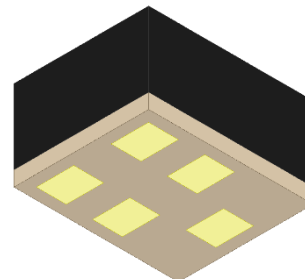
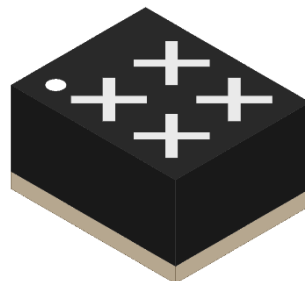


2.4 – 2.48GHz Band Pass Filter, BAW (Bulk Acoustic Wave)

- Superior attenuation for bands outside passband
- For stringent 2.4GHz coexistence requirements
- Low loss and high out-of-band selectivity
- Small size (1.0x0.9x0.6mm)
- LGA footprint



General Specifications¹

Passband Frequency (MHz)	2402 – 2482
Impedance ² (Ω)	50
Frequency Range (MHz)	2402 – 2421.5
Insertion Loss (dB)	1.9 Typ. (2.3 Max.)
Frequency Range (MHz)	2407.5 – 2426.5
Insertion Loss (dB)	1.8 Typ. (2.1 Max.)
Frequency Range (MHz)	2412.5 – 2471.5
Insertion Loss (dB)	1.5 Typ. (2.0 Max.)
Frequency Range (MHz)	2457.5 – 2476.5
Insertion Loss (dB)	1.4 Typ. (2.0 Max.)
Frequency Range (MHz)	2462.5 – 2482
Insertion Loss (dB)	1.6 Typ. (2.4 Max.)
Insertion Loss Ripple (dB)	1.0 Typ. (1.4 Max.)
Return Loss Input (dB)	17.7 Typ. (14 Min.)
Return Loss Output (dB)	15.6 Typ. (12.8 Min.)
Attenuation	
Frequency Range (MHz)	699 – 1700
Attenuation (dB)	28 Typ. (26 Min.)
Frequency Range (MHz)	1700 – 2200
Attenuation (dB)	26 Typ. (25 Min.)
Frequency Range (MHz)	2300 – 2370
Attenuation (dB)	40 Typ. (37 Min.)

¹ Typical value represents average measurement at 25°C. Min./Max. values represent measurements from -40°C to +85°C

² With matching network

General Specifications (continued)

Frequency Range (MHz)	2515 – 2690
Attenuation (dB)	36 Typ. (29 Min.)
Frequency Range (MHz)	2800 – 4500
Attenuation (dB)	46 Typ. (31 Min.)
Frequency Range (MHz)	4800 – 5000
Attenuation (dB)	55 Typ. (54 Min.)
Frequency Range (MHz)	7200 – 7500
Attenuation (dB)	27 Typ. (23 Min.)

Maximum Ratings

Maximum RF Input Power to Pin 1 (dBm, CW)	+29.5
DC Voltage (V) ³	+5
Operating Temperature (°C)	-40 to +85
Recommended Storage Conditions post-installation (°C)	-40 to +85
Recommended Storage Conditions and Period for Unused T&R Product	45% - 60% RH +5 to +35 18 Months Max.

Handling Precautions

ESD – Human Body Model (HBM) ⁴	Class 1B (ESDA / JEDEC JS-001-2012)
ESD – Charged Device Model (CDM) ⁵	Class C3 (JEDEC JESD22-C101F)
MSL – Moisture Sensitivity Level ⁶	Level 3 (IPC / JEDEC J-STD-020)

³ 168-hour test according to IEC60068-2-67: Damp heat, steady state, accelerated test primarily intended for components

⁴ Class 1B: 500 to <1000V, 25°C ±5°C, Relative humidity: 45% - 60%RH, Voltage shift ±30% at reference point before/after zapping

⁵ Class C3: >1000V, 25°C ±5°C, Relative humidity: 45% - 60%RH, Voltage shift ±30% at reference point before/after zapping

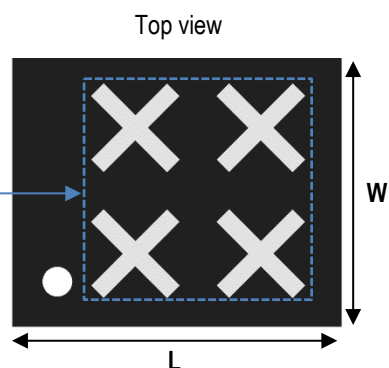
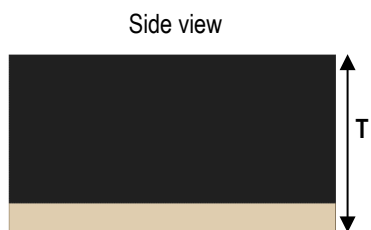
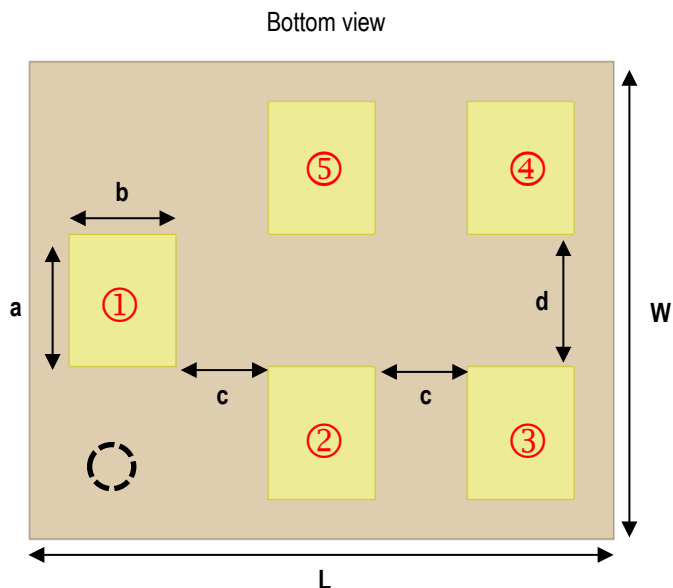
⁶ Level 3: 24-hour bake at 125°C, soak for 192 hours at 30°C, 60% RH, reflow 3 cycles, meet specifications after cycling at room temperature

Mechanical Dimensions

	Inches			Millimeters		
L	0.043	±	0.002	1.10	±	0.05
W	0.035	±	0.002	0.90	±	0.05
T	0.024		Max.	0.60		Max.
a	0.010	±	0.002	0.25	±	0.05
b	0.008	±	0.002	0.20	±	0.05
c	0.007	±	0.002	0.175	±	0.05
d	0.010	±	0.002	0.25	±	0.05

Terminal Configuration

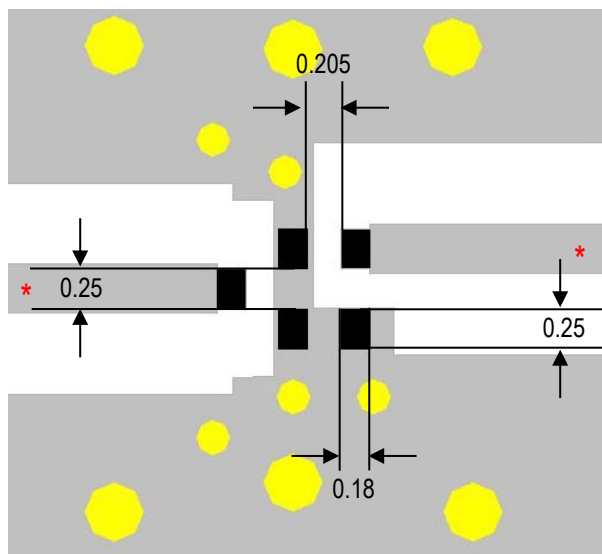
Pin Number	Function
1	INPUT
2	GND
3	GND
4	OUTPUT
5	GND



[Code explanation on page 6](#)



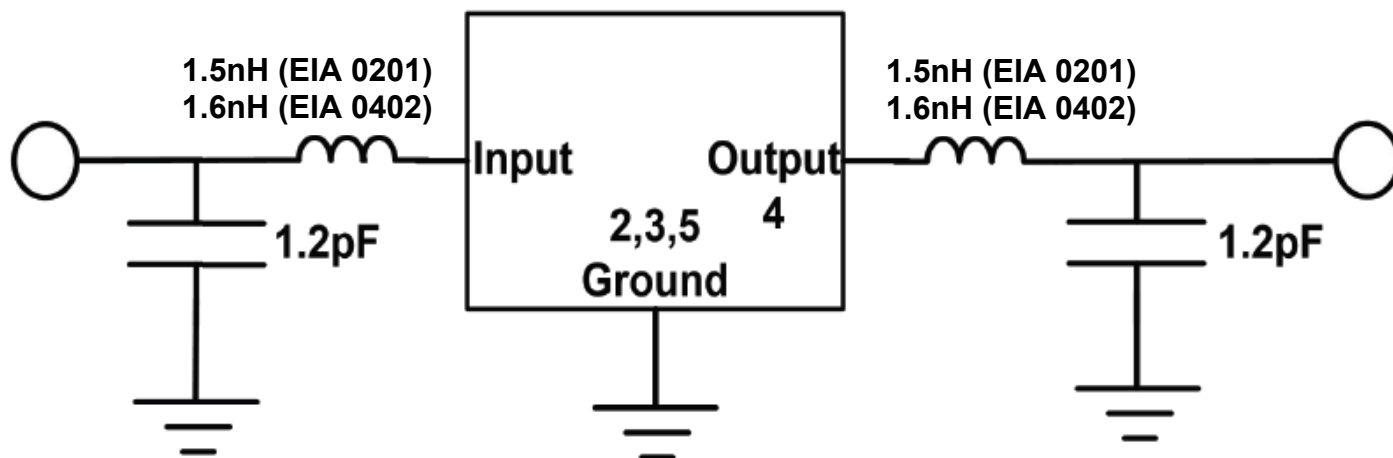
PCB Layout



- Solder Resist
- Land
- Through-hole ($\phi 0.2/\phi 0.35$)
- * Transmission line designed to be 50Ω

If you'd like the CAD PCB layout or have any questions, contact our application engineers for the CAD PCB layout at <https://www.johansontechnology.com/ask-a-question>

External Matching Circuit

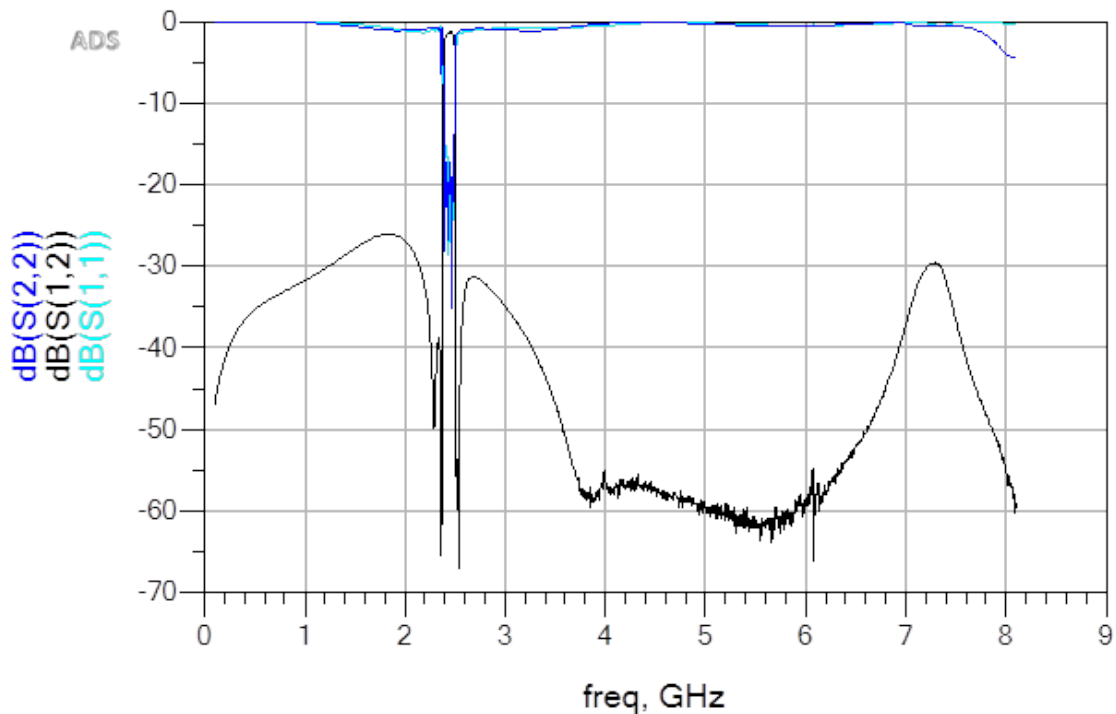
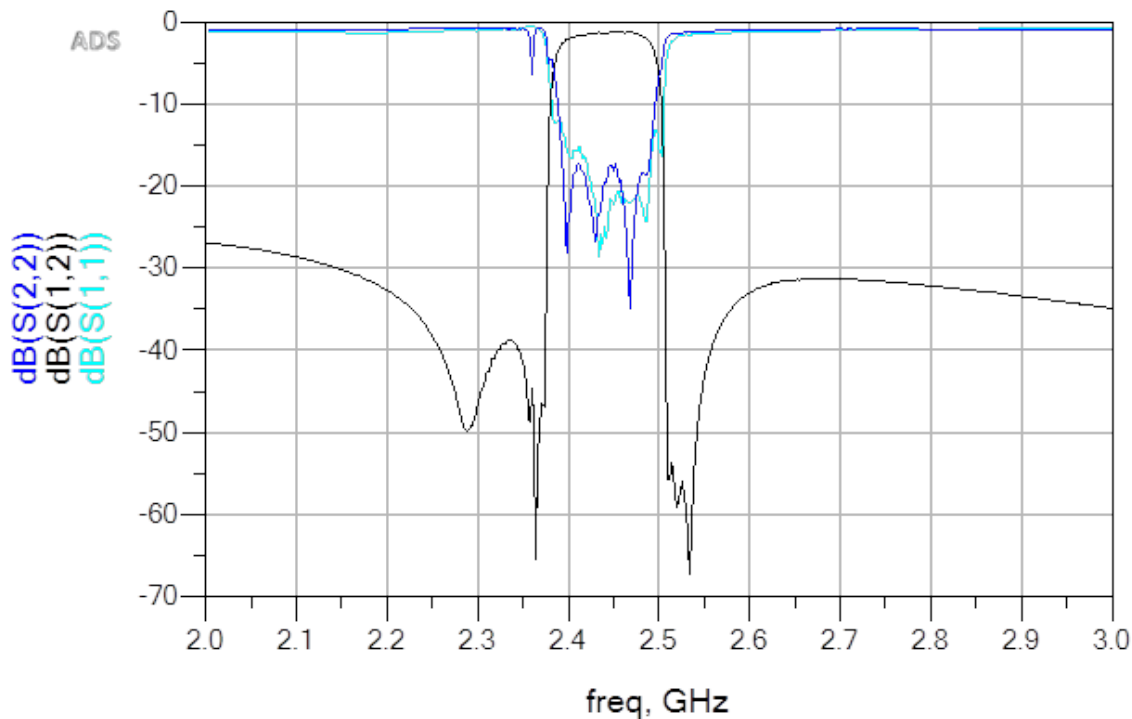


Recommended Part Numbers

L/C	EIA 0201	EIA 0402
1.2pF	QLCD250Q1R2B1GV001T	QSCF500Q1R2B1GV001T
1.5nH / 1.6nH	LRC0201BS1N5GV001T	LRC0402CS1N6GV001T

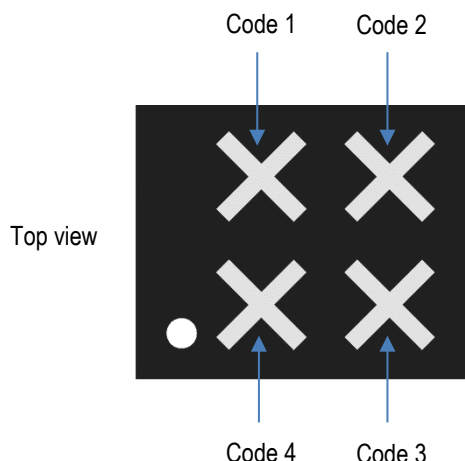


RF Measurement



S-parameter and layout file available upon request. Please contact <https://www.johansontechnology.com/ask-a-question>

Code Explanation



Code 1: "P" for production part.

Code 2: Corresponds to the production year and month. Repeats every 4 years.

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
2020/2024	A	B	C	D	E	F	G	H	J	K	L	M
2021/2025	N	P	Q	R	S	T	U	V	W	X	Y	Z
2022/2026	a	b	c	d	e	f	g	h	i	j	k	m
2023/2027	n	p	q	r	s	t	u	v	w	x	y	z

Code 3: Corresponds to the week within each month ID, using the capital letters A to E to represent the 1st to 5th week of each month.

Code 4: Corresponds to the serial number of the lot in each week using the capitalized and lower-cased letters. Repeats every 4 years.

001	002	003	004	005	006	007	008	009	010	011	012
A	B	C	D	E	F	G	H	J	K	L	M
013	014	015	016	017	018	019	020	021	022	023	024
N	P	Q	R	S	T	U	V	W	X	Y	Z
025	026	027	028	029	030	031	032	033	034	035	036
a	b	c	d	e	f	g	h	i	j	k	m
037	038	039	040	041	042	043	044	045	046	047	048
n	p	q	r	s	t	u	v	w	x	y	z

Orderable Part Number

Part Number Explanation		
Packaging Style	Bulk	2442BP08A0080001B
	T & R	2442BP08A0080001T (Qty: 10,000pcs/reel)
Evaluation Board	50Ω SMA	2442BP08A0080001CE1

Important Links

[2442BP08A0080001T Downloads](#)

[2.4GHz Antennas](#)

[Antenna Tuning, Optimization, and Validation Services](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

[RoHS Compliance](#)