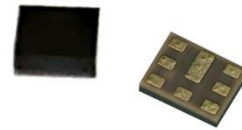


Data Sheet for SAW Components



Band8

Duplexer

Product ID: RAD0943B0Q

Date: Mar. 17, 2022

Revision: 3.1

Features

- ◆ Package Size: 1.8 x 1.4 x 0.55max 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	-	1.7	2.7	dB
Pass Band Ripple								
	880	-	915	MHz	-	1.2	2.6	dB
VSWR Tx								
	880	-	915	MHz	-	1.6	2.0	-
VSWR Ant								
	880	-	915	MHz	-	1.6	2.0	-
Absolute Attenuation								
	10	-	716	MHz	30	37	-	dB
	716	-	728	MHz	30	37	-	dB
	728	-	793	MHz	30	37	-	dB
	832	-	862	MHz	30	41	-	dB
	925.25	-	959.75	MHz	45	57	-	dB
	1559	-	1563	MHz	33	43	-	dB
	1565.42	-	1573.37	MHz	33	43	-	dB
	1573.37	-	1577.47	MHz	33	43	-	dB
	1577.47	-	1585.42	MHz	33	43	-	dB
	1597.55	-	1605.89	MHz	33	43	-	dB
	1710	-	1785	MHz	30	46	-	dB
	1760	-	1840	MHz	40	48	-	dB
	1840	-	1880	MHz	38	49	-	dB
	1920	-	1980	MHz	30	49	-	dB
	2110	-	2170	MHz	30	45	-	dB
	2400	-	2500	MHz	30	39	-	dB
	2434	-	2494	MHz	30	39	-	dB
	2620	-	2745	MHz	30	33	-	dB
	3520	-	3660	MHz	10	28	-	dB
	4400	-	4575	MHz	5	22	-	dB
	4900	-	5950	MHz	2	16	-	dB
	6160	-	6405	MHz	2	14	-	dB
	7040	-	7320	MHz	5	20	-	dB

7920	-	8235	MHz	2	27	-	dB
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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	-	2.0	2.9	dB
Pass Band Ripple				
925 - 960 MHz	-	1.4	2.8	dB
VSWR Rx				
925 - 960 MHz	-	1.6	2.0	-
VSWR Ant				
925 - 960 MHz	-	1.7	2.0	-
Absolute Attenuation				
10 - 880 MHz	45	55	-	dB
45 - 880 MHz	50	105	-	dB
835 - 870 MHz	40	55	-	dB
880.25 - 914.75 MHz	45	58	-	dB
902.5 - 910 MHz	45	58	-	dB
980 - 1045 MHz	23	30	-	dB
1427 - 1448 MHz	40	53	-	dB
1710 - 1785 MHz	40	62	-	dB
1805 - 1920 MHz	40	62	-	dB
1920 - 1980 MHz	40	61	-	dB
2400 - 2500 MHz	40	58	-	dB
2500 - 2570 MHz	40	57	-	dB
2685 - 2790 MHz	40	55	-	dB
2775 - 2880 MHz	40	55	-	dB
2880 - 3700 MHz	35	50	-	dB
3700 - 3840 MHz	40	55	-	dB
4625 - 4800 MHz	35	53	-	dB
4900 - 5950 MHz	25	37	-	dB
6475 - 6720 MHz	20	33	-	dB
7400 - 7680 MHz	15	36	-	dB

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	59	-	dB
	925.25	-	959.75 MHz	53	57	-	dB

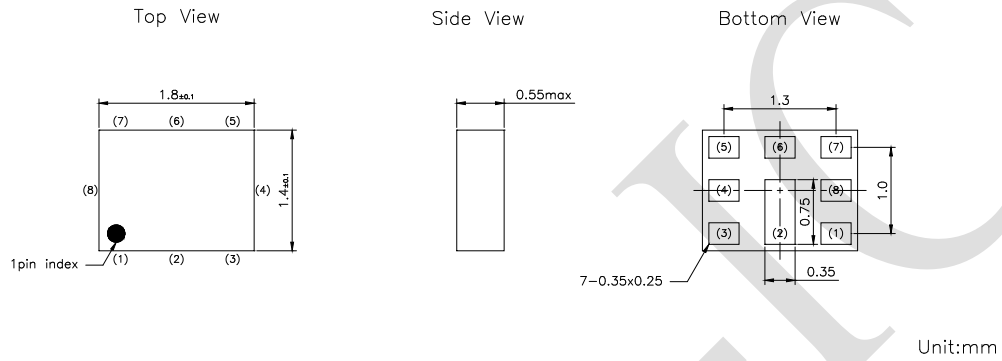
Maximum Ratings

Item	Rating	Condition / Remark
Storage Temperature	-40 to +85 °C	
DC Voltage	5 V	+25 °C
Input power	+30 dBm	LTE , +55 °C , 2000 h

Recommended Operating Conditions

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

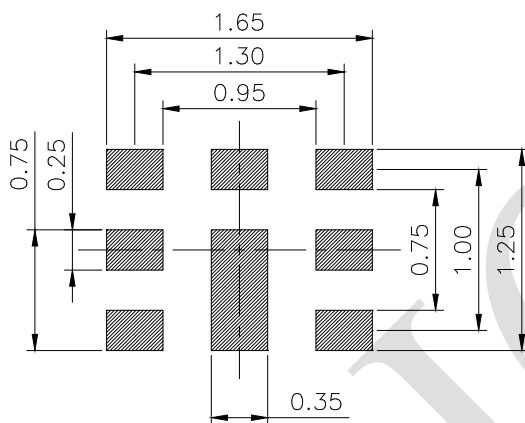
Package Information



Pin Configuration

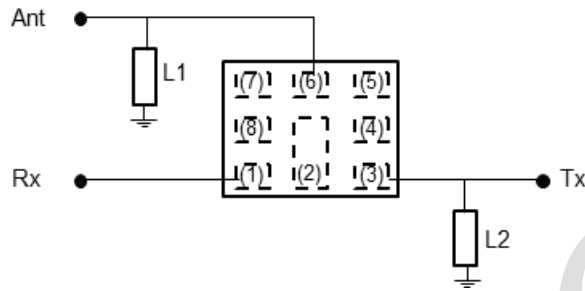
1	:	Rx
3	:	Tx
6	:	Ant
Other	:	GND

Land Pattern



Unit:mm

Application Circuit



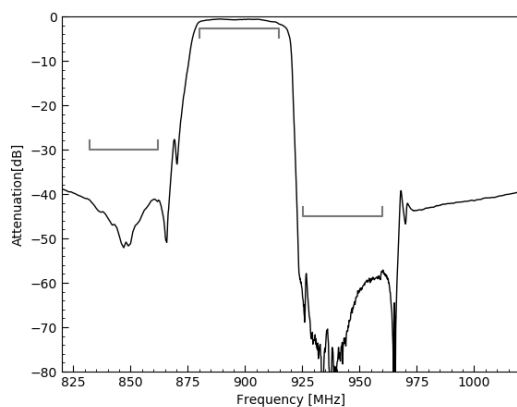
Port	Terminating Z	Matching Component
Ant	50 Ω	L1 : 8.2nH (Ideal inductor)
Tx	50 Ω	L2 : 18nH (Ideal inductor)
Rx	50 Ω	

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

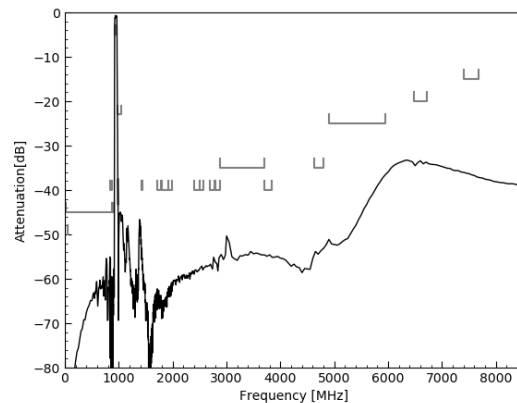
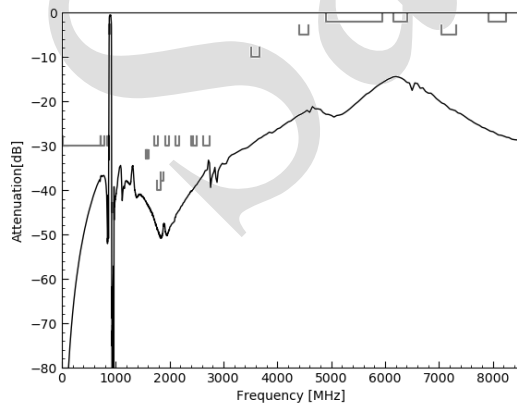
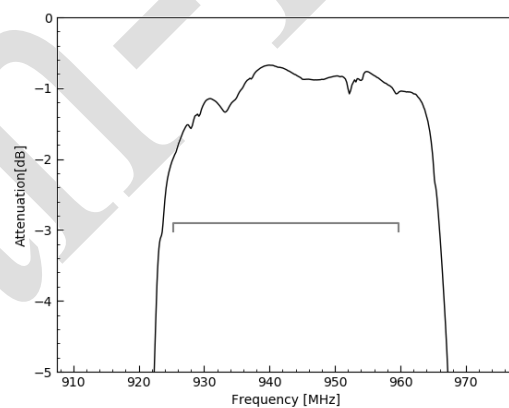
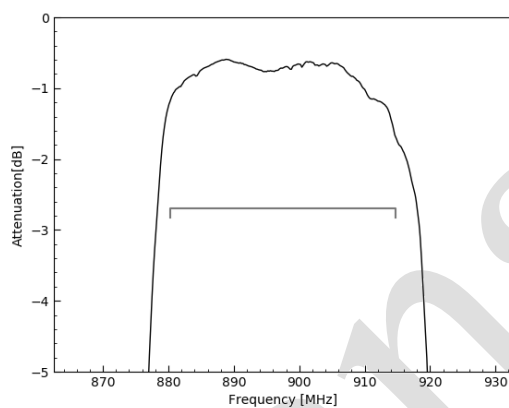
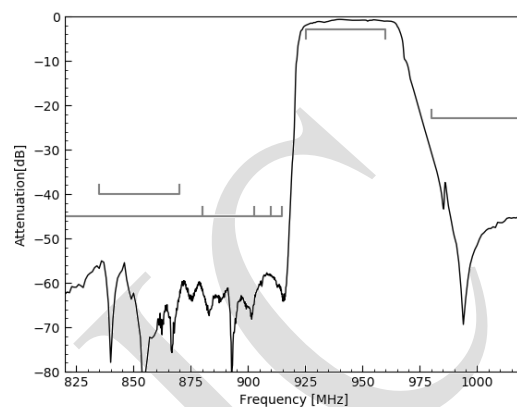
Electrical Characteristics

Band8 Duplexer

Tx to Ant



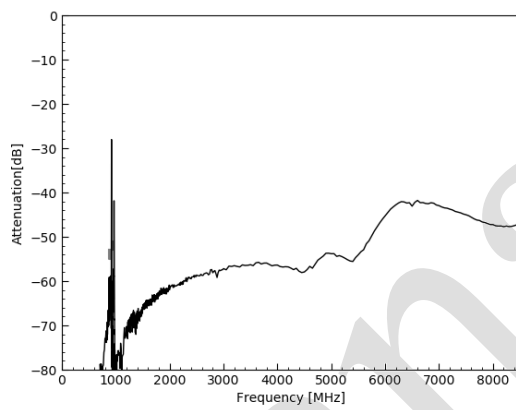
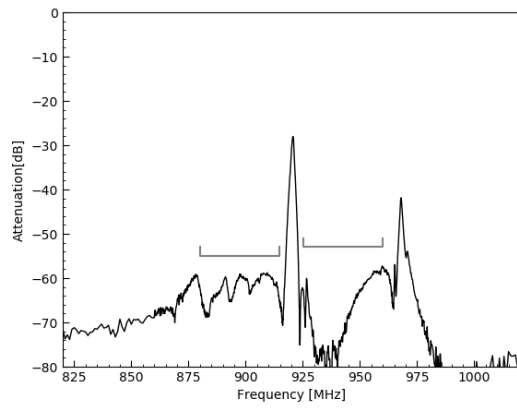
Ant to Rx



Electrical Characteristics

Band8 Duplexer

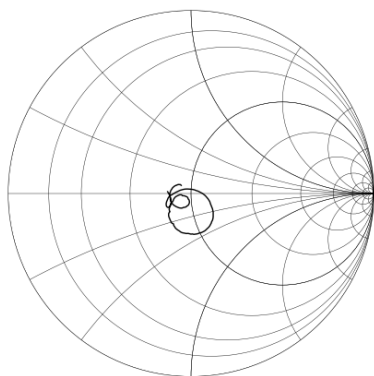
Tx to Rx



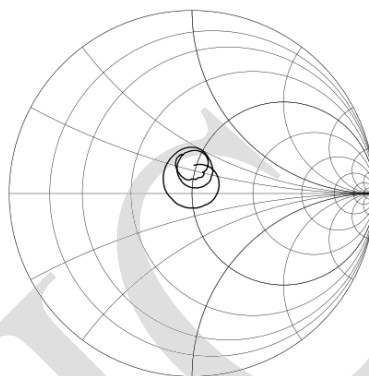
Electrical Characteristics

Band8 Duplexer

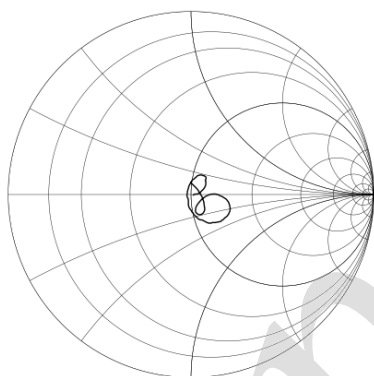
Ant Impedance (Tx band)



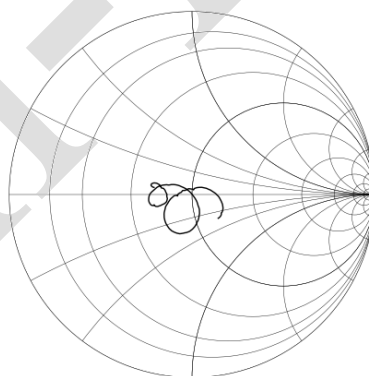
Ant Impedance (Rx band)



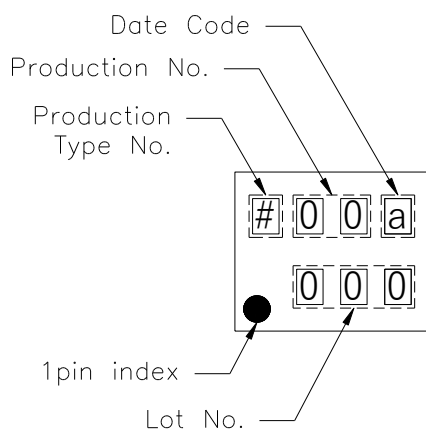
Tx Impedance



Rx Impedance



Marking Information



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

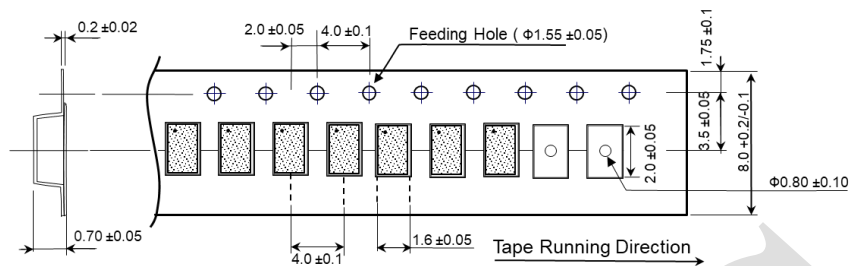
Product No. : 0Q

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

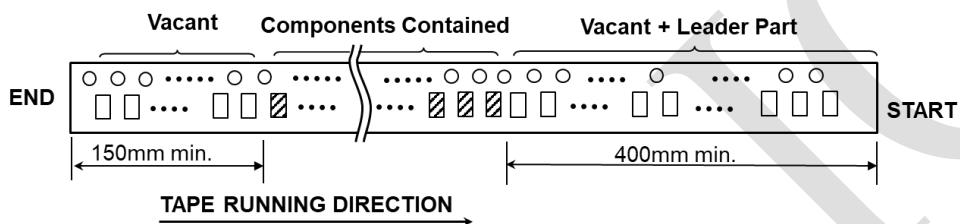
Product date code :

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

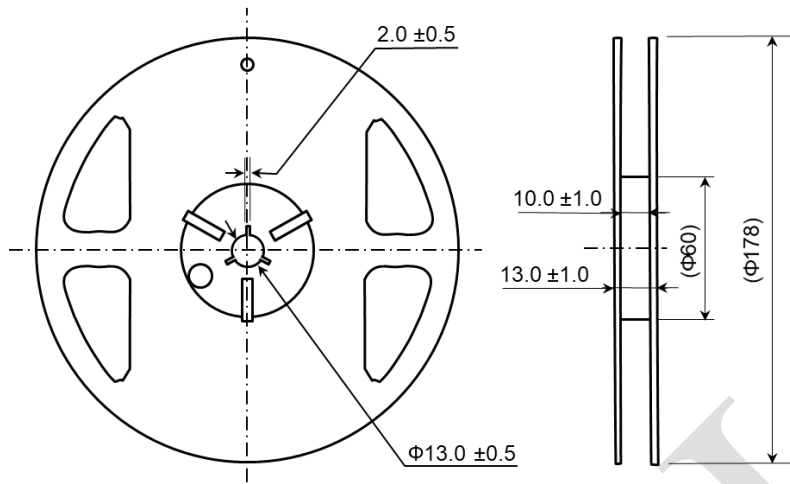
Tape Information



UNIT: mm

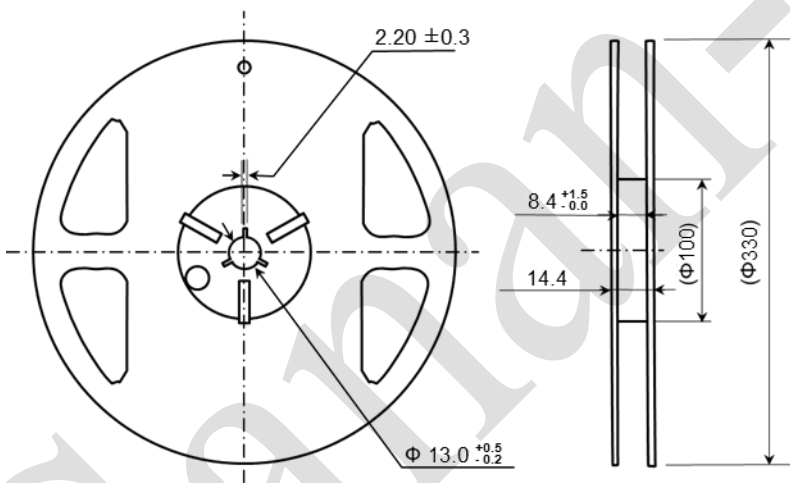


Reel Information



$\Phi 178$ Reel Dimension

UNIT: mm



$\Phi 330$ Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
RAD0943B0Q-SA	Bulk (few pieces)
RAD0943B0Q-MB	Tape & Reel 3,000 pcs/reel
RAD0943B0Q-MC	Tape & Reel 10,000 pcs/reel
RAD0943B0Q-SZ	EVB

Revision History

Revision	Date	Description
1.0	Jul. 17, 2020	● Initial release
2.0	Dec. 29, 2020	● Updated "Electrical Specifications", "Electrical Characteristics". ● Updated "Reel Information".
3.0	Feb.1, 2021	● Updated format, "electrical specifications" and "Electrical Characteristics".
3.1	Mar. 17, 2022	● Updated "Features"

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