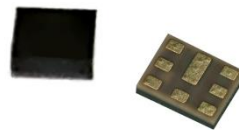


Data Sheet for SAW Components

Band 5

Duplexer



Product ID: LBD0882G14

Date: Apr. 15, 2022

Revision: 1.0

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

Electrical Specifications Band 5 Duplexer

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

Tx to Ant					Min.	Typ.	Max.	Unit
Insertion Loss								
	824	-	849	MHz	-	1.4	1.8	dB
Pass Band Ripple								
	824	-	849	MHz	-	0.5	1.2	dB
VSWR Tx								
	824	-	849	MHz	-	1.6	2.0	-
VSWR Ant								
	824	-	849	MHz		1.6	2.0	
Absolute Attenuation								
	10	-	420	MHz	35	44	-	dB
	420	-	494	MHz	35	40	-	dB
	494	-	701	MHz	27	35	-	dB
	699	-	716	MHz	27	35	-	dB
	701	-	728	MHz	27	35	-	dB
	704	-	716	MHz	27	35	-	dB
	728	-	764	MHz	27	35	-	dB
	764	-	804	MHz	28	38	-	dB
	860	-	869	MHz	2	4	-	dB
	869	-	894	MHz	45	55	-	dB
	1559	-	1563	MHz	30	48	-	dB
	1565.42	-	1573.37	MHz	30	48	-	dB
	1573.37	-	1577.47	MHz	30	48	-	dB
	1577.47	-	1585.42	MHz	30	48	-	dB
	1597.55	-	1605.89	MHz	30	47	-	dB
	1638	-	1708	MHz	28	44	-	dB
	1710	-	1785	MHz	28	42	-	dB
	1844.9	-	1879.9	MHz	25	40	-	dB
	1884.5	-	1919.6	MHz	25	39	-	dB
	1920	-	1980	MHz	25	38	-	dB
	2110	-	2170	MHz	25	36	-	dB
	2400	-	2494	MHz	22	34	-	dB
	2472	-	2547	MHz	22	24	-	dB

3286	-	3406	MHz	15	31	-	dB
4110	-	4255	MHz	15	17	-	dB
4900	-	5950	MHz	10	14	-	dB
6582	-	6802	MHz	8	11	-	dB
7406	-	7651	MHz	8	12	-	dB

Sanan-IC

Electrical Specifications Band 5 Duplexer

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

Ant to Rx					Min.	Typ.	Max.	Unit
Insertion Loss								
	869	-	894	MHz	-	1.7	2.3	dB
Pass Band Ripple								
	869	-	894	MHz	-	0.5	1.2	dB
VSWR Rx								
	869	-	894	MHz	-	1.8	2.0	-
VSWR Ant								
	869	-	894	MHz		1.6	2.0	
Absolute Attenuation								
	10	-	447	MHz	50	62	-	dB
			45	MHz	50	100	-	dB
	447	-	824	MHz	43	58	-	dB
	779	-	804	MHz	44	64	-	dB
	824	-	849	MHz	45	61	-	dB
	849	-	854	MHz	33	55	-	dB
	909	-	979	MHz	10	13	-	dB
	1693	-	1743	MHz	45	58	-	dB
	1710	-	1785	MHz	45	58	-	dB
	1788	-	1788	MHz	45	59	-	dB
	1850	-	1920	MHz	40	56	-	dB
	1920	-	1980	MHz	40	56	-	dB
	1980	-	2400	MHz	40	54	-	dB
	2305	-	2315	MHz	33	54	-	dB
	2400	-	2500	MHz	30	54	-	dB
	2467	-	2494	MHz	30	54	-	dB
	2517	-	2592	MHz	30	52	-	dB
	2607	-	2682	MHz	30	54	-	dB
	3476	-	3576	MHz	32	47	-	dB
	4345	-	4470	MHz	30	34	-	dB
	4900	-	5950	MHz	25	36	-	dB
	5214	-	5364	MHz	25	36	-	dB
	6083	-	6258	MHz	25	35	-	dB

6952	-	7152	MHz	20	32	-	dB
7821	-	8046	MHz	20	29	-	dB

Sanan-IC

Electrical Specifications Band 5 Duplexer

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

Ant to Rx					Min.	Typ.	Max.	Unit
Isolation								
	824	-	849	MHz	55	59	-	dB
	869	-	894	MHz	52	57	-	dB
	1574	-	1577	MHz	50	64	-	dB
	1683	-	1708	MHz	50	62	-	dB
	2462	-	2557	MHz	45	56	-	-dB

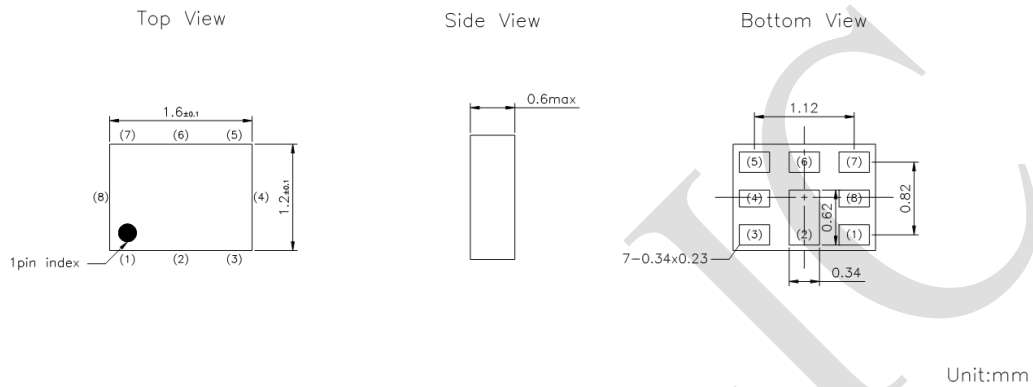
Maximum Ratings

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	

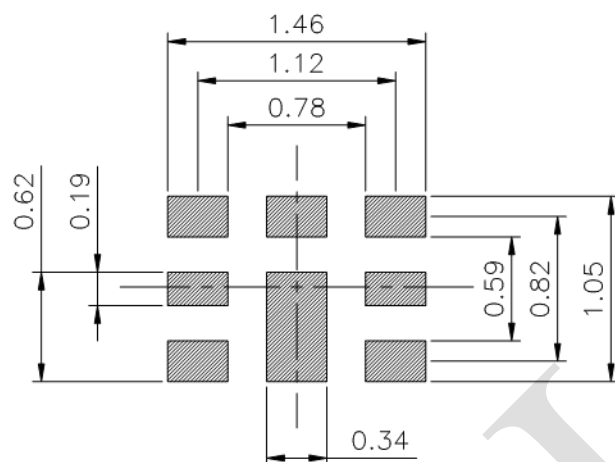
Package Information



Pin Configuration

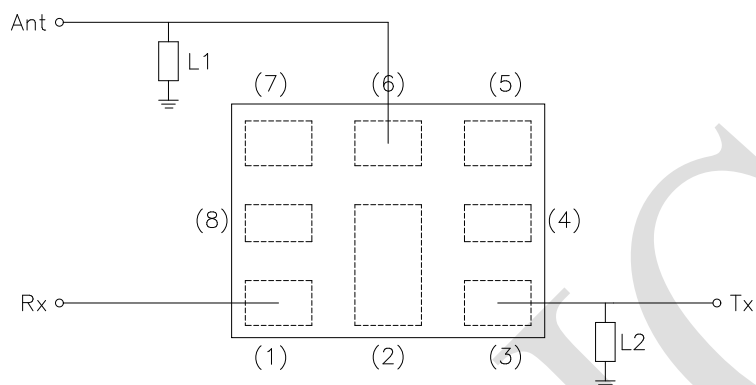
1 : Rx
 3 : Tx
 6 : Ant
 Other : GND

Land Pattern



Unit:mm

Application Circuit



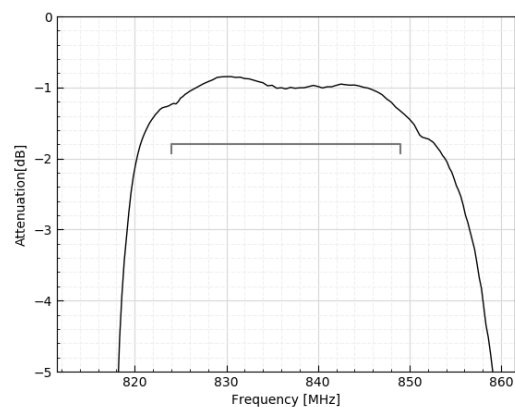
Port	Terminating Z	Matching Component
Ant	50 Ω	L1 : 10nH (Ideal inductor)
Tx	50 Ω	L2 : 18nH (Ideal inductor)
Rx	50 Ω	

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

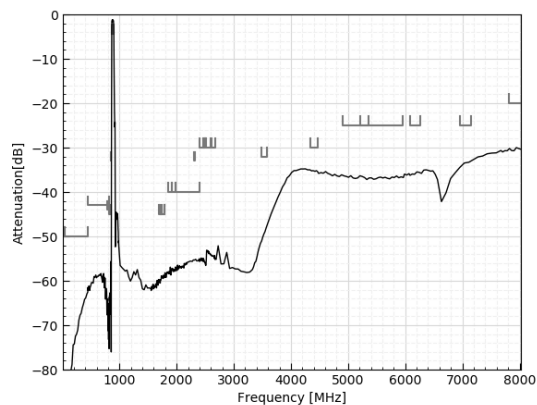
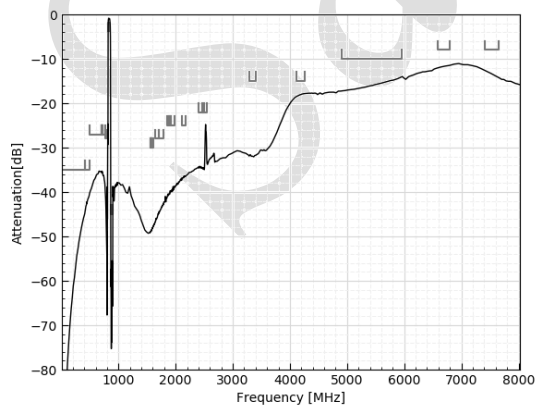
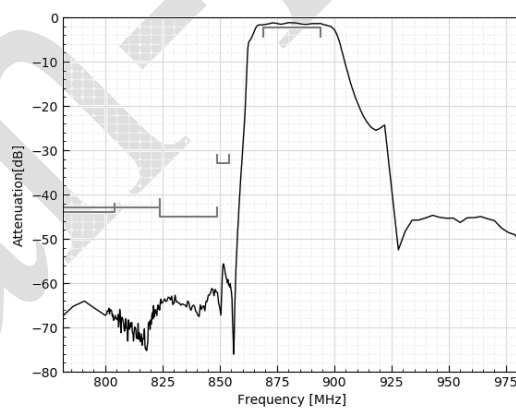
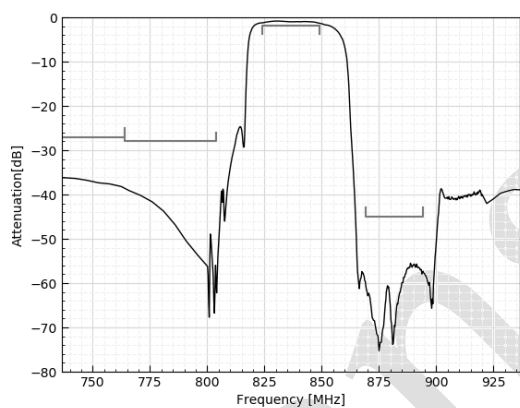
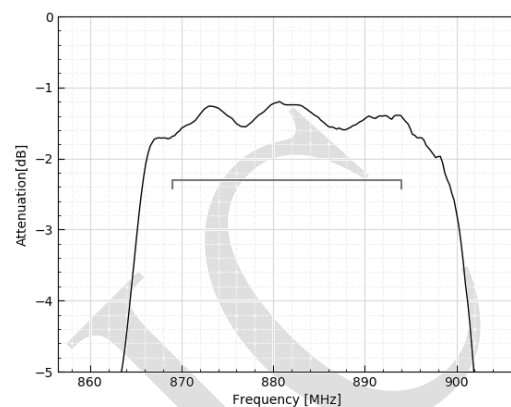
Electrical Characteristics

Band 5 Duplexer

Tx to Ant



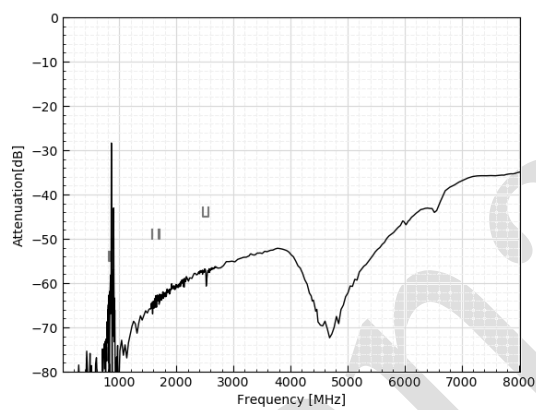
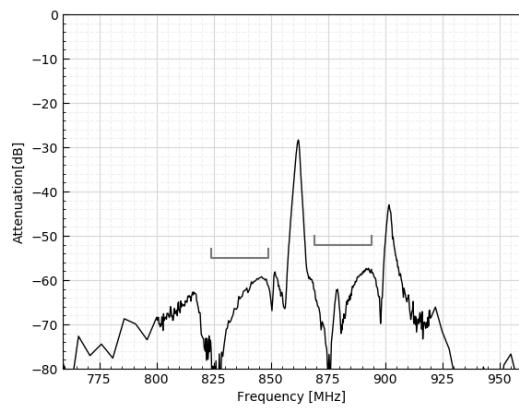
Ant to Rx



Electrical Characteristics

Band 5 Duplexer

Tx to Rx

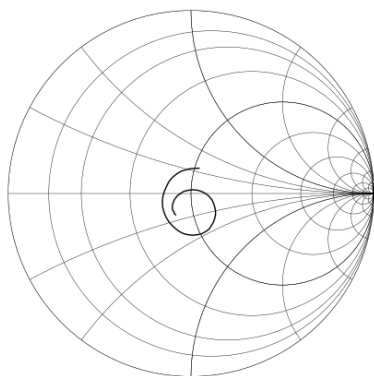


Electrical Characteristics

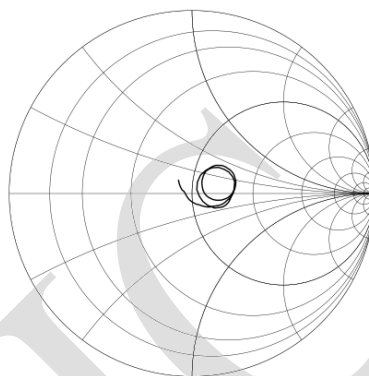
Band 5 Duplexer

Ant Port Impedance (Tx band)

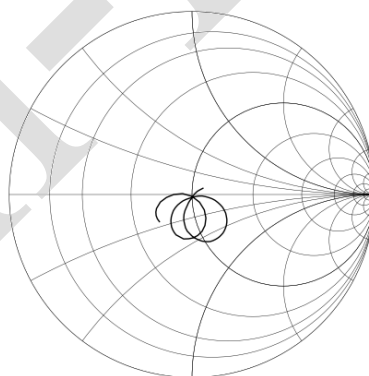
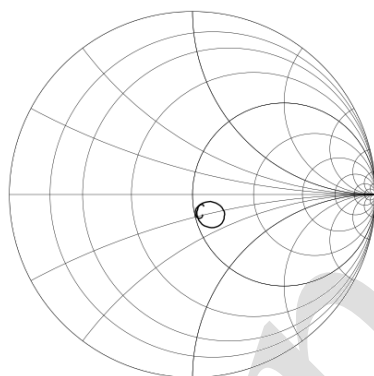
Ant Port Impedance (Rx band)



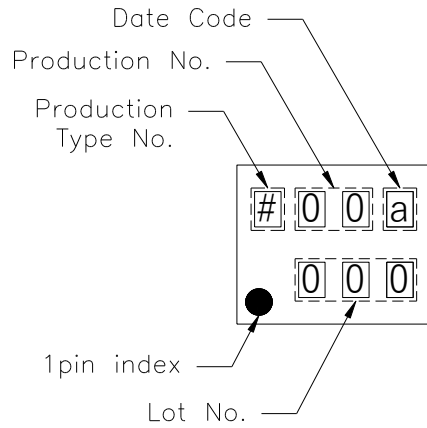
Tx Impedance



Rx Impedance



Marking Information



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

Product No. : 14

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

Technical drawing of a tape with dimensions and labels:

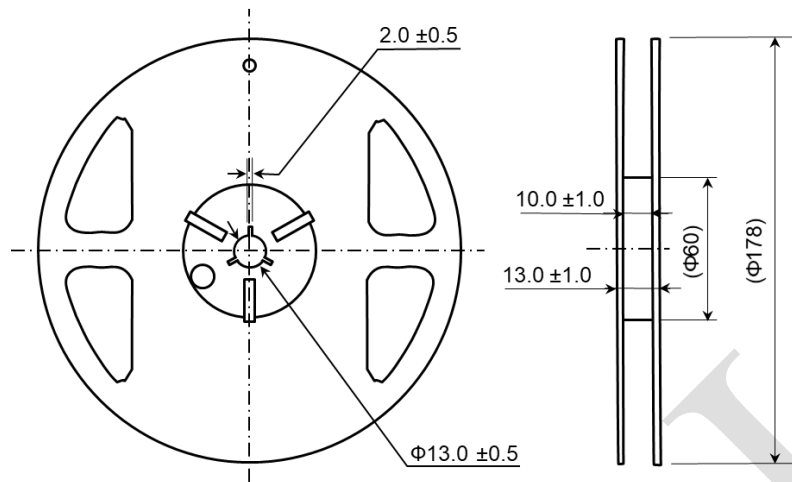
- Top dimensions: 0.2 ± 0.03 , 2.0 ± 0.05 , 4.0 ± 0.1
- Bottom dimensions: 0.72 ± 0.05 , 4.0 ± 0.1 , 1.36 ± 0.02
- Right side dimensions: 1.75 ± 0.1 , 3.5 ± 0.05 , 8.0 ± 0.2 , 0.60 ± 0.10
- Internal dimensions: 1.78 ± 0.05
- Labels: "Feeding Hole ($\phi 1.55 \pm 0.05$)", "Tape Running Direction"

The diagram illustrates the layout of a magnetic tape. It is divided into three main sections:

- Vacant:** The first section, starting from the **END** of the tape, is at least 150mm long. It contains several circles and squares, some of which are hatched.
- Components Contained:** The middle section, separated from the first by a break symbol (two parallel slanted lines). It contains several circles and squares, some of which are hatched.
- Vacant + Leader Part:** The final section, starting from the **START** of the tape, is at least 400mm long. It contains several circles and squares, some of which are hatched.

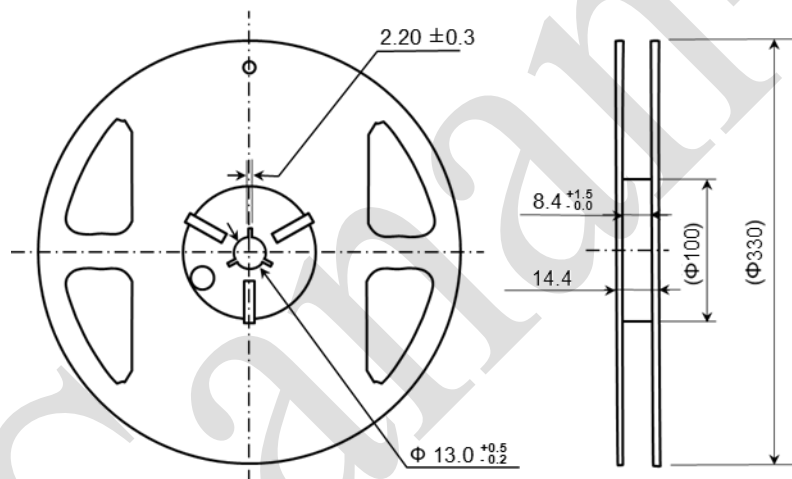
The tape runs from **END** to **START**, as indicated by the **TAPE RUNNING DIRECTION** arrow at the bottom.

Reel Information



$\Phi 178$ Reel Dimension

UNIT: mm



$\Phi 330$ Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
LBD0882G14-SA	Bulk (few pieces)
LBD0882G14-MB	Tape & Reel 3,000 pcs/reel
LBD0882G14-MC	Tape & Reel 10,000 pcs/reel
LBD0882G14-SZ	EVB

Revision History

Revision	Date	Description
1.0	Apr. 15, 2022	● Initial release

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