

Data Sheet for

SAW Components

2.4GHz WiFi

Single Filter



Product ID: RAS2442A35

Date: Dec 27, 2022

Revision: 0.1 Preliminary

Features

- ◆ Package Size : 1.1 x 0.9 x 0.5max mm
- ◆ Single-Ended Input and Output
- ◆ Terminating Impedance : 50 Ω
- ◆ Moisture Sensitivity Level 3
- ◆ ESD Sensitive Device
- ◆ TC-SAW

Electrical Specifications 2.4GHz WiFi Single Filter

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

TRx to Ant					Min.	Typ.	Max.	Unit
Insertion Loss								
	2401	-	2483	MHz	-	1.7	2.6	dB _{INT} ^{*1}
	2406	-	2478	MHz	-	1.4	1.9	dB _{INT} ^{*2}
Pass Band Ripple								
	2401	-	2483	MHz	-	0.9	4.0	dB
VSWR TRx								
	2401	-	2483	MHz	-	1.5	2.2	-
VSWR Ant								
	2401	-	2483	MHz	-	1.5	2.2	-
Absolute Attenuation								
	10	-	1559	MHz	32	45	-	dB
	1559	-	1606	MHz	33	45	-	dB
	1710	-	1785	MHz	33	44	-	dB
	1805	-	1880	MHz	33	45	-	dB
	1850	-	1990	MHz	35	45	-	dB
	2110	-	2170	MHz	38	47	-	dB
	2300	-	2350	MHz	46	51	-	dB
	2350	-	2370	MHz	40	52	-	dB
	2370	-	2380	MHz	23	41	-	dB
	2370	-	2380	MHz	30	43	-	dB ^{*3}
	2380	-	2390	MHz	5	16	-	dB
	2380	-	2390	MHz	8	20	-	dB ^{*3}
	2496	-	2690	MHz	3	42	-	dB
	2496	-	2501	MHz	3	42	-	dB
	2496	-	2501	MHz	8	44	-	dB ^{*3}
	2500	-	2505	MHz	14	48	-	dB
	2500	-	2505	MHz	23	54	-	dB ^{*3}
	2505	-	2570	MHz	39	51	-	dB
	2570	-	2690	MHz	40	51	-	dB
	2555	-	2655	MHz	39	53	-	dB
	2620	-	2690	MHz	39	51	-	dB

4800	-	5000	MHz	45	53	-	dB
7200	-	7500	MHz	33	50	-	dB

*1 : WLAN ch1-13 18MHz-BW

*2 : WLAN ch2-12 18MHz-BW

*3 : Average over 5MHz

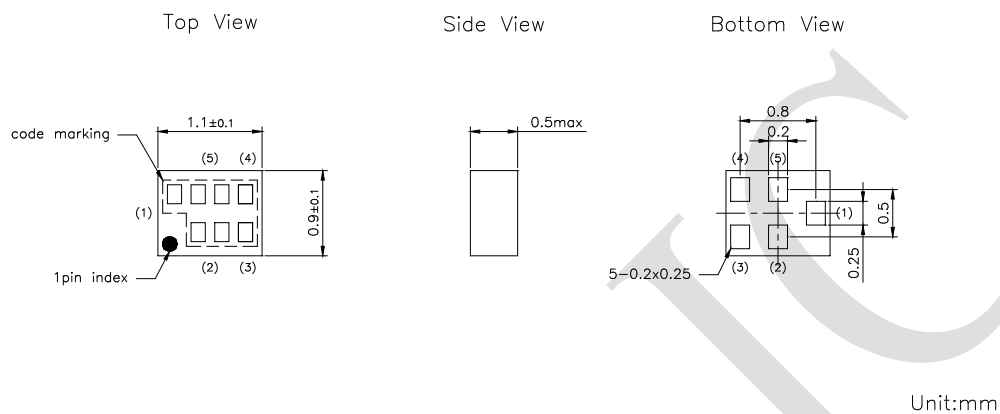
Maximum Ratings

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

Recommended Operating Conditions

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

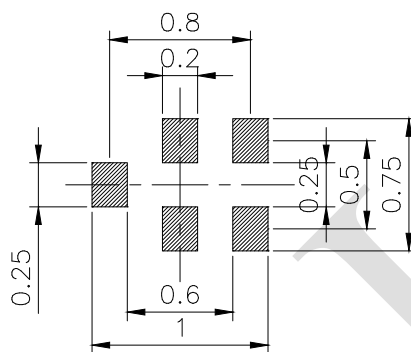
Package Information



Pin Configuration

1 : TRx
 4 : Ant
 Other : GND

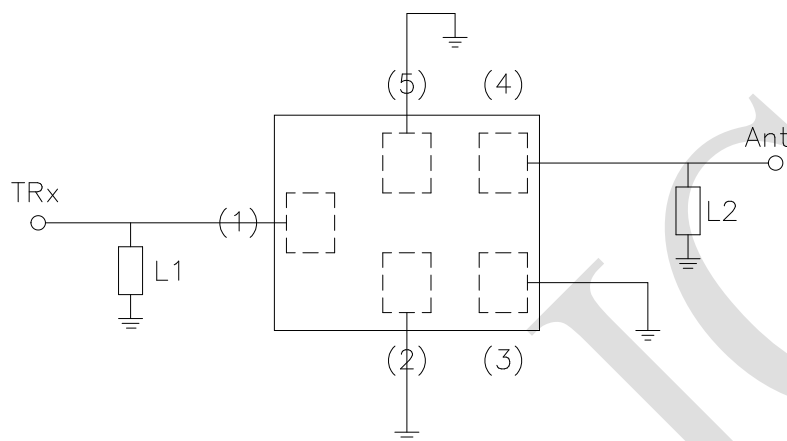
Land Pattern



Unit:mm

3

Application Circuit



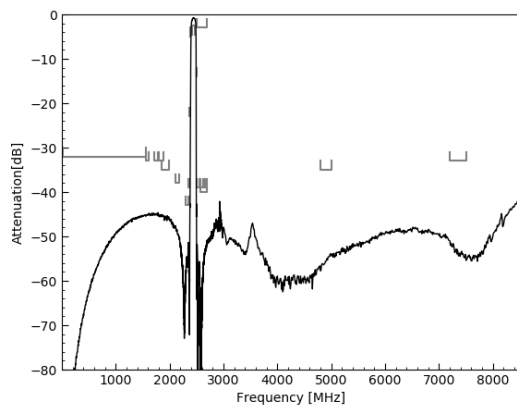
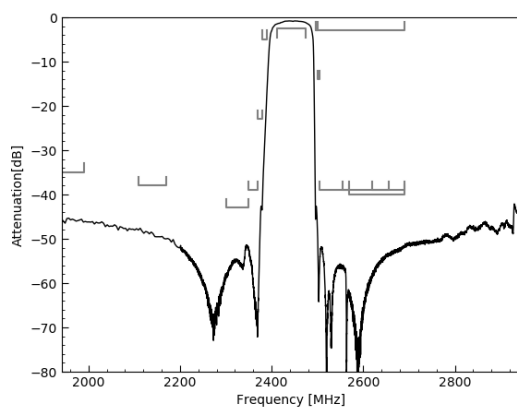
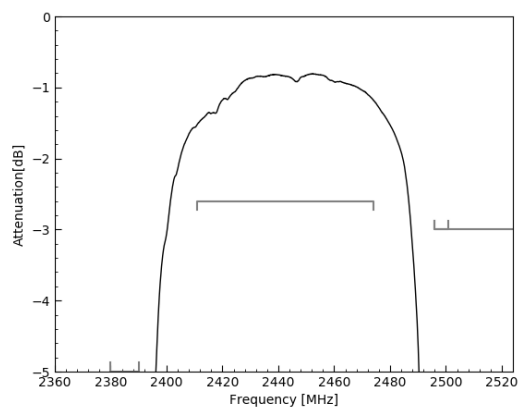
Port	Terminating Z	Matching Component
TRx	50 Ω	L1 : 15nH (Ideal inductor)
Ant	50 Ω	L2 : 6.2nH (Ideal inductor)

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

Electrical Characteristics

2.4GHz WiFi Single Filter

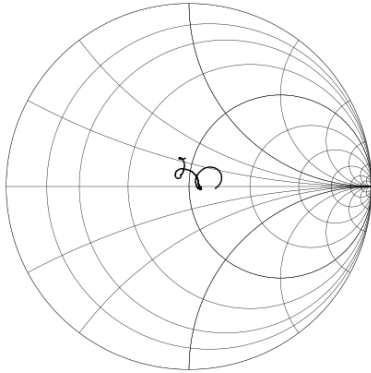
TRx to Ant



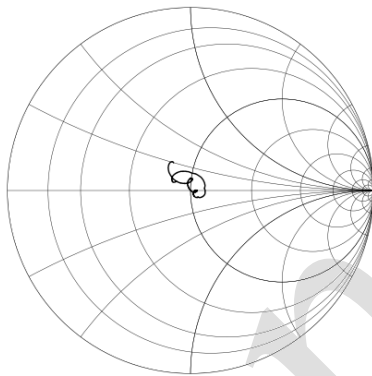
Electrical Characteristics

2.4GHz WiFi Single Filter

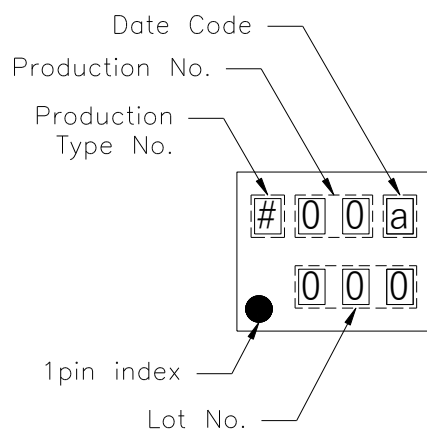
TRx Port Impedance



Ant Port Impedance



Marking Information



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

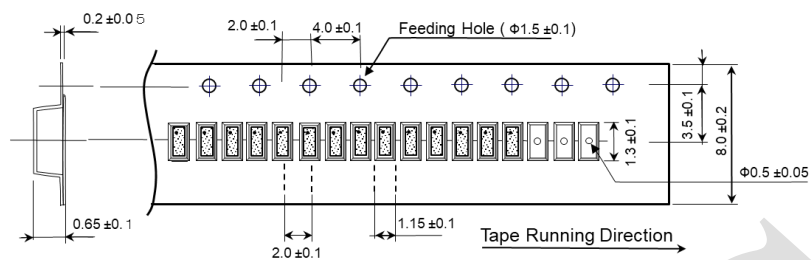
Product No. : 35

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

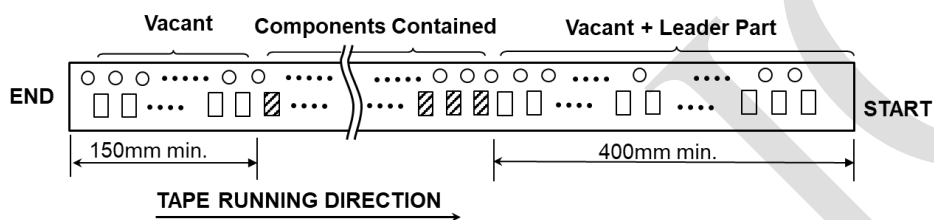
Product date code :

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

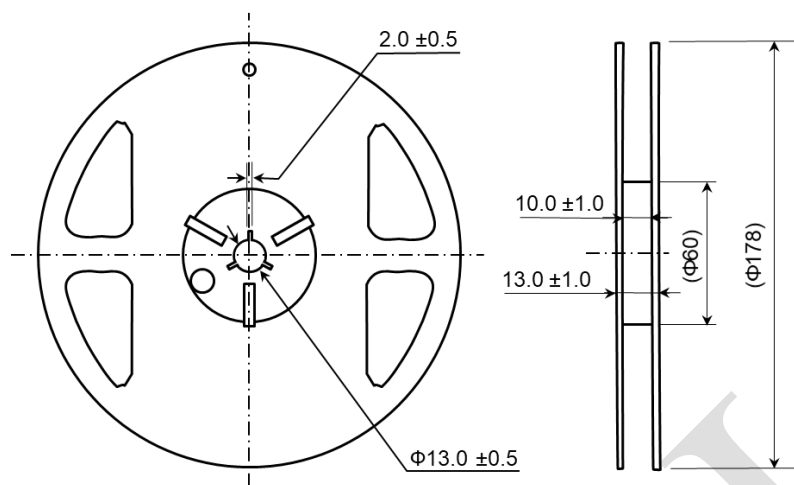
Tape Information



UNIT: mm



Reel Information



$\Phi 178$ Reel Dimension

UNIT: mm

Ordering Code

Part Number	Description
RAS2442A35-SA	Bulk (few pieces)
RAS2442A35-MB	Tape & Reel 3,000 pcs/reel
RAS2442A35-MC	Tape & Reel 10,000 pcs/reel
RAS2442A35-SZ	EVB

Revision History

Revision	Date	Description
0.1	Dec. 27, 2022	● Initial release
		●
		●

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