



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



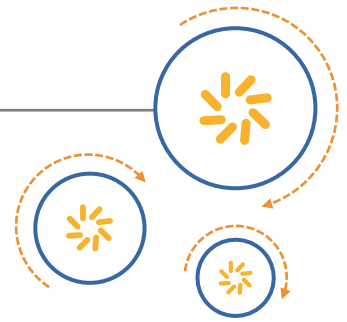
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RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW resonator

Short range devices

Series/type:	R963
Ordering code:	B39321R 963H110
Date:	March 20, 2013
Version:	2.1

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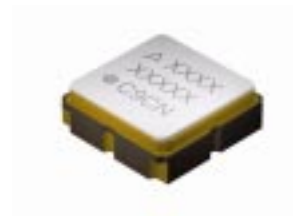
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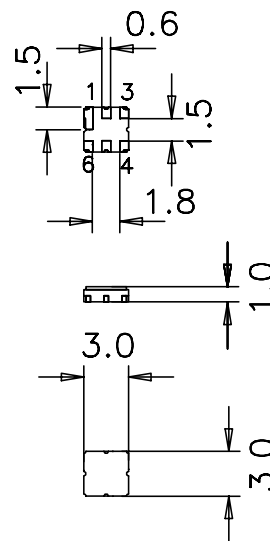
Data sheet


Application

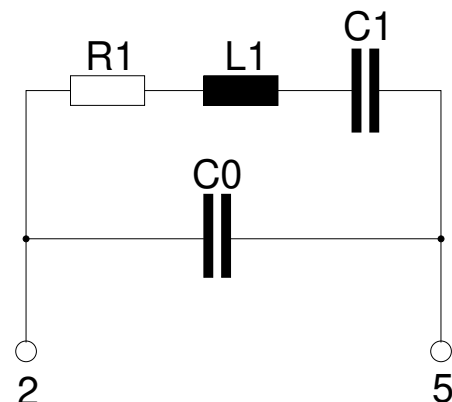
- 1-port resonator
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators


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	314.99	315.04	315.09	MHz
Minimum insertion attenuation	α_{\min}	—	1.4	1.8	dB
Unloaded quality factor	Q_U	8000	11700	—	
Ageing of f_C		—	—	-50/+50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2.39	—	fF
Motional inductance	L_1	—	106.9	—	μH
Motional resistance	R_1	—	18	26	Ω
Parallel capacitance ²⁾	C_0	—	3.2	—	pF
Temperature coefficient of frequency³⁾	TC_f	—	-0.032	—	ppm/K ²
Turnover temperature	T_0	15	—	35	$^{\circ}\text{C}$

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

2) If used in two port configuration (pin 1 - input, pin 3 - 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	R963
Ordering code	B39321R 963H110
Marking and package	C61157-A7-A143
Packaging	F61074-V8168-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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