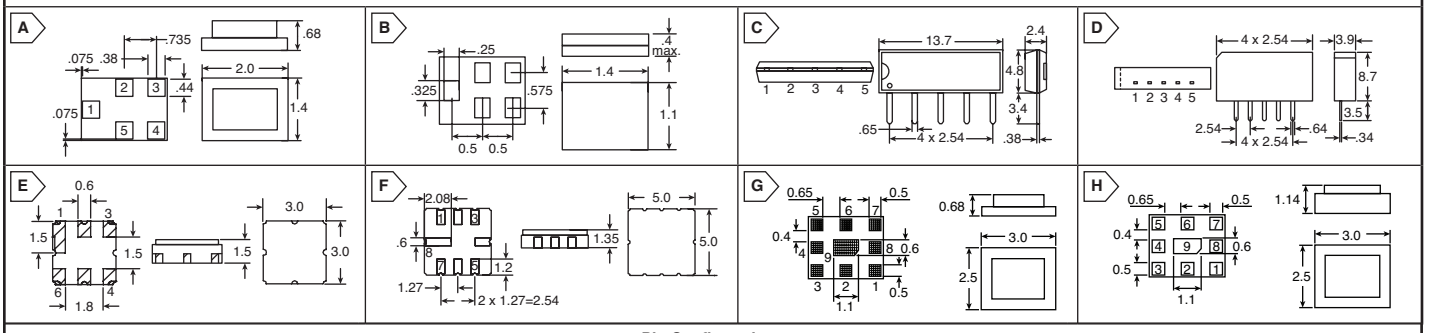
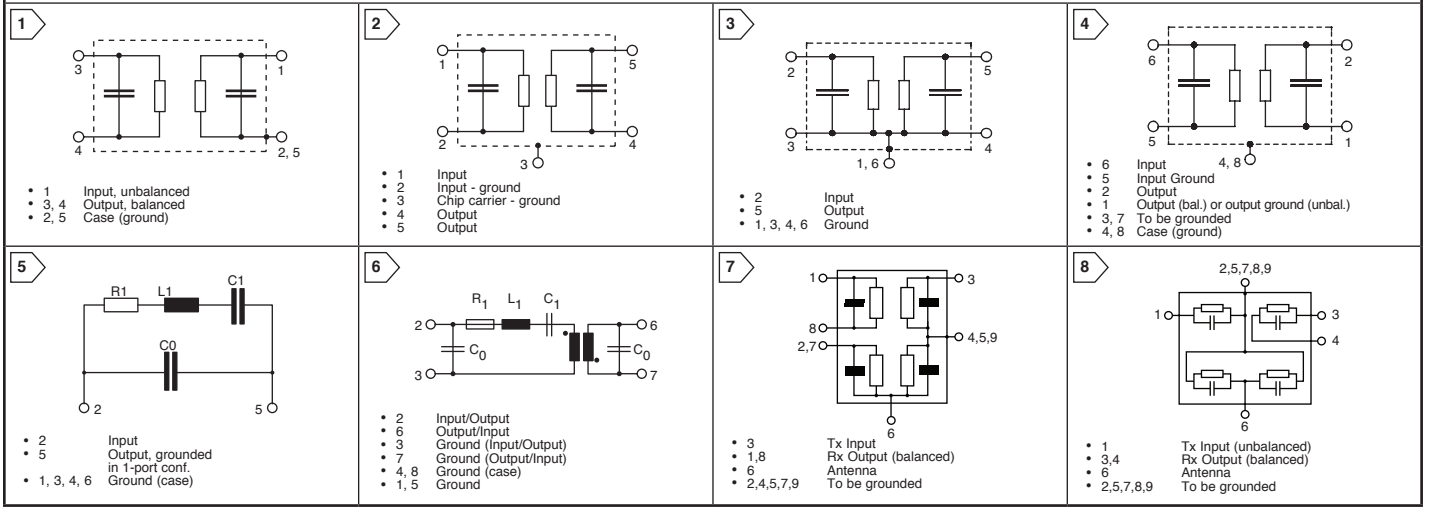
EPCOS SAW Filters, Duplexers and Resonators

RoHS Compliant This product is RoHS compliant.

DIMENSIONS: mm



Pin Configurations



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

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Epcos Part No.	Application	Internal Schematic Diagrams	Center Frequency (MHz)	Case Size (mm)	Min. Insertion Attenuation (dB)	Price Each 1	50	100	1000	Reel Qty.	Price Per Piece
SAW Filters												
871-B39162B7840C710	B39162B7840C710	Low Loss GPS	A1	1575.42	2.0x1.4x0.68	1.2	1.59	1.43	1.19	.783	9000	.72
871-B39162B9417K610	B39162B9417K610	GPS	B1	1575.42	1.4x1.1x0.4	1.1	1.04	.93	.77	.62	15000	.46
871-B39242B9413K610	B39242B9413K610	Bluetooth	B1	2441.75	1.4x1.1x0.4	2.0	.87	.78	.652	.522	6000	.435
871-B39252B9430M410	B39252B9430M410	WLAN	B1	2450	1.4x1.1x0.4	2.2	.87	.78	.652	.522	15000	.43
871-B39361X6865N201	B39361X6865N201	BandPass 6.0MHz	C2	36.125	SIP5D	17.6	4.35	3.91	3.27	2.47	2000	2.32
871-B39438X6964M100	B39438X6964M100	BandPass 6.0MHz	D2	43.75	SIP5K	14.8	5.52	5.13	4.65	3.50	1000	3.50
871-B39438X6964N201	B39438X6964N201	BandPass 6.0MHz	D2	43.75	SIP5K	14.8	3.08	2.06	1.88	1.44	2000	1.35
871-B39440X6855M100	B39440X6855M100	BandPass 7.9MHz	C2	44	SIP5D	17.3	1.30	.87	.792	.612	1000	.612
871-B39440X6941N201	B39440X6941N201	BandPass 7.5MHz	C2	44	SIP5D	20.0	7.89	6.31	5.26	4.06	2000	3.91
SAW Resonators												
871-B39871B3716U410	B39871B3716U410	ISM Band Europe	E3	869	3.0x3.0x1.1	3.9	1.54	1.38	1.28	.96	9000	.80
871-B39162B4060U810	B39162B4060U810	GPS	E4	1575.42	3.0x3.0x1.1	1.8	2.09	1.91	1.74	1.20	9000	.716
871-B39311R854H210	B39311R854H210	Transmitter Stability	E5	314.5	3.0x3.0x1.1	1.3	2.60	1.72	1.55	1.30	3000	1.19
871-B39321R801H210	B39321R801H210	Transmitter Stability	E5	315	3.0x3.0x1.1	1.5	.99	.83	.74	.588	3000	.583
871-B39321R821H210	B39321R821H210	Transmitter Stability	E5	315	3.0x3.0x1.1	1.5	1.11	.99	.938	.69	3000	.64
871-B39431R880H210	B39431R880H210	Transmitter Stability	E5	433.92	3.0x3.0x1.1	1.2	.99	.87	.74	.66	3000	.629
871-B39431R900U410	B39431R900U410	Transmitter Stability	E5	433.92	3.0x3.0x1.1	1.4	1.26	1.13	.94	.62	9000	.52
871-B39871R2711U310	B39871R2711U310	Transmitter Stability	F6	868.3	5.0x5.0x1.35	7.0	2.18	2.00	1.82	1.22	3000	1.01
SAW Duplexers												
871-B39781B7928P810	B39781B7928P810	Low Loss Mobile Telephone	G7	782, 751	3x2.5	1.5, 2	2.99	2.42	2.20	1.84	9000	1.53
871-B39881B7654P810	B39881B7654P810	Low Loss Mobile Telephone	H8	836.5, 881.5	3x2.5	1.7, 2.2	2.99	2.42	2.20	1.84	9000	1.53

SAW Resonators

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Epcos Part No.	Application	Center Frequency (MHz)	Case Size (mm)	Min. Insertion Attenuation (dB)	Price Each 1	50	100	1000
871-B39311R2710U310	B39311R2710U310	Transmitter stability	311.06	5.0x5.0x1.35	8.7	2.18	2.09	1.82	1.01
871-B39321R2704U310	B39321R2704U310	Transmitter stability	315.00	5.0x5.0x1.35	9.4	2.18	2.10	1.82	1.01
871-B39421R2702U310	B39421R2702U310	Transmitter stability	418.05	5.0x5.0x1.35	9.2	2.03	1.82	1.52	1.21
871-B39431R2701U310	B39431R2701U310	Transmitter stability	433.92	5.0x5.0x1.35	9.2	2.18	2.00	1.82	1.22
871-B39431R980U410	B39431R980U410	Transmitter stability	433.92	3.0x3.0x1.1	1.4	1.08	.97	.812	.623
871-B39801R2712U310	B39801R2712U310	Transmitter stability	868.69	5.0x5.0x1.35	3.1	2.18	2.00	1.82	1.01
871-B39921R2706U310	B39921R2706U310	Transmitter stability	915.00	5.0x5.0x1.35	7.0	1.59	1.47	1.32	1.03

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