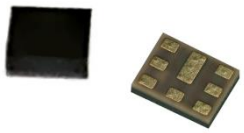
Data Sheet for SAW Components



Band8

Duplexer

Product ID: RBD0943G4G

Date: Jun. 13, 2023

Revision: 0.1 Preliminary

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	dB*1
Pass Band Ripple							
880	-	915	MHz	-	1.0	2.6	dB
880	-	915	MHz	-	1.0	2.1	dB*1
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	36	-	dB
716	-	728	MHz	30	36	-	dB
728	-	793	MHz	30	36	-	dB
832	-	862	MHz	30	43	-	dB
925.25	-	959.75	MHz	45	57	-	dB
1559	-	1563	MHz	33	41	-	dB
1565.42	-	1573.37	MHz	33	41	-	dB
1573.37	-	1577.47	MHz	33	41	-	dB
1577.47	-	1585.42	MHz	33	41	-	dB
1597.55	-	1605.89	MHz	33	41	-	dB
1710	-	1785	MHz	30	45	-	dB
1760	-	1840	MHz	40	47	-	dB
1840	-	1880	MHz	38	48	-	dB
1920	-	1980	MHz	30	49	-	dB
2110	-	2170	MHz	30	45	-	dB
2400	-	2500	MHz	30	40	-	dB
2434	-	2494	MHz	30	40	-	dB
2620	-	2745	MHz	30	38	-	dB

3520	-	3660	MHz	20	34	-	dB
4400	-	4575	MHz	10	30	-	dB
4900	-	5950	MHz	10	28	-	dB
6160	-	6405	MHz	10	37	-	dB
7040	-	7320	MHz	10	39	-	dB
7920	-	8235	MHz	10	37	-	dB

*1: Room Temperature 25℃

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		-	1.9	2.9	dB
925.25	-	959.75	MHz		-	1.9	2.7	dB*1
Pass Band Ripple								
925	-	960	MHz		-	1.2	2.5	dB
925	-	960	MHz		-	1.2	2.3	dB*1
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	51	-	dB
		45	MHz		50	114	-	dB
835	-	870	MHz		40	51	-	dB
880.25	-	914.75	MHz		45	62	-	dB
902.5	-	910	MHz		45	67	-	dB
980	-	1045	MHz		20	24	-	dB
1427	-	1448	MHz		40	53	-	dB
1710	-	1785	MHz		40	60	-	dB
1805	-	1920	MHz		40	60	-	dB
1920	-	1980	MHz		40	62	-	dB
2400	-	2500	MHz		40	64	-	dB
2500	-	2570	MHz		40	65	-	dB
2685	-	2790	MHz		40	64	-	dB
2775	-	2880	MHz		40	64	-	dB
2880	-	3700	MHz		35	58	-	dB
3700	-	3840	MHz		40	57	-	dB
4625	-	4800	MHz		35	45	-	dB
4900	-	5950	MHz		25	43	-	dB

	6475	-	6720	MHz	20	46	-	dB
	7400	-	7680	MHz	15	47	-	dB

*1: Room Temperature 25℃

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	61	-	dB
	925.25	-	959.75	MHz	53	58	-	dB

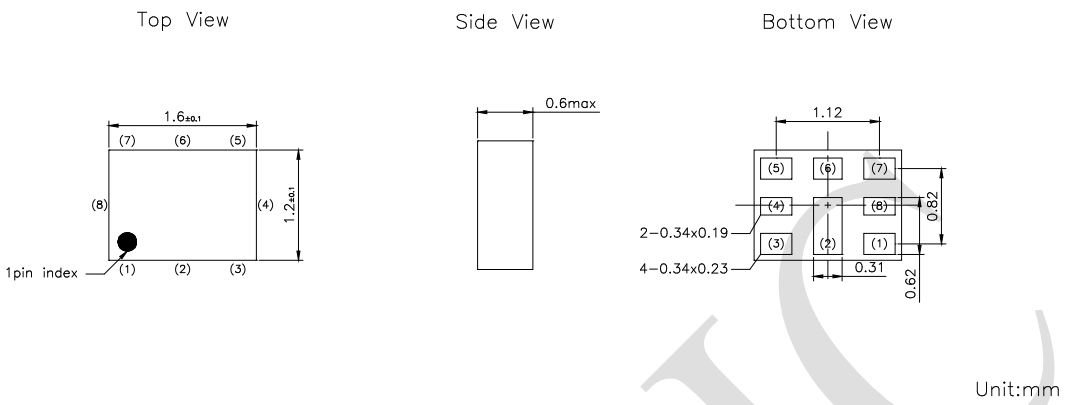
Maximum Ratings

Item	Rating	Condition / Remark
Storage Temperature	-40 to +85 °C	
DC Voltage	5 V	+25 °C
Input power	+29 dBm	LTE , +55 °C , 5000 h

Recommended Operating Conditions

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

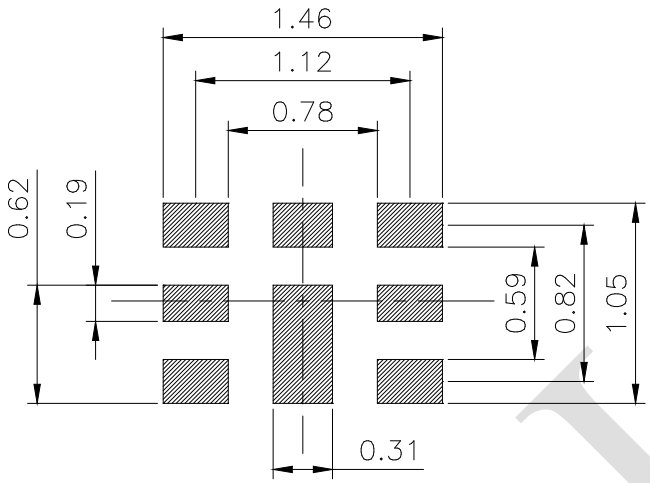
Package Information



Unit:mm

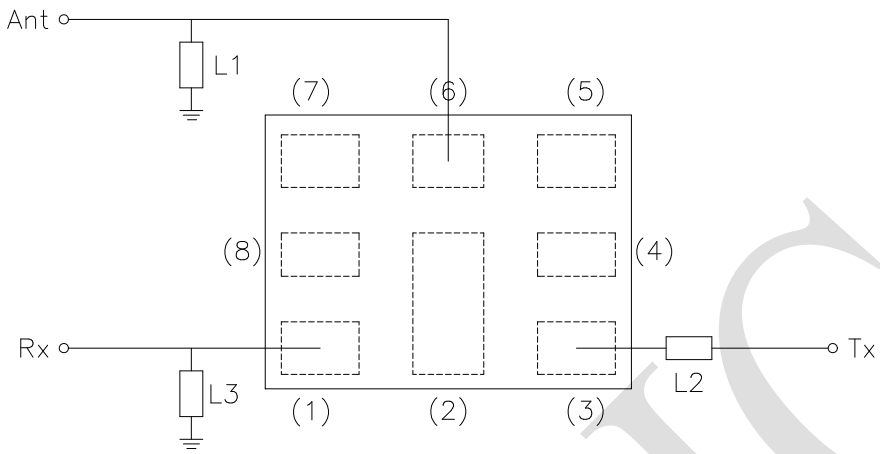
Pin Configuration		
1	:	Rx
3		Tx
6	:	Ant
Other	:	GND

Land Pattern



Unit:mm

Application Circuit

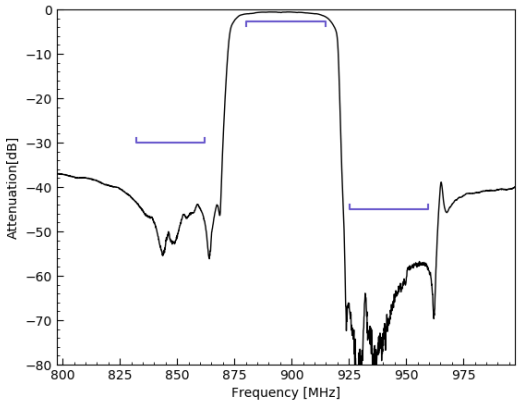


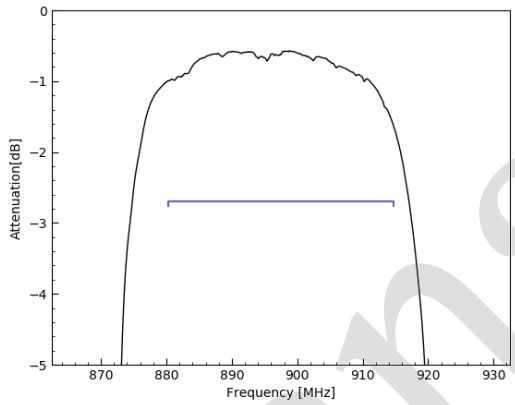
Port	Terminating Z	Matching Component
Ant	50 Ω	L1 : 10nH (Ideal inductor)
Tx	50 Ω	L2 : 4.7nH (Ideal inductor)
Rx	50 Ω	L3 : 40nH (Ideal inductor)

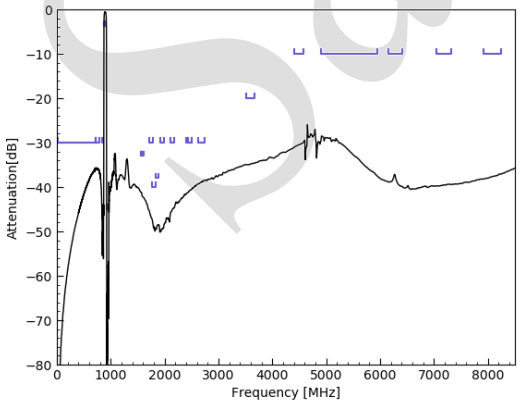
For ESD protection, external shunt inductor at all ports is recommended.

Electrical Characteristics Band8 Duplexer

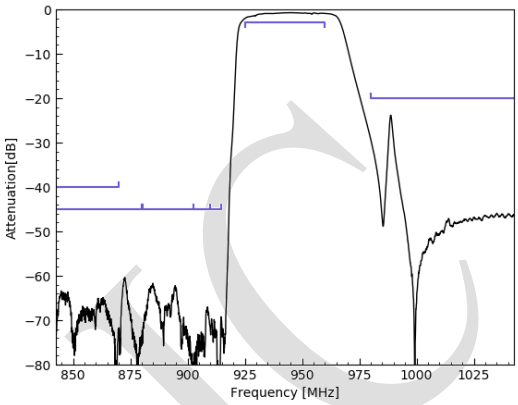
Tx to Ant

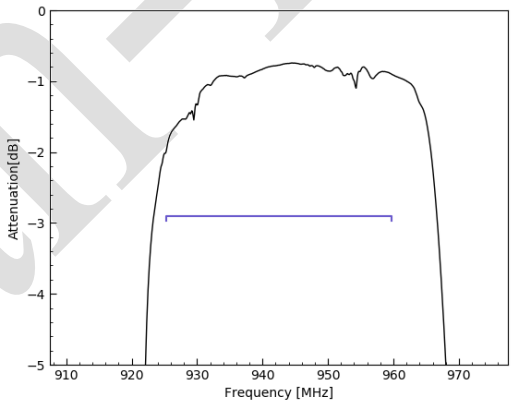


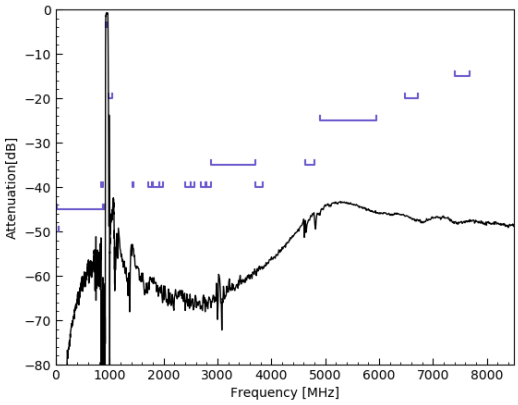




Ant to Rx

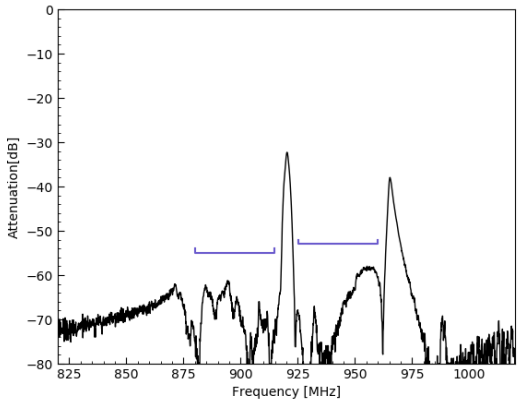


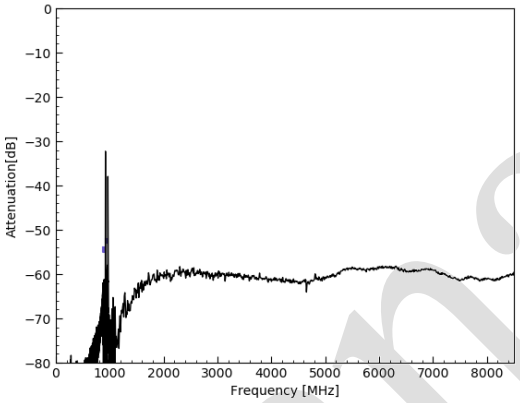




Electrical Characteristics Band8 Duplexer

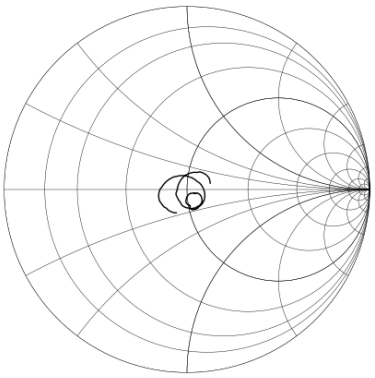
Tx to Rx



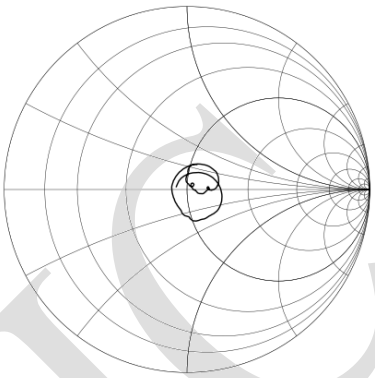


Electrical Characteristics Band8 Duplexer

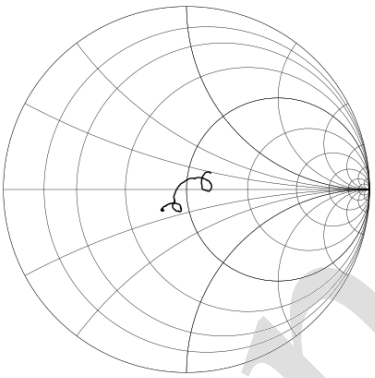
Ant Impedance (Tx band)



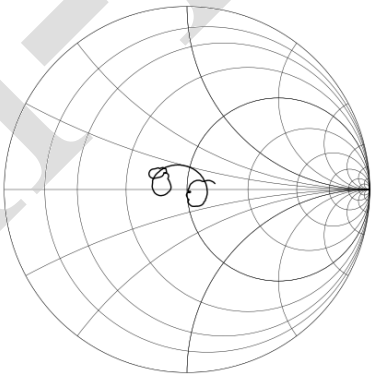
Ant Impedance (Rx band)



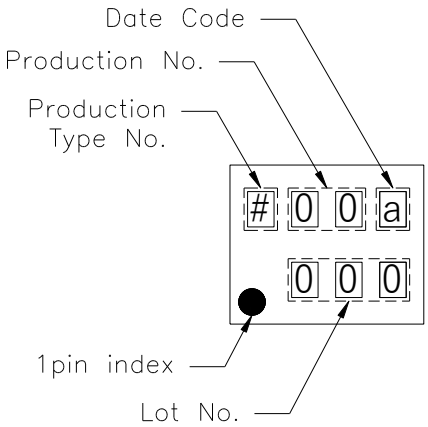
Tx Impedance



Rx Impedance



Marking Information



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

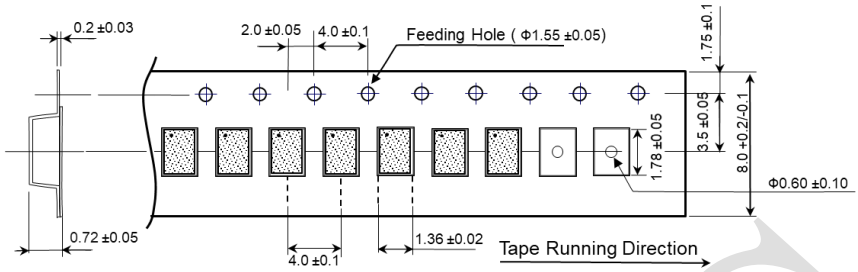
Product No. : 4G

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

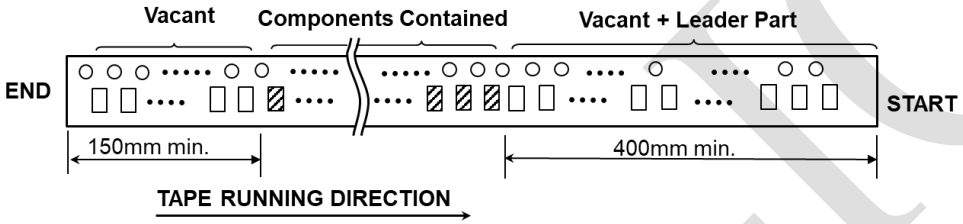
Product date code :

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
2026	a	b	c	d	e	f	g	h	j	k	l	m

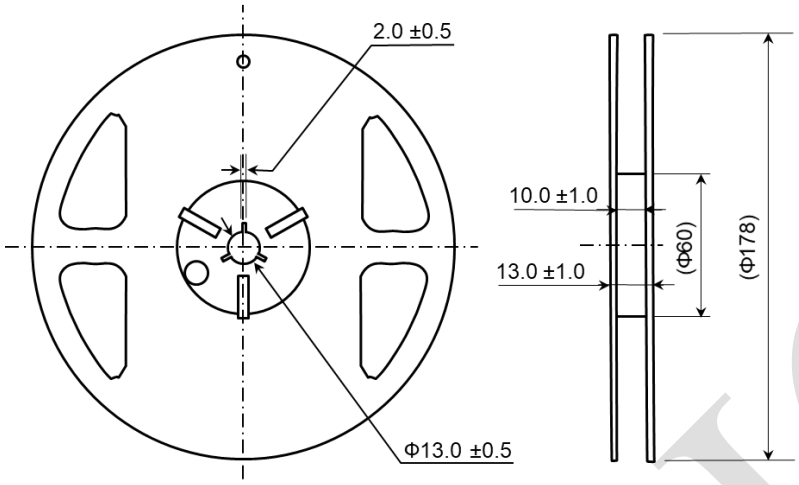
Tape Information



UNIT: mm

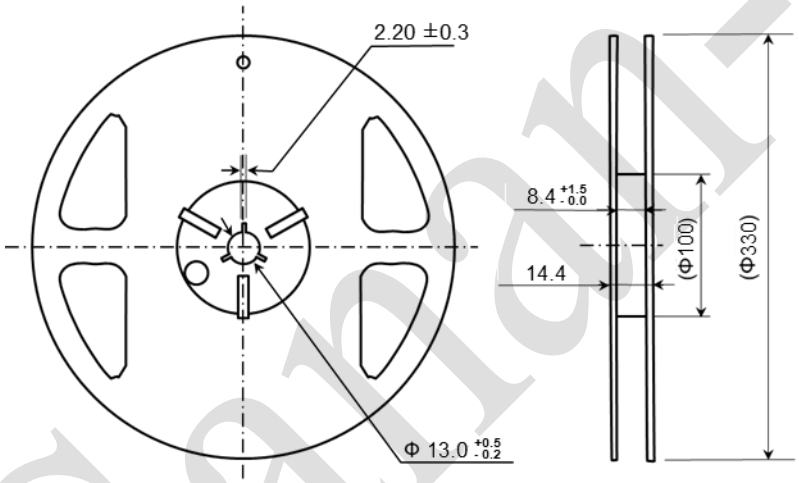


Reel Information



Φ178 Reel Dimension

UNIT: mm



Φ330 Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
RBD0943G4G-SA	Bulk (few pieces)
RBD0943G4G-MB	Tape & Reel 3,000 pcs/reel
RBD0943G4G-MC	Tape & Reel 10,000 pcs/reel
RBD0943G4G-SZ	EVB

Revision History

Revision	Date	Description
0.1	Jun. 13, 2023	● Initial release

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