

EPCOS SAW Filters and Resonators



RoHS Compliant This product is RoHS compliant.

A

B

1

Pin Configuration:

- 2 Input
- 5 Output, grounded in 1-port conf.
- 1, 3, 4, 6 Ground (case)

2

Pin Configuration:

- 1 Input Ground (recommended) or Input
- 2 Input (recommended) or Input Ground
- 5 Output (recommended) or Output Ground
- 6 Output Ground (recommended) or Output
- 4, 8 Case - Ground To be grounded
- 3, 7 To be grounded

3

Pin Configuration:

- 2 Input
- 5 Output
- 1, 3, 4, 6 Ground

4

Pin Configuration:

- 2 Input
- 5 Output
- 1, 3, 4, 6 Ground

5

Pin Configuration:

- 6 Input
- 5 Input Ground
- 2 Output
- 1 Output (bal.) or output ground (unbal.)
- 3, 7 To be grounded
- 4, 8 Case - Ground

6

Pin Configuration:

- 2 Input, unbalanced
- 4, 6 Output, balanced
- 1, 3, 5 To be grounded
- 1, 3, 5 Case - Ground

7

Pin Configuration:

- 2 Input
- 5 Output
- 1, 3, 4, 6 Ground

Frequency Control Epcos

DIMENSIONS: mm

Surface Acoustic Wave (SAW) resonators and front end filters are key components in modern Remote Control Applications, which transmit in Europe typically at 433.92MHz or 868-870MHz and in the USA at 315 or 915MHz. These remote controls are used in systems for Remote Keyless Entry (RKE, wireless operation of a car's central locking system), wireless Tire Pressure Monitoring (TPMS), electronic toll, RFID, short range data transmission, security alarms and garage door openers. They consist of several transmitters and receivers as well as the combination of both, transceivers.

Transmitter
The code which is supposed to be transmitted to the receiver consists of an encoded identifier (including a rolling code for security reasons) and the message itself to e.g. unlock the central locking system of a car. An oscillator which is synchronized by a SAW resonator oscillates at an exact frequency. Thereby, it generates an RF carrier signal, which (using the simple on-off-keying procedure, OOK) is modulated according to the transmission code by simply turning the oscillator on and off. This coded, modulated RF signal will be sent out through the antenna of the transmitter.

Receiver
The modulated RF signal (encoded message) sent from the transmitter is received by the antenna of the receiver a few feet away (typically 30-300 ft.). Additionally, the receiver will involuntarily pick up environmental noise and spurious emissions which may jam/block the receiver, making it deaf for any message from the transmitter. To avoid this, a narrow band SAW front end filter with high selectivity can filter out this unwanted noise. A local oscillator (stabilized e.g. by a SAW resonator like the transmitter oscillator) generates an LO frequency, typically 500kHz or 10.7MHz below transmission frequency. The filtered RF signal from the antenna will now be mixed down in a mixer with this LO frequency to an intermediate frequency (IF), which can be decoded by decoder ICs and microcontrollers.

- Features:**
- Provides reliable, fundamental mode, quartz frequency stabilization in transmitters or local oscillators
 - RoHS Compatible
 - Ni, Gold-Plated Terminals
 - Passivation Layer Elpas
 - AEC-Q200 Qualified



SAW FILTERS

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Epcos Part Number	Application	Internal Schematic Diagrams	Center Frequency	Case Size (mm)	Min. Insertion Attenuation (dB)	Price Each				Reel Quantity	Price per Piece
							1	50	100	1000		
871-B39321B3761Z810	B39321B3761Z810	Keyless Entry, Short Range RF	B2	315MHz	3.8x3.8x1.5	1.9	3.68	2.44	2.24	1.71	3000	1.61
871-B39321B3741H110	B39321B3741H110	Keyless Entry, Short Range RF	A1	315MHz	3.0x3.0x1.0	1.9	3.00	2.00	1.82	1.49	9000	1.23
871-B39321B3722U410	B39321B3722U410	Keyless Entry, Short Range RF	A1	315MHz	3.0x3.0x1.0	1.9	2.01	1.34	1.21	1.00	9000	.836
871-B39431R960H110	B39431R960H110	ISM Band & Keyless Entry	A1	433.92MHz	3.0x3.0x1.0	1.3	2.03	1.35	1.23	1.02	9000	.847
871-B39431B3760Z810	B39431B3760Z810	ISM Band & Keyless Entry	B2	433.92MHz	3.8x3.8x1.5	1.9	2.72	2.43	2.27	1.50	3000	1.40
871-B39431B3743H110	B39431B3743H110	ISM Band & Keyless Entry	A1	433.92MHz	3.0x3.0x1.0	1.9	3.00	2.00	1.82	1.49	9000	1.23



SAW RESONATORS

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Epcos Part Number	Application	Internal Schematic Diagrams	Center Frequency	Case Size (mm)	Min. Insertion Attenuation (dB)	Price Each				Reel Quantity	Price per Piece
							1	50	100	1000		
871-B39431B3721U410	B39431B3721U410	ISM Band & Keyless Entry	A3	433.92MHz	3.0x3.0x1.1	2.9	2.01	1.34	1.21	1.00	9000	.836
871-B39871B3734H110	B39871B3734H110	ISM Band Europe	A3	868.3MHz	3.0x3.0x1.1	2.9	2.54	1.69	1.54	1.26	9000	1.04
871-B39871B3716U410	B39871B3716U410	ISM Band Europe	A4	869MHz	3.0x3.0x1.1	3.9	2.54	1.69	1.54	1.26	9000	1.04
871-B39921B3588U410	B39921B3588U410	ISM Band USA	A4	915MHz	3.0x3.0x1.1	3.3	2.40	1.60	1.46	1.12	9000	.94
871-B39162B4060U810	B39162B4060U810	GPS	A5	1575.42MHz	3.0x3.0x1.1	1.8	2.09	1.88	1.74	1.32	9000	.97
871-B39162B4050U510	B39162B4050U510	GPS	A6	1575.42MHz	3.0x3.0x1.1	3.8	7.17	4.78	4.33	3.35	9000	2.26
871-B39162B3521U410	B39162B3521U410	GPS	A7	1575.42MHz	3.0x3.0x1.1	3.5	3.00	2.00	1.82	1.49	9000	1.23

