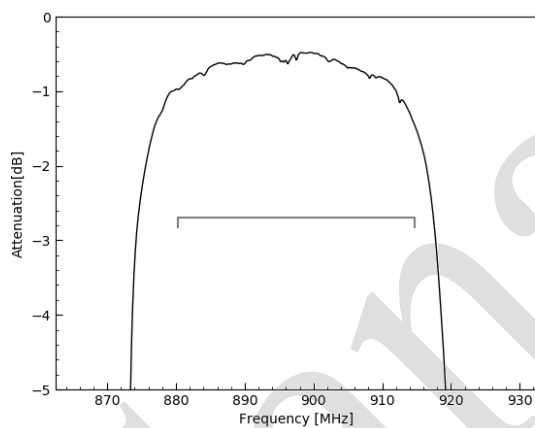
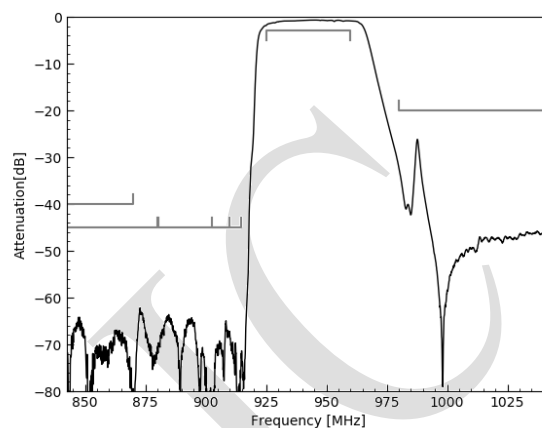
Electrical Characteristics

Band8 Duplexer

Tx to Ant



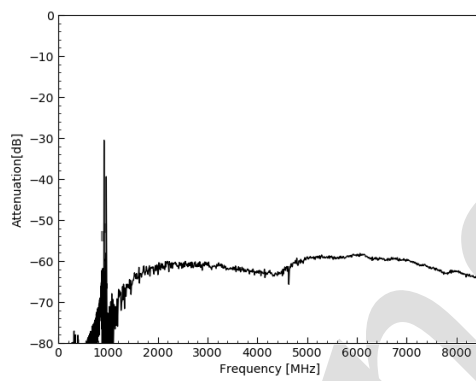
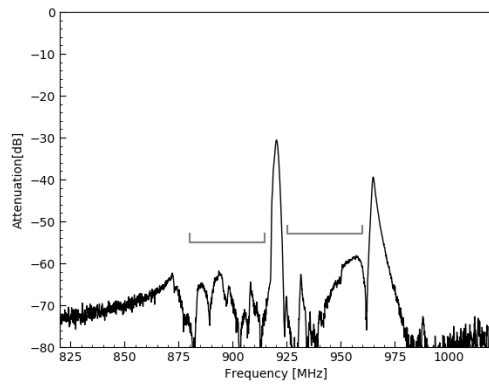
Ant to Rx



Electrical Characteristics

Band8 Duplexer

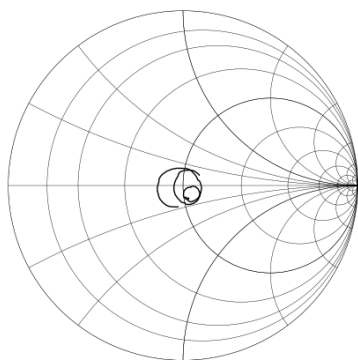
Tx to Rx



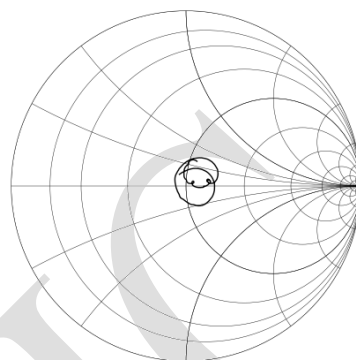
Electrical Characteristics

Band8 Duplexer

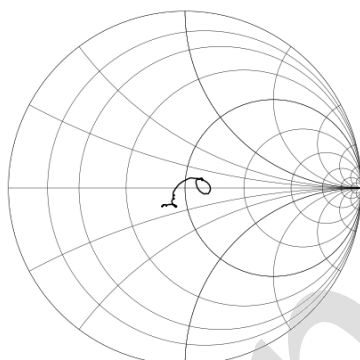
Ant Impedance (Tx band)



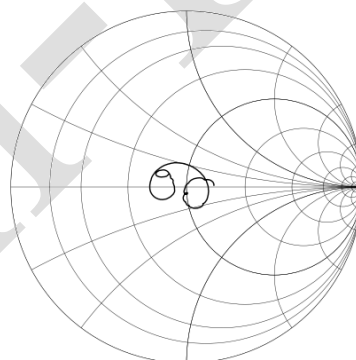
Ant Impedance (Rx band)



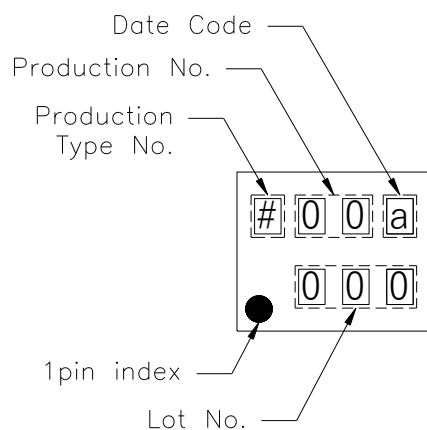
Tx Impedance



Rx Impedance



Marking Information



Production type No. (S: Sample, P: Production)

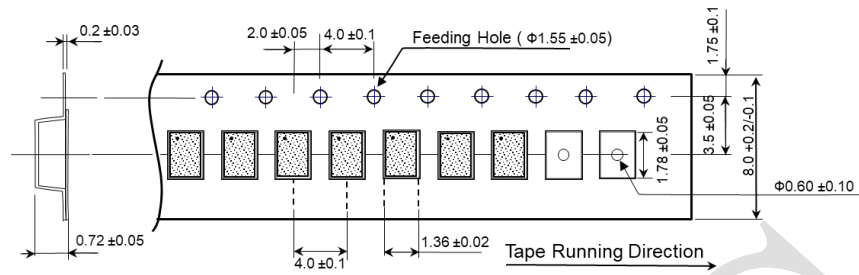
Product No. : 2S

Lot No. (Indicated by 0 ~ 9 or A to Z and a to z, except I, O, i, o and l)

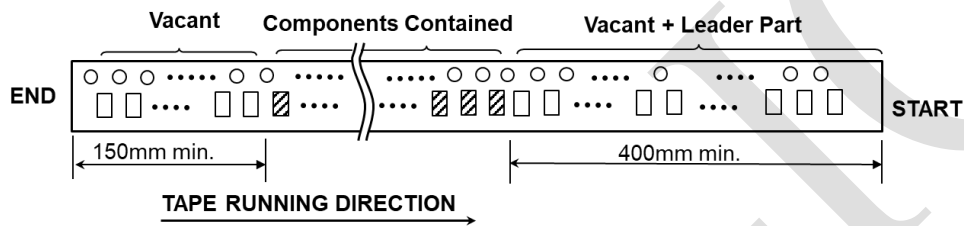
Product date code :

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	a	b	c	d	e	f	g	h	j	k	l	m
2023	n	p	q	r	s	t	u	v	w	x	y	z
2024	A	B	C	D	E	F	G	H	J	K	L	M
2025	N	P	Q	R	S	T	U	V	W	X	Y	Z

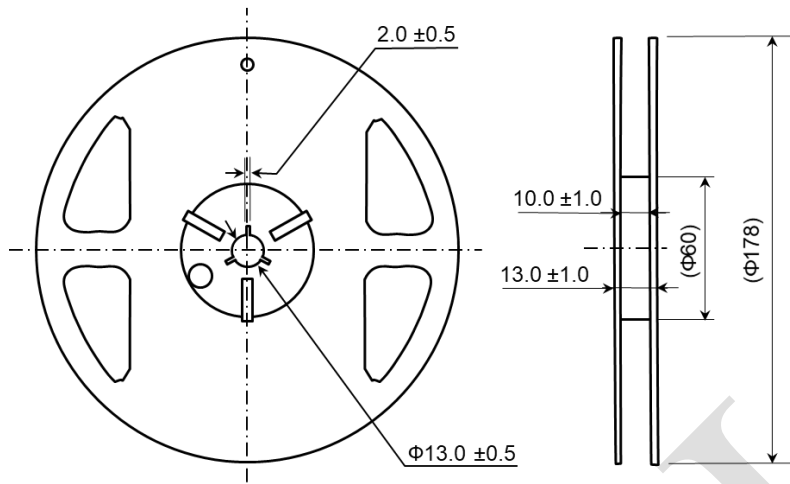
Tape Information



UNIT: mm

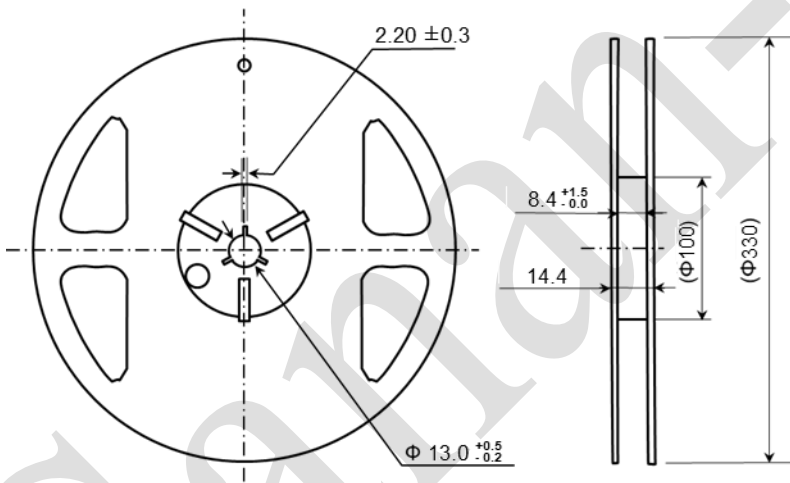


Reel Information



$\Phi 178$ Reel Dimension

UNIT: mm



$\Phi 330$ Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
RBD0943G2S-SA	Bulk (few pieces)
RBD0943G2S-MB	Tape & Reel 3,000 pcs/reel
RBD0943G2S-MC	Tape & Reel 10,000 pcs/reel
RBD0943G2S-SZ	EVB

Revision History

Revision	Date	Description
0.1	Jun. 9, 2022	● Initial release
1.0	Nov. 15, 2022	● Updated specification
1.1	Feb. 7, 2023	● Added room temperature spec

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