

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW resonator

Short range devices

| | |
|----------------|-------------------|
| Series/type: | R992 |
| Ordering code: | B39431R 992H110 |
| Date: | December 18, 2012 |
| Version: | 2.1 |

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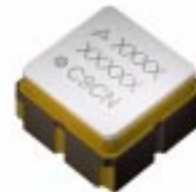
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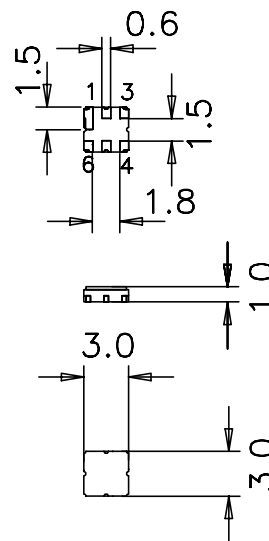
Data sheet


Application

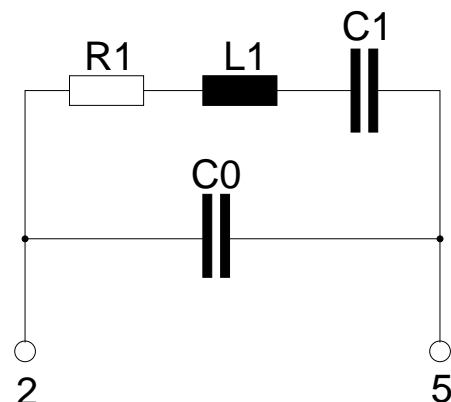
- 1-port resonator
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators


Features

- Package size 3.0 x 3.0 x 1.0 mm³
- Package code DCC6E
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- Passivation layer Elpas
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**


Pin configuration

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



Data sheet

Characteristics

| | |
|-------------------------------|----------------------|
| Reference temperature: | $T_A = 25\text{ °C}$ |
| Terminating source impedance: | $Z_S = 50\ \Omega$ |
| Terminating load impedance: | $Z_L = 50\ \Omega$ |

| | | min. | typ. | max. | |
|--|-----------------|---------|--------|---------|--------------------|
| Center frequency¹⁾ | f_C | 433.915 | 433.94 | 433.965 | MHz |
| Minimum insertion attenuation | α_{\min} | — | 1.5 | 1.9 | dB |
| Unloaded quality factor | Q_U | 7800 | 11000 | — | |
| Ageing of f_C | | — | — | -50/+50 | ppm |
| Equivalent circuit elements | | | | | |
| Motional capacitance | C_1 | — | 1.581 | — | fF |
| Motional inductance | L_1 | — | 85.08 | — | μH |
| Motional resistance | R_1 | — | 20 | 28 | Ω |
| Parallel capacitance ²⁾ | C_0 | — | 2.4 | — | pF |
| Temperature coefficient of frequency³⁾ | TC_f | — | -0.032 | — | ppm/K ² |
| Turnover temperature | T_0 | 10 | — | 30 | $^{\circ}\text{C}$ |

1) Center frequency is defined as maximum of the real part of the admittance.

2) If used in two port configuration (pin 2 - input, pin 5 - output) C_0 is reduced by approx. 0.3 pF.

3) Temperature dependence of f_C : $f_C(T_A) = f_C(T_0) (1 + TC_f (T_A - T_0)^2)$

Maximum ratings

| | | | | |
|----------------------------|------------------|----------|--------------------|--|
| Operable temperature range | T | -40/+125 | $^{\circ}\text{C}$ | |
| Storage temperature range | T_{stg} | -40/+125 | $^{\circ}\text{C}$ | |
| DC voltage | V_{DC} | 12 | V | |
| Source power | P_S | 0 | dBm | |


References

| | |
|----------------------------|---|
| Type | R992 |
| Ordering code | B39431R 992H110 |
| Marking and package | C61157-A7-A143 |
| Packaging | F61074-V8228-Z000 |
| Date codes | L_1126 |
| Soldering profile | S_6001 |
| RoHS compatible | RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 th , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases. |

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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