RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW resonator

Short range devices

Series/type:	R901
Ordering code:	B39321R 901H110
Date:	January 30, 2013
Version:	2.0

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Series/type:	**R901**
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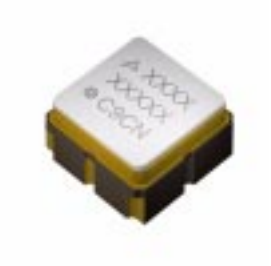
Data sheet SMD

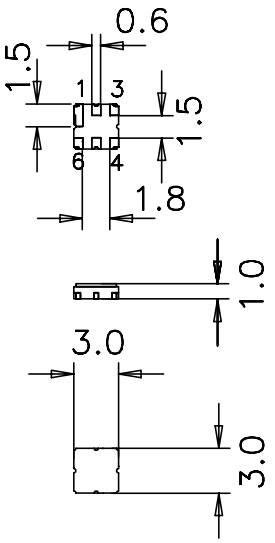
Application

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



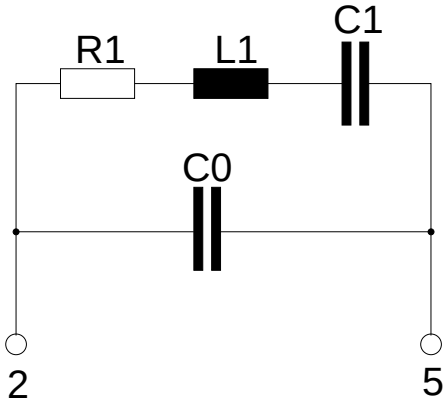
Features

- Package size 3.0 x 3.0 x 1.0 mm³
- Package code DCC6E
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- Passivation layer Elpas
- AEC-Q200 qualified component family
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Data sheet SMD

Characteristics

Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency[1]	f_C	314.925	315.000	315.075	MHz
Minimum insertion attenuation	α_{min}	—	1.5	1.9	dB
Unloaded quality factor	Q_U	7600	11000	—	
Ageing of f_C		—	—	–50/+50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2.268	—	fF
Motional inductance	L_1	—	112.5	—	µH
Motional resistance	R_1	—	20	28	Ω
Parallel capacitance[2]	C_0	—	3.3	—	pF
Temperature coefficient of frequency[3]	TC_f	—	–0.032	—	ppm/K²
Turnover temperature	T_0	15	—	35	°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	–45/+125	°C	
Storage temperature range	T_{stg}	–45/+125	°C	
DC voltage	V_{DC}	12	V	
Source power	P_S	0	dBm	

References

Type	R901
Ordering code	B39321R 901H110
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 8th, 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.
Coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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