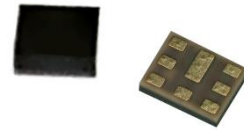


Data Sheet for SAW Components

Band20

Duplexer



Product ID: RAD0847B0L

Date: Mar. 16, 2022

Revision: 1.0

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
- ◆ Low Insertion Loss

Electrical Specifications Band20 Duplexer

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

Tx to Ant					Min.	Typ.	Max.	Unit
Insertion Loss								
	832.25	-	861.75	MHz	-	1.2	2.0	dB
Pass Band Ripple								
	832	-	862	MHz	-	0.8	2.0	dB
VSWR Tx								
	832	-	862	MHz	-	1.5	2.0	-
VSWR Ant								
	832	-	862	MHz	-	1.6	2.0	-
Absolute Attenuation								
	10	-	771	MHz	34	42	-	dB
	771	-	791	MHz	40	55	-	dB
	791.25	-	820.75	MHz	44	57	-	dB
	820	-	821	MHz	45	64	-	dB
	821	-	827	MHz	1	9.5	-	dB
	925	-	960	MHz	30	47	-	dB
	1559	-	1563	MHz	45	59	-	dB
	1565.42	-	1573.37	MHz	45	59	-	dB
	1573.37	-	1577.47	MHz	45	59	-	dB
	1577.47	-	1585.42	MHz	45	59	-	dB
	1597.55	-	1605.89	MHz	45	59	-	dB
	1664	-	1724	MHz	40	56	-	dB
	1710	-	1785	MHz	30	55	-	dB
	1805	-	1880	MHz	30	53	-	dB
	1884.5	-	1919.6	MHz	30	54	-	dB
	2110	-	2170	MHz	30	51	-	dB
	2400	-	2500	MHz	39	49	-	dB
	2496	-	2586	MHz	37	49	-	dB
	2570	-	2620	MHz	37	49	-	dB
	2620	-	2690	MHz	30	47	-	dB
	3328	-	3448	MHz	20	48	-	dB
	4160	-	4310	MHz	16	51	-	dB
	4900	-	5950	MHz	16	45	-	dB

Electrical Specifications Band20 Duplexer

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

Ant to Rx	Min.	Typ.	Max.	Unit
Insertion Loss				
791.25 - 820.75 MHz	-	1.4	2.4	dB
Pass Band Ripple				
791 - 821 MHz	-	0.7	2.0	dB
VSWR Rx				
791 - 821 MHz	-	1.4	2.1	-
VSWR Ant				
791 - 821 MHz	-	1.5	2.1	-
Absolute Attenuation				
10 - 760 MHz	40	46	-	dB
41 - 760 MHz	50	120	-	dB
760 - 770 MHz	10	30	-	dB
832.25 - 861.75 MHz	45	57	-	dB
873 - 903 MHz	40	44	-	dB
880 - 915 MHz	40	44	-	dB
1623 - 1683 MHz	40	60	-	dB
1710 - 1785 MHz	40	58	-	dB
2373 - 2463 MHz	40	52	-	dB
2373 - 2570 MHz	40	52	-	dB
2400 - 2500 MHz	48	52	-	dB
2500 - 2570 MHz	40	52	-	dB
4900 - 5950 MHz	36	45	-	dB
6328 - 6568 MHz	25	35	-	dB
7119 - 7389 MHz	20	33	-	dB
7910 - 8210 MHz	20	37	-	dB

Electrical Specifications Band20 Duplexer

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

Tx to Rx	Min.	Typ.	Max.	Unit
Isolation				
791.25 - 820.75 MHz	55	60	-	dB
832.25 - 861.75 MHz	55	59	-	dB

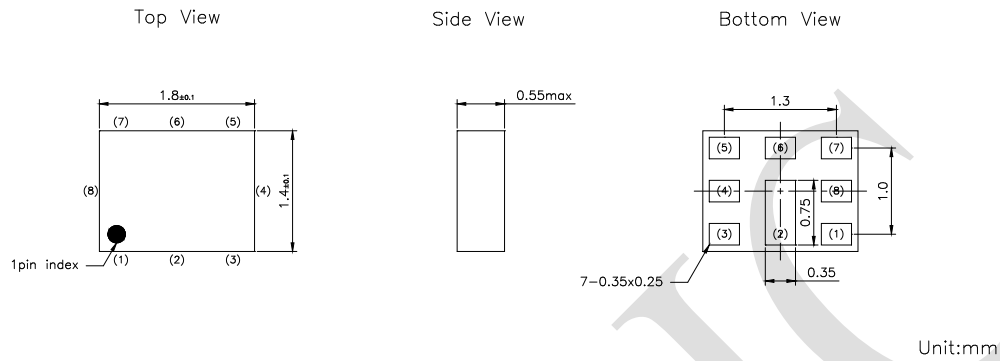
Maximum Ratings

Item	Rating	Condition / Remark
Storage Temperature	-40 to +85 °C	
DC Voltage	5 V	+25 °C
Input power	+30 dBm	LTE , +55 °C , 5000 h

Recommended Operating Conditions

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

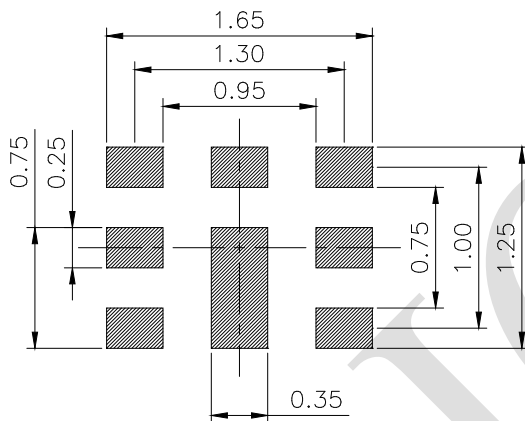
Package Information



Pin Configuration

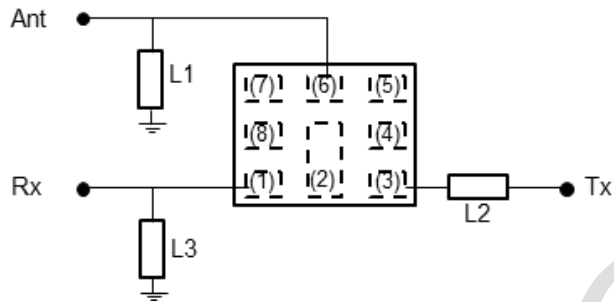
1 : Rx
 3 : Tx
 6 : Ant
 Other : GND

Land Pattern



Unit:mm

Application Circuit



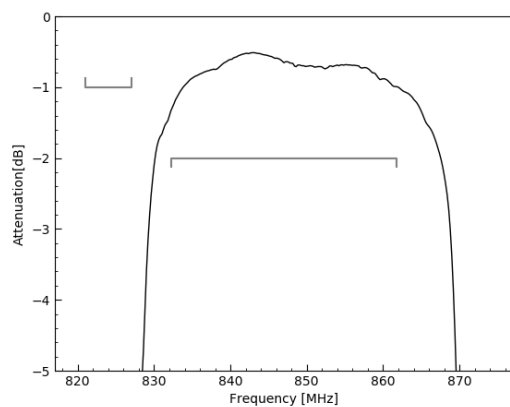
Port	Terminating Z	Matching Component
Ant	50 Ω	L1 : 12nH (Ideal inductor)
Tx	50 Ω	L2 : 4.7nH (Ideal inductor)
Rx	50 Ω	L3 : 10nH (Ideal inductor)

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

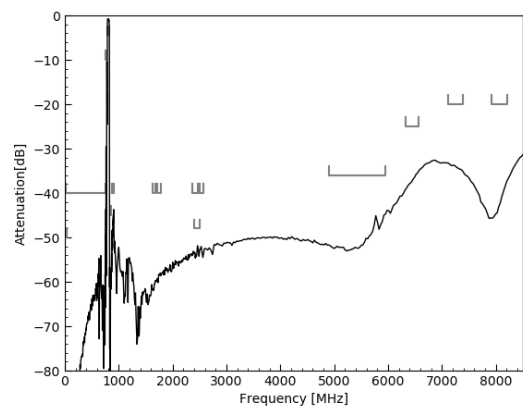
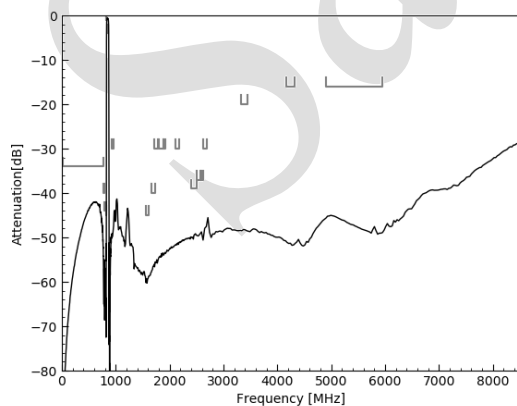
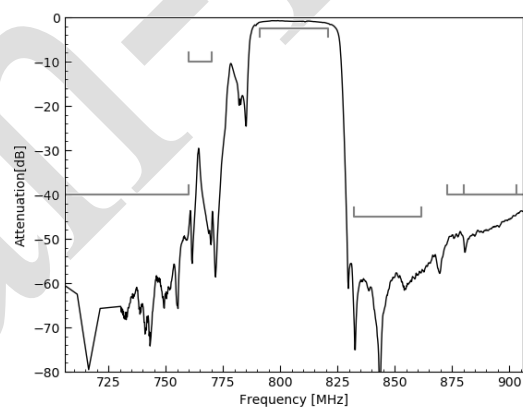
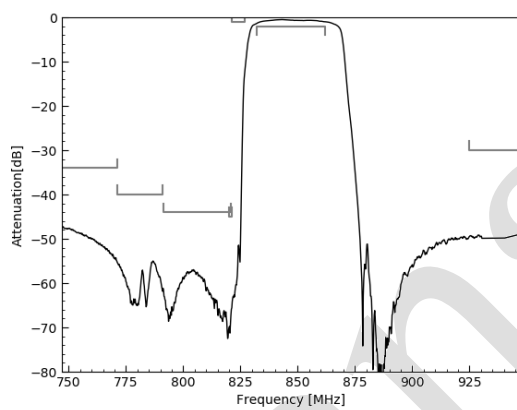
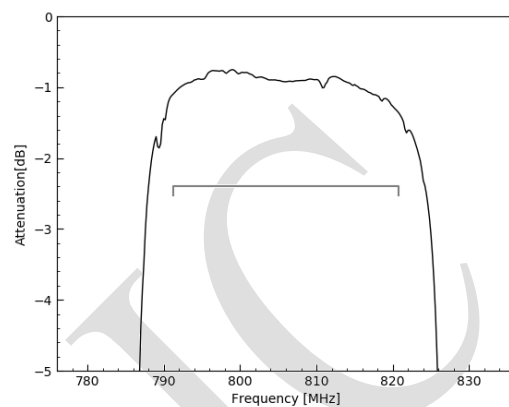
Electrical Characteristics

Band20 Duplexer

Tx to Ant



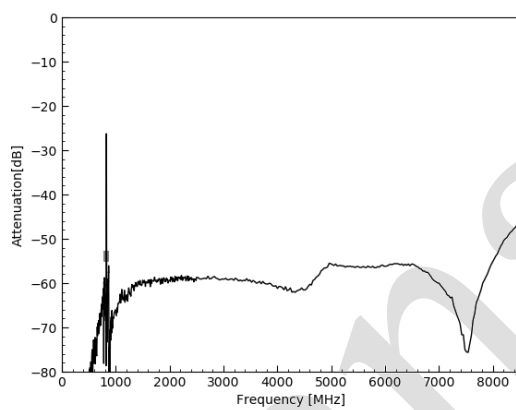
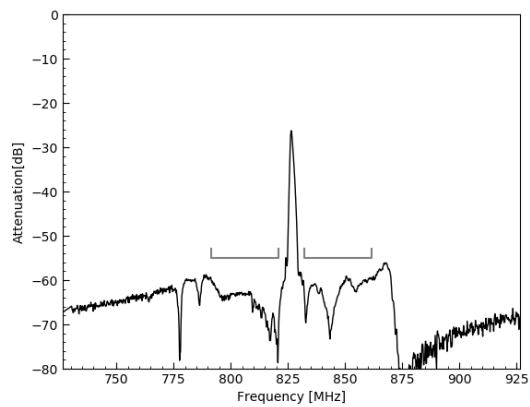
Ant to Rx



Electrical Characteristics

Band20 Duplexer

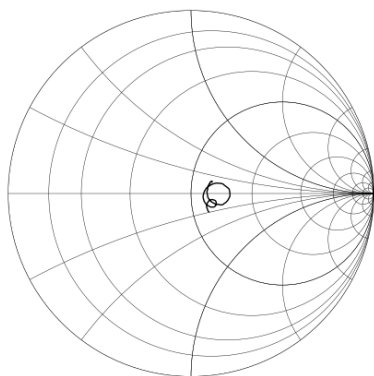
Tx to Rx



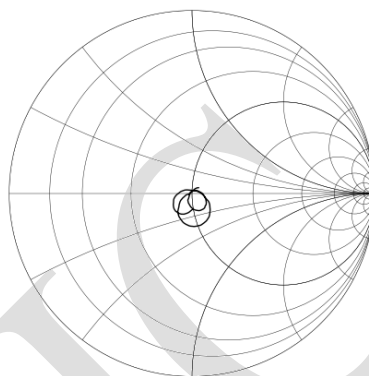
Electrical Characteristics

Band20 Duplexer

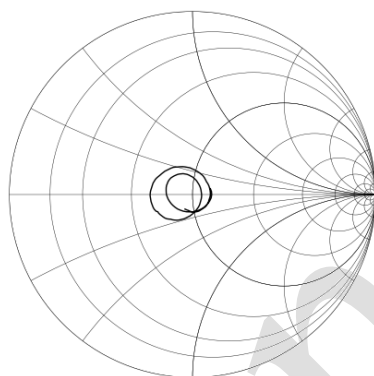
Ant Impedance (Tx band)



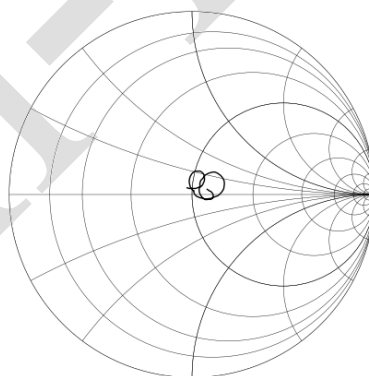
Ant Impedance (Rx band)



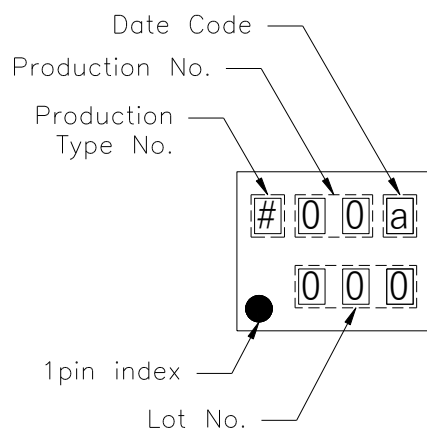
Tx Impedance



Rx Impedance



Marking Information



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

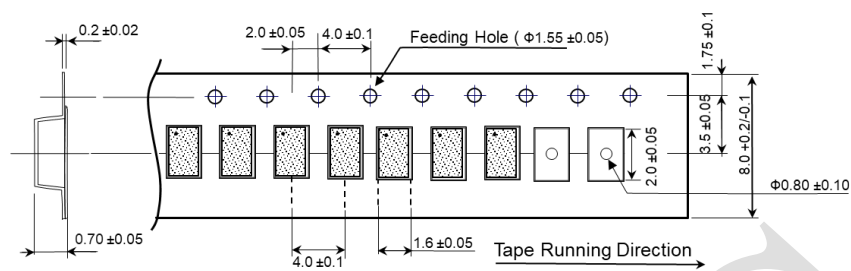
Product No. : 0L

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

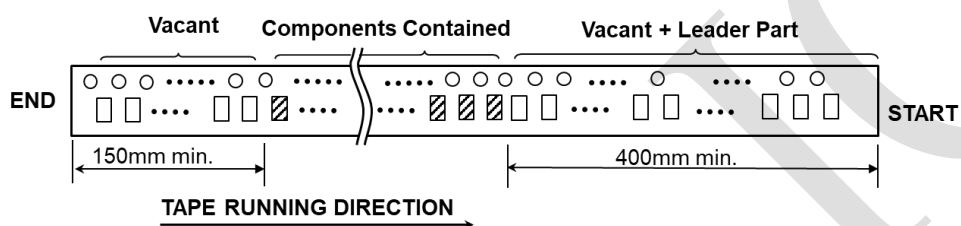
Product date code :

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

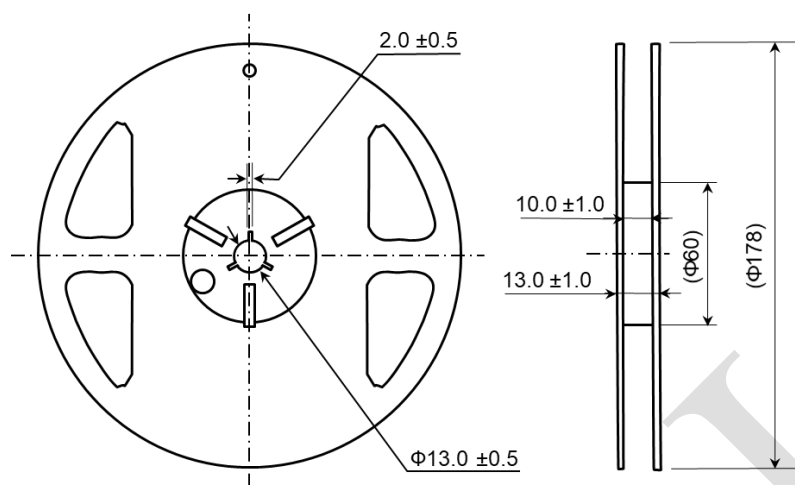
Tape Information



UNIT: mm

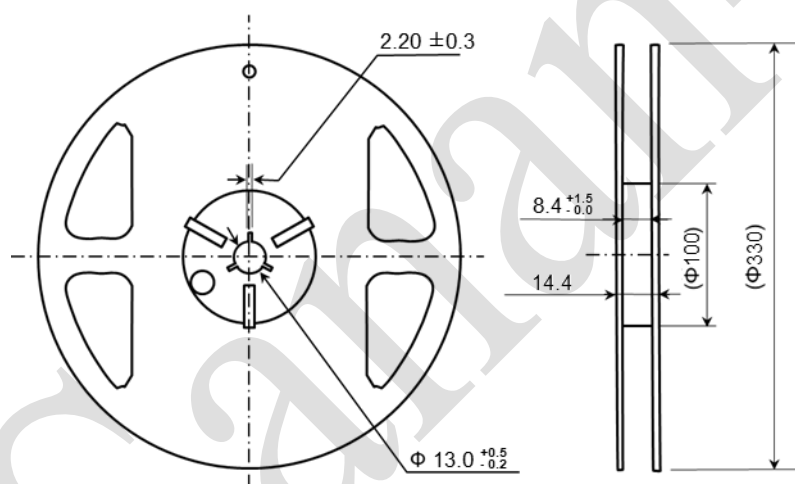


Reel Information



$\Phi 178$ Reel Dimension

UNIT: mm



$\Phi 330$ Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
RAD0847B0L-SA	Bulk (few pieces)
RAD0847B0L-MB	Tape & Reel 3,000 pcs/reel
RAD0847B0L-MC	Tape & Reel 10,000 pcs/reel
RAD0847B0L-SZ	EVB

Sanan-IC

Revision History

Revision	Date	Description
1.0	Mar. 16, 2022	● Initial release

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