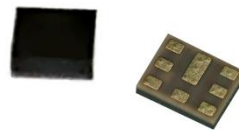


Data Sheet for SAW Components



Band5

Duplexer

Product ID: LBD0882B46

Date: Mar. 14, 2024

Revision: 2.0

Features

- ◆ Package Size: 1.8 x 1.4 x 0.6max mm
- ◆ Single-Ended Input and Output
- ◆ Terminating Impedance: 50 Ω
- ◆ Moisture Sensitivity Level 3
- ◆ ESD Sensitive Device

Electrical Specifications Band5 Duplexer

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

Tx to Ant					Min.	Typ.	Max.	Unit
Insertion Loss								
	824	-	849	MHz	-	1.2	1.8	dB
	824	-	849	MHz	-	1.2	1.7 ^{*1}	dB
Pass Band Ripple								
	824	-	849	MHz	-	0.5	1.2	dB
	824	-	849	MHz	-	0.5	1.0 ^{*1}	dB
VSWR Tx								
	824	-	849	MHz	-	1.3	2.0	-
	824	-	849	MHz	-	1.3	2.0 ^{*1}	-
VSWR Ant								
	824	-	849	MHz	-	1.5	2.0	-
	824	-	849	MHz	-	1.5	2.0 ^{*1}	-
Absolute Attenuation								
	10	-	420	MHz	35	43	-	dB
	420	-	494	MHz	35	39	-	dB
	494	-	701	MHz	27	31	-	dB
	699	-	716	MHz	27	31	-	dB
	701	-	728	MHz	27	31	-	dB
	704	-	716	MHz	27	31	-	dB
	728	-	764	MHz	27	31	-	dB
	764	-	804	MHz	28	32	-	dB
	860	-	869	MHz	2	5	-	dB
	869	-	894	MHz	45	57	-	dB
	1559	-	1563	MHz	30	38	-	dB
	1565.42	-	1573.37	MHz	30	38	-	dB
	1573.37	-	1577.47	MHz	30	38	-	dB
	1577.47	-	1585.42	MHz	30	38	-	dB
	1597.55	-	1605.89	MHz	30	39	-	dB
	1638	-	1708	MHz	28	40	-	dB
	1710	-	1785	MHz	28	41	-	dB
	1844.9	-	1879.9	MHz	25	44	-	dB
	1884.5	-	1919.6	MHz	25	45	-	dB

1920	-	1980	MHz	25	46	-	dB
2110	-	2170	MHz	25	48	-	dB
2400	-	2494	MHz	22	42	-	dB
2472	-	2547	MHz	22	41	-	dB
3286	-	3406	MHz	15	34	-	dB
4110	-	4255	MHz	15	32	-	dB
4900	-	5950	MHz	10	18	-	dB
6582	-	6802	MHz	8	17	-	dB
7406	-	7651	MHz	8	16	-	dB

*1: +23 to +27 °C

Electrical Specifications Band5 Duplexer

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

Ant to Rx					Min.	Typ.	Max.	Unit
Insertion Loss								
	869	-	894	MHz	-	1.6	2.3	dB
	869	-	894	MHz	-	1.6	2.1 ^{*2}	dB
Pass Band Ripple								
	869	-	894	MHz	-	0.5	1.2	dB
	869	-	894	MHz	-	0.5	1.0 ^{*2}	dB
VSWR Rx								
	869	-	894	MHz	-	1.5	2.0	-
	869	-	894	MHz	-	1.5	2.0 ^{*2}	-
VSWR Ant								
	869	-	894	MHz		1.5	2.0	-
	869	-	894	MHz		1.5	2.0 ^{*2}	-
Absolute Attenuation								
	10	-	447	MHz	50	62	-	dB
			45	MHz	50	100	-	dB
	447	-	824	MHz	43	58	-	dB
	779	-	804	MHz	44	63	-	dB
	824	-	849	MHz	45	61	-	dB
	849	-	854	MHz	33	55	-	dB
	909	-	979	MHz	10	18	-	dB
	1693	-	1743	MHz	45	57	-	dB
	1710	-	1785	MHz	45	57	-	dB
	1788	-	1788	MHz	45	57	-	dB
	1850	-	1920	MHz	40	55	-	dB
	1920	-	1980	MHz	40	54	-	dB
	1980	-	2400	MHz	40	52	-	dB
	2305	-	2315	MHz	33	52	-	dB
	2400	-	2500	MHz	30	51	-	dB
	2467	-	2494	MHz	30	52	-	dB
	2517	-	2592	MHz	30	51	-	dB
	2607	-	2682	MHz	30	51	-	dB
	3476	-	3576	MHz	32	49	-	dB

4345	-	4470	MHz	30	46	-	dB
4900	-	5950	MHz	25	38	-	dB
5214	-	5364	MHz	25	38	-	dB
6083	-	6258	MHz	25	38	-	dB
6952	-	7152	MHz	20	36	-	dB
7821	-	8046	MHz	20	34	-	dB

*2: +23 to +27 °C

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Electrical Specifications Band5 Duplexer

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

Tx to Rx					Min.	Typ.	Max.	Unit
Isolation								
	824	-	849	MHz	55	59	-	dB
	869	-	894	MHz	52	58	-	dB
	1574	-	1577	MHz	50	70	-	dB
	1683	-	1708	MHz	50	67	-	dB
	2462	-	2557	MHz	45	61	-	dB

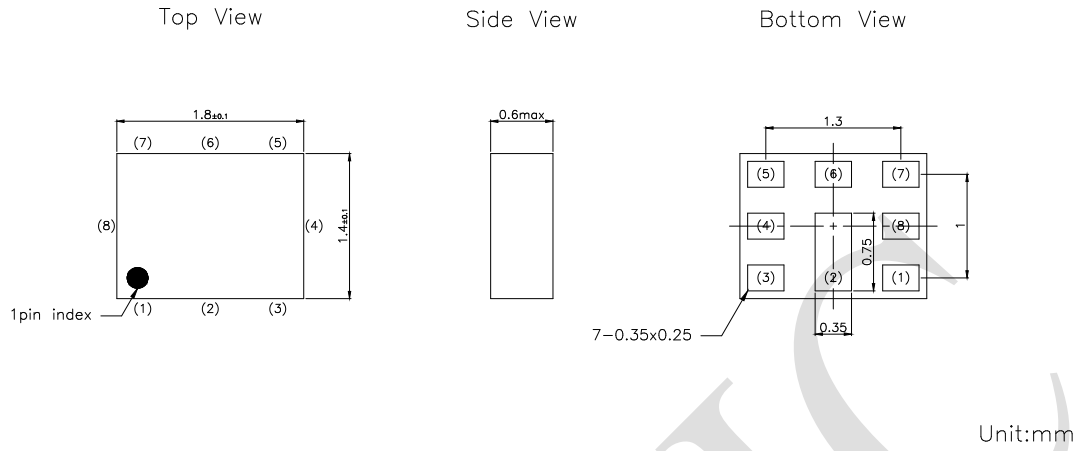
Maximum Ratings

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	

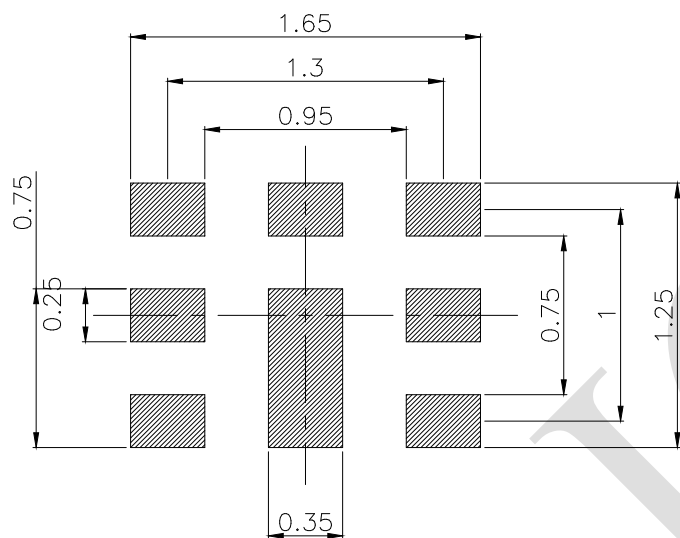
Package Information



Pin Configuration

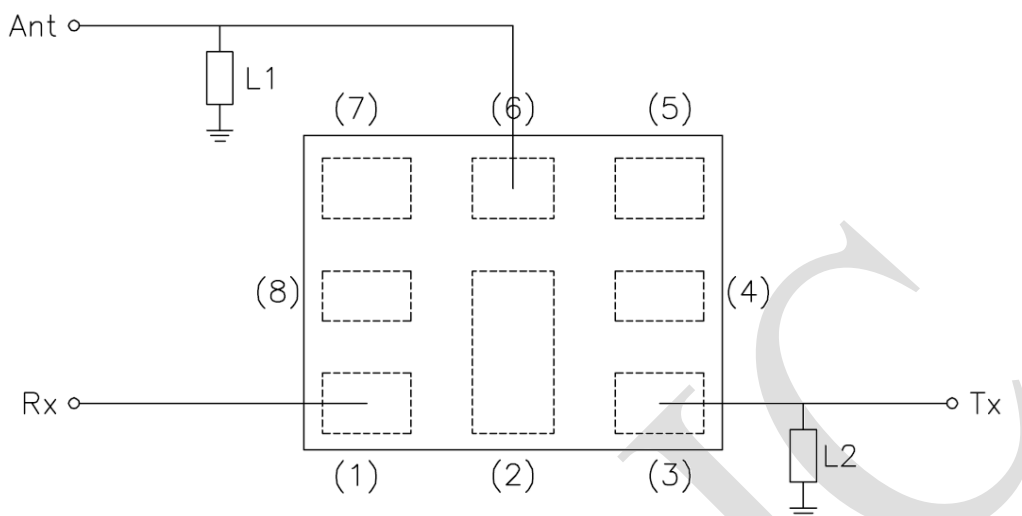
1 : Rx
 3 : Tx
 6 : Ant
 Other : GND

Land Pattern



Unit:mm

Application Circuit



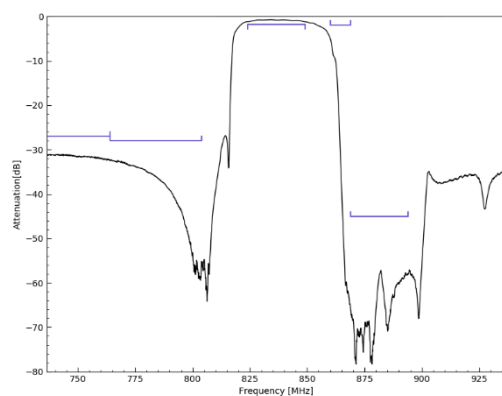
Port	Terminating Z	Matching Component
Ant	50 Ω	L1 : 10 nH (Ideal inductor)
Tx	50 Ω	L2 : 13 nH (Ideal inductor)

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

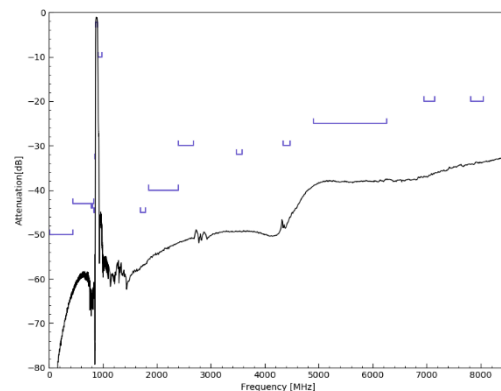
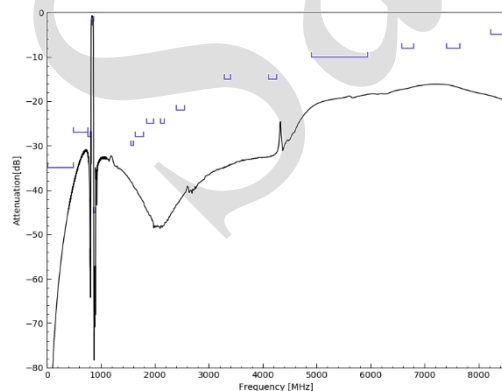
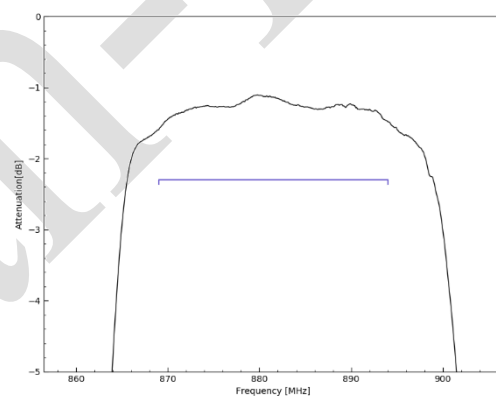
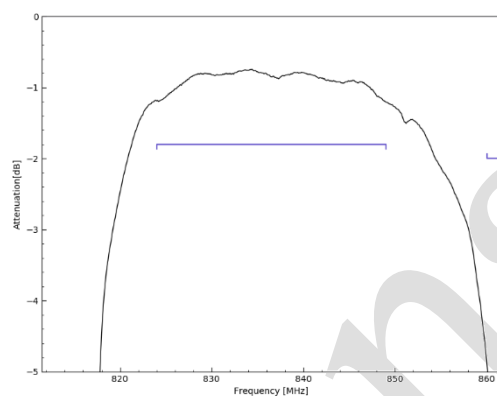
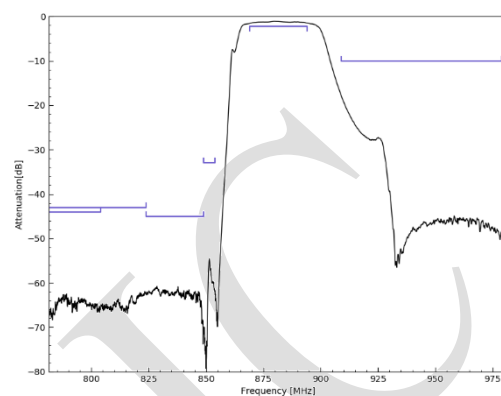
Electrical Characteristics

Band5 Duplexer

Tx to Ant



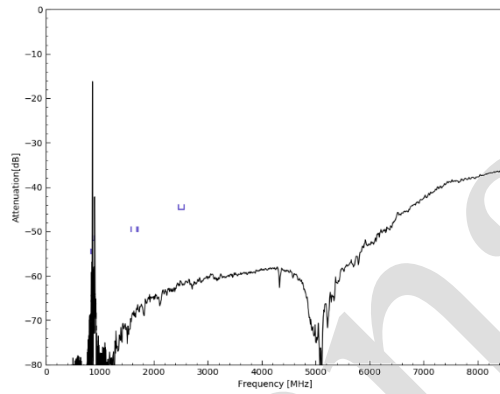
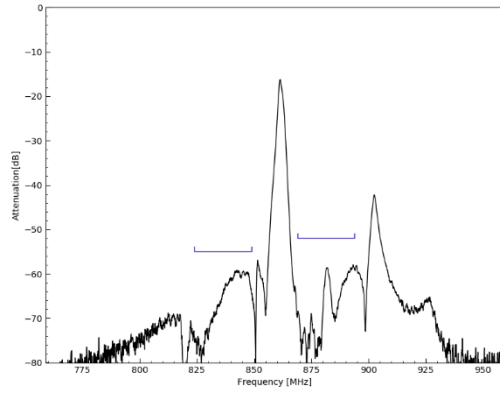
Ant to Rx



Electrical Characteristics

Band5 Duplexer

Tx to Rx

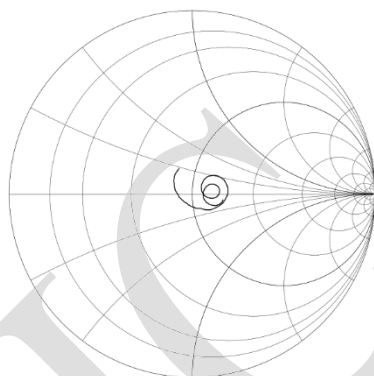
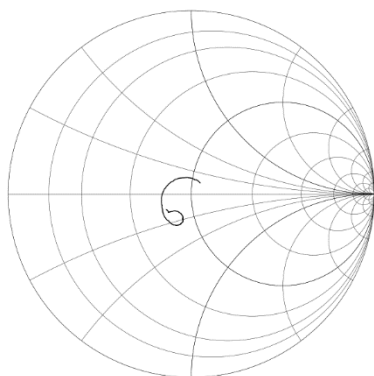


Electrical Characteristics

Band5 Duplexer

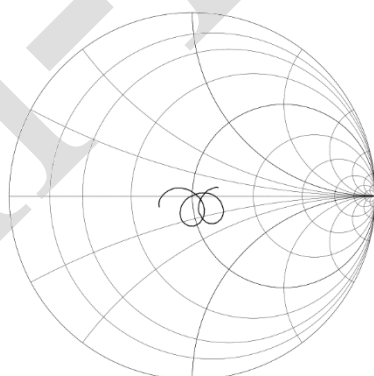
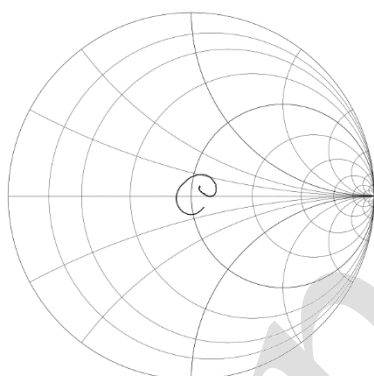
Ant Impedance (Tx band)

Ant Impedance (Rx band)

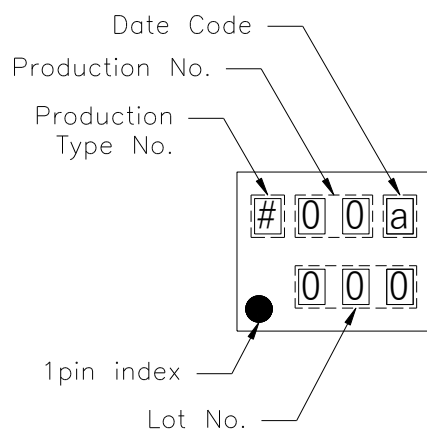


Tx Impedance

Rx Impedance



Marking Information



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

Product No. : 46

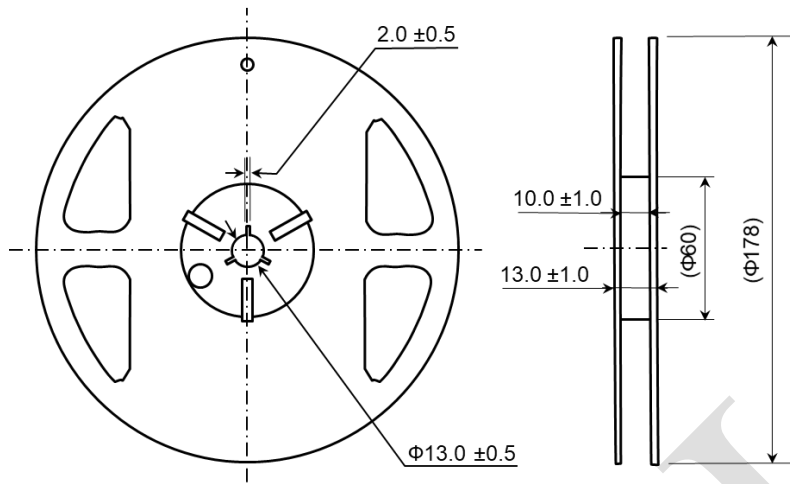
Lot No. (Indicated by 0 ~ 9 or A to Z and a to z, except I, O, i, o and l)

Product date code :

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
2027	n	p	q	r	s	t	u	v	w	x	y	z

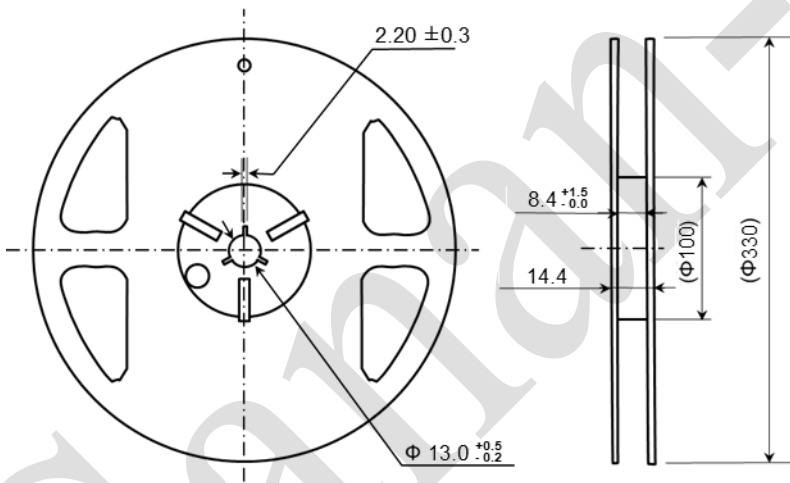
The diagram illustrates the layout of a magnetic tape. It is divided into three main sections: **Vacant**, **Components Contained**, and **Vacant + Leader Part**. The tape runs from **END** to **START**. The first section, **Vacant**, is at least 150mm long. The third section, **Vacant + Leader Part**, is at least 400mm long. Components are represented by circles and squares, some of which are shaded to indicate specific data or status.

Reel Information



$\Phi 178$ Reel Dimension

UNIT: mm



$\Phi 330$ Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
LBD0882B46-SA	Bulk (few pieces)
LBD0882B46-MB	Tape & Reel 3,000 pcs/reel
LBD0882B46-MC	Tape & Reel 10,000 pcs/reel
LBD0882B46-SZ	EVB

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Revision History

Revision	Date	Description
1.0	Jan. 29, 2024	● Initial release
2.0	Mar. 14, 2024	● Update typ spec, Electrical Characteristics, Product date code

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