

Data Sheet for SAW Components

Band 1 + 3

Rx Dual Filter



Product ID: LBB2140D19

Date: Dec. 1, 2020

Revision: 1.0

Features

- ◆ Package Size : 1.5 x 1.1 x 0.5max mm
- ◆ Single-Ended Input and Output
- ◆ Terminating Impedance : 50 Ω
- ◆ Moisture Sensitivity Level 3
- ◆ ESD Sensitive Device

Electrical Specifications

Band 1 + 3 Rx Dual Filter

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

Ant to B3Rx					Min.	Typ.	Max.	Unit
Insertion Loss								
	1805	-	1880	MHz	-	1.8	3.5	dB
Pass Band Ripple								
	1805	-	1880	MHz	-	1.1	2.5	dB
VSWR Rx								
	1805	-	1880	MHz	-	1.5	2.0	-
VSWR Ant								
	1805	-	1880	MHz	-	1.4	2.0	-
Absolute Attenuation								
	1	-	1710	MHz	27	32	-	dB
			95	MHz	50	98	-	dB
	824	-	849	MHz	39	42	-	dB
	832	-	862	MHz	38	41	-	dB
	880	-	915	MHz	37	40	-	dB
	1615	-	1690	MHz	30	32	-	dB
	1710	-	1785	MHz	34	38	-	dB
	1785	-	1790	MHz	1	45	-	dB
	1920	-	1980	MHz	36	40	-	dB
	1920	-	6000	MHz	26	36	-	dB
	2400	-	2500	MHz	34	37	-	dB
	2500	-	2570	MHz	32	36	-	dB
	3515	-	3610	MHz	36	52	-	dB
	3610	-	3760	MHz	35	49	-	dB
	3760	-	6000	MHz	14	42	-	dB
	4900	-	5950	MHz	26	42	-	dB
	5225	-	5415	MHz	27	43	-	dB
	5415	-	5640	MHz	27	43	-	dB
	7220	-	7520	MHz	20	24	-	dB

Electrical Specifications

Band 1 + 3 Rx Dual Filter

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

Ant to B1Rx				Min.	Typ.	Max.	Unit
Insertion Loss							
	2110	-	2170 MHz	-	1.7	2.8	dB
Pass Band Ripple							
	2110	-	2170 MHz	-	0.4	2.0	dB
VSWR Rx							
	2110	-	2170 MHz	-	1.6	2.0	-
VSWR Ant							
	2110	-	2170 MHz	-	1.3	2.0	-
Absolute Attenuation							
	10	-	1920 MHz	24	45	-	dB
			190 MHz	50	92	-	dB
	400	-	400 MHz	50	73	-	dB
	699	-	716 MHz	50	59	-	dB
	777	-	787 MHz	40	57	-	dB
	810	-	830 MHz	48	56	-	dB
	814	-	849 MHz	40	55	-	dB
	824	-	849 MHz	46	55	-	dB
	880	-	915 MHz	40	54	-	dB
	898	-	925 MHz	46	54	-	dB
	1710	-	1785 MHz	42	47	-	dB
	1730	-	1920 MHz	34	45	-	dB
	1920	-	1980 MHz	42	49	-	dB
	2015	-	2075 MHz	10	27	-	dB
	2185	-	6130 MHz	1	2	-	dB
	2400	-	2500 MHz	33	45	-	dB
	4030	-	4150 MHz	37	41	-	dB
	4220	-	4340 MHz	36	41	-	dB
	4340	-	6000 MHz	15	34	-	dB
	4900	-	5950 MHz	30	36	-	dB
	5950	-	6130 MHz	29	36	-	dB
	6330	-	6510 MHz	28	35	-	dB

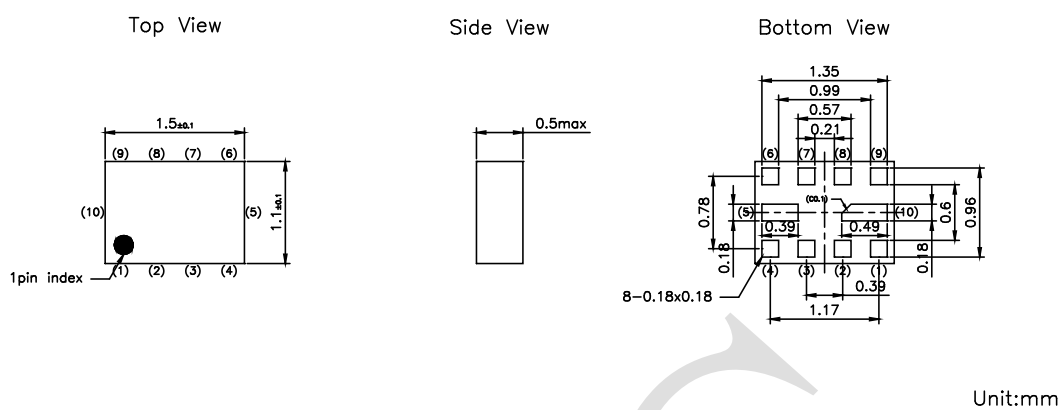
Maximum Ratings

Item	Rating	Condition / Remark
Storage Temperature	-40 to +85 ° C	
DC Voltage	5 V	+25 ° C
Input power	+15 dBm	LTE , +55 ° C , 2000 h

Recommended Operating Conditions

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

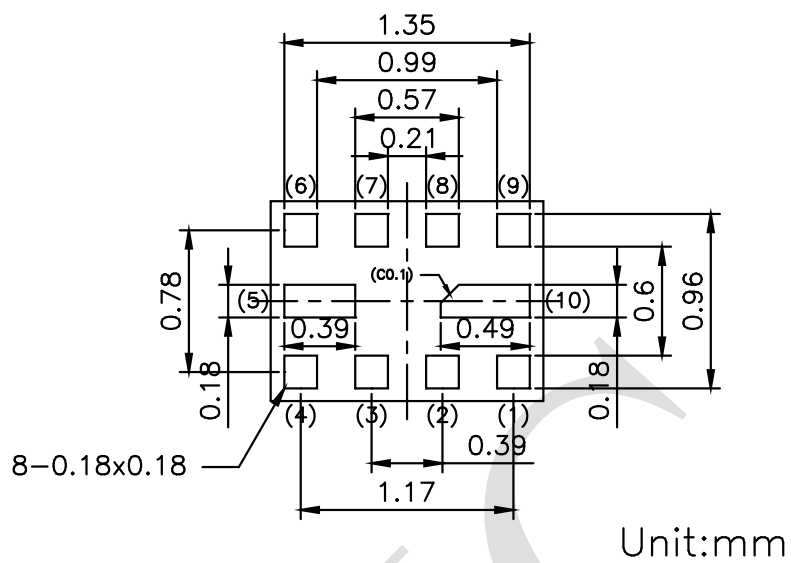
Package Information



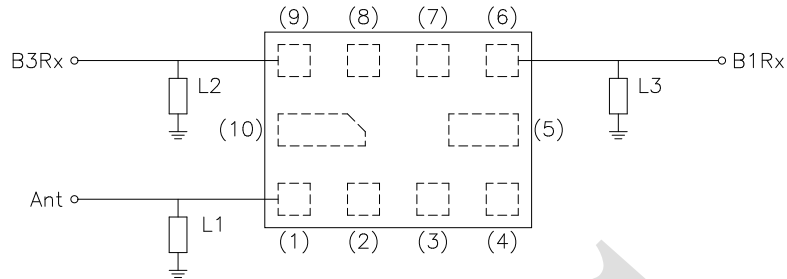
Pin Configuration

1	:	Ant
6	:	B1Rx
9	:	B3Rx
Other	:	GND

Land Pattern



Application Circuit



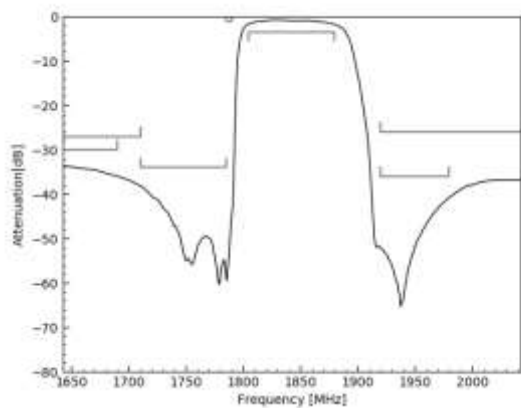
Port	Terminating Z	Matching Component		
Ant	50 Ω	L1 : 3.0nH (Ideal inductor)		
B3Rx	50 Ω	L2 : 12nH (Ideal inductor)		
B1Rx	50 Ω	L3 : 12nH (Ideal inductor)		

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

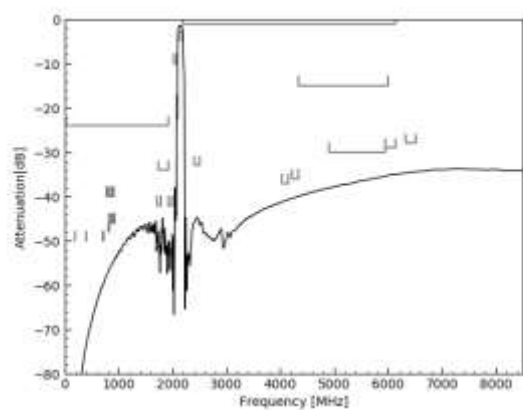
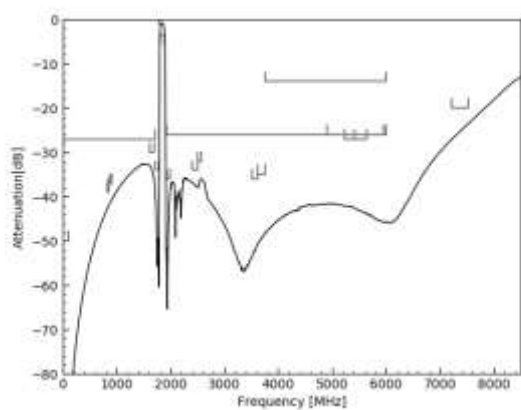
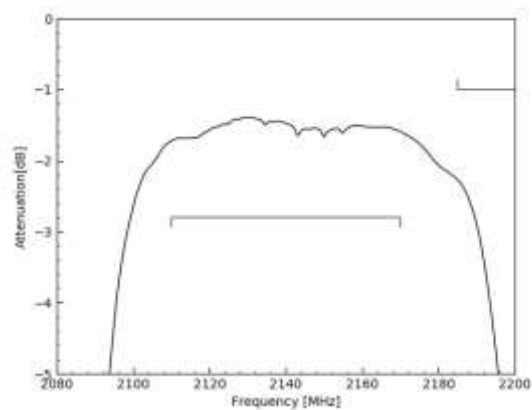
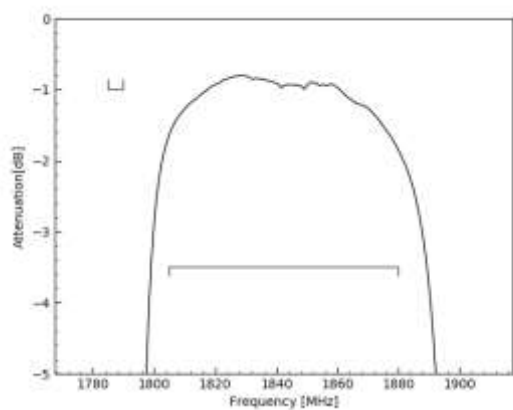
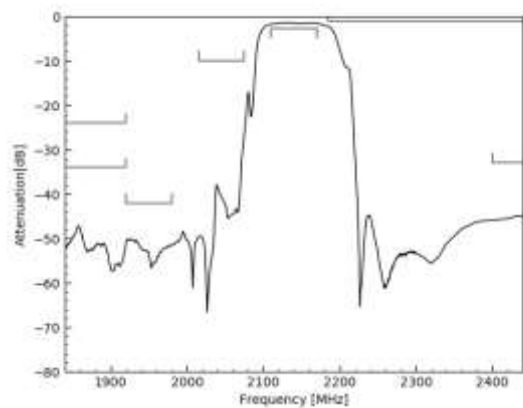
Electrical Characteristics

Band 1 + 3 Rx Dual Filter

Ant to B3Rx



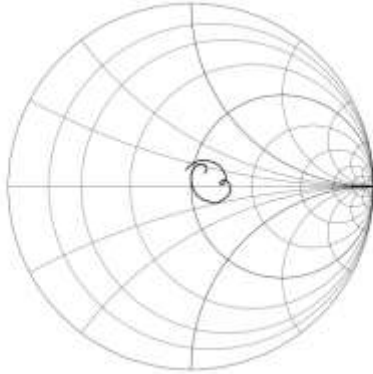
Ant to B1Rx



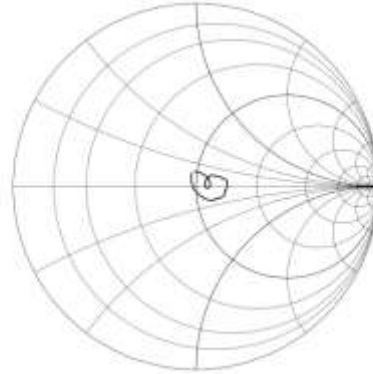
Electrical Characteristics

Band 1 + 3 Rx Dual Filter

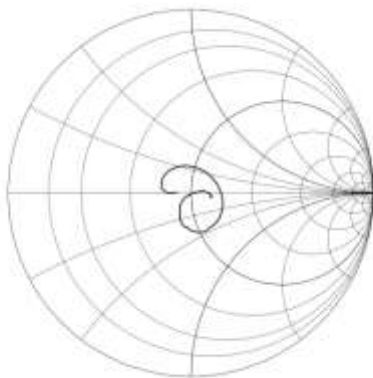
Ant Impedance (B3Rx band)



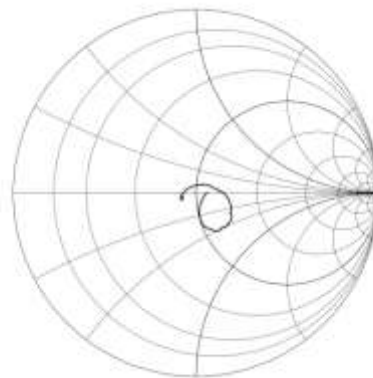
Ant Impedance (B1Rx band)



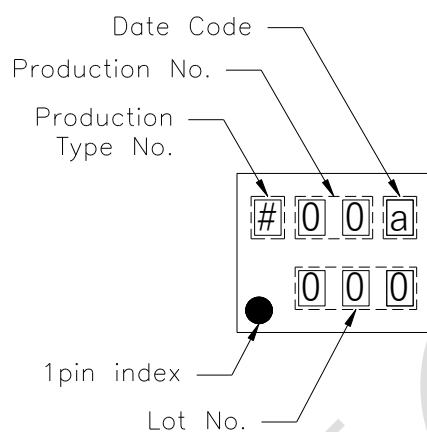
B3Rx Impedance



B1Rx Impedance



Marking Information



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

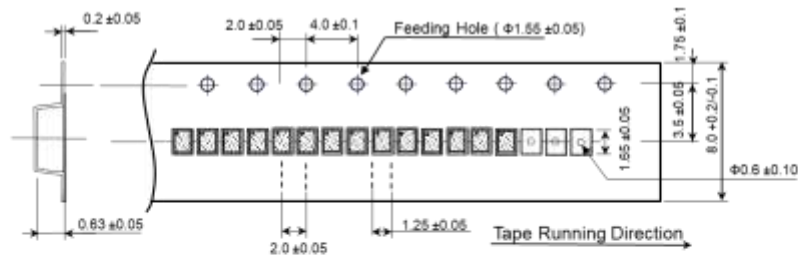
Product No. : 19

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

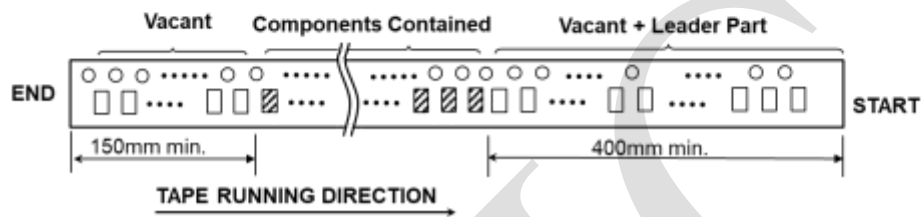
Product date code:

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	A	B	C	D	E	F	G	H	J	K	L	M
2021	N	P	Q	R	S	T	U	V	W	X	Y	Z
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

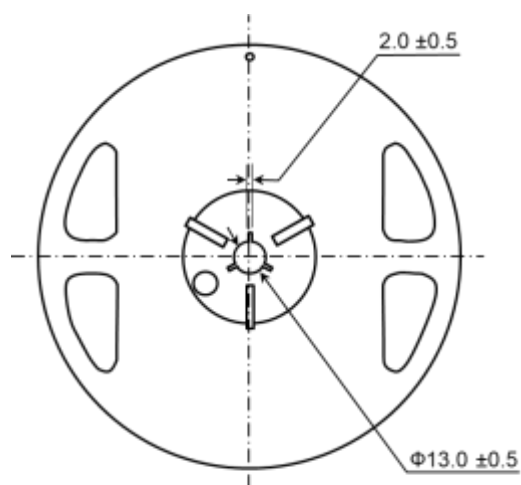
Tape Information



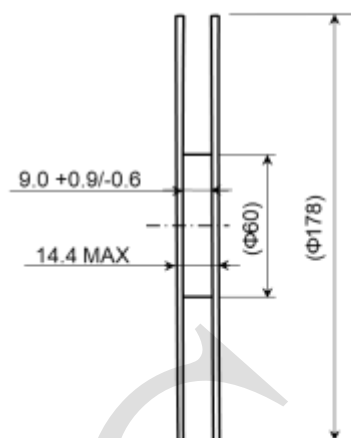
UNIT: mm



Reel Information



$\Phi 178$ Reel Dimension



UNIT: mm

Ordering Code

Part Number	Description
LBB2140D19-SA	Bulk (few pieces)
LBB2140D19-MB	Tape & Reel 3,000 pcs/reel
LBB2140D19-MC	Tape & Reel 10,000 pcs/reel
LBB2140D19-SZ	EVB

Revision History

Revision	Date	Description
1.0	Dec. 1, 2020	● Initial release

SALIC

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