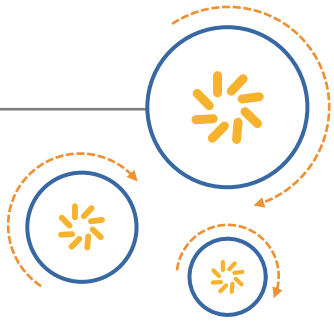
RF360 Europe GmbH

A Qualcomm – TDK Joint Venture



SAW Components

SAW resonator

Short range devices

Series/type:	R1921
Ordering code:	B39321R1921A310
Date:	May 19, 2011
Version:	2.0

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Series/type:	**R1921**
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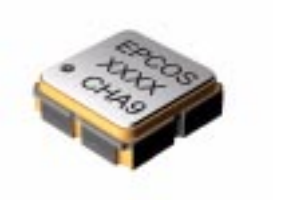
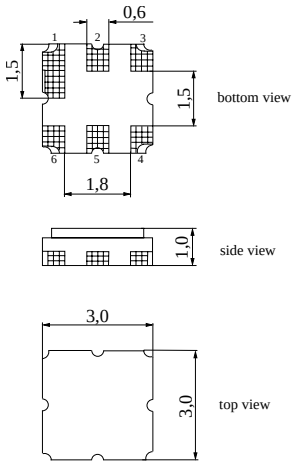
Application

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



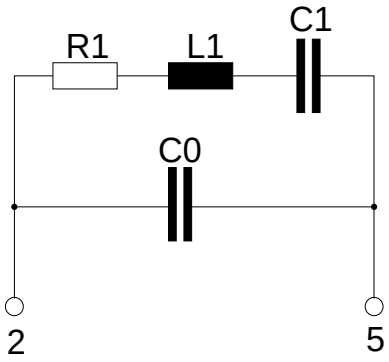
Features

- Package size 3.0 x 3.0 x 1.0 mm³
- Package code DCC6G
- 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**lectrostactic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



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	314.975	315.000	315.025	MHz
Minimum insertion attenuation	α_{min}	—	1.5	2.0	dB
Unloaded quality factor	Q_U	7000	9800	—	
Ageing of f_C		—	—	–50/+50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2.455	—	fF
Motional inductance	L_1	—	104.0	—	µH
Motional resistance	R_1	—	21	30	Ω
Parallel capacitance[2)]	C_0	—	3.6	—	pF
Temperature coefficient of frequency[3)]	TC_f	—	–0.032	—	ppm/K²
Turnover temperature	T_0	10	—	30	°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	R1921
Ordering code	B39321R1921A310
Marking and package	C61157-A7-A172
Packaging	F61074-V8228-Z000
Date codes	L_1126
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."
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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