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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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# SAW Filters for Automotive Electronics

Series/Type: R922

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product		Deadline Last Orders	Last Shipments
B39321R0922H110		2013-05-10	2013-08-31	2013-11-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

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SAW Components R 922

SAW resonator 321.00 MHz

Data sheet



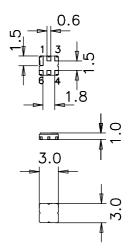
### **Application**

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



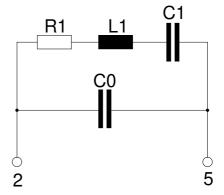
### **Features**

- Package size 3.0 x 3.0 x 1.0 mm<sup>3</sup>
- 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 Inpu
- 5 Output, grounded in 1-port conf.
- 1,3,4,6 Ground (case)





**SAW Components** R 922

**SAW** resonator 321.00 MHz

**Data sheet** 

**Characteristics** 

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

		min.	typ.	max.	
Center frequency <sup>1)</sup>	f <sub>C</sub>	320.925	321.00	321.075	MHz
Minimum insertion attenuation	$lpha_{min}$	_	1.3	1.7	dB
Unloaded quality factor	$Q_U$	7700	11400	_	
Ageing of f <sub>C</sub>		_	_	-50/+50	ppm
Equivalent circuit elements					
Motional capacitance	C <sub>1</sub>	_	2.564	_	fF
Motional inductance	$L_1$	_	95.84	_	μΗ
Motional resistance	$R_1$	_	17	25	Ω
Parallel capacitance <sup>2)</sup>	$C_0$	_	3.3	_	pF
Temperature coefficient of frequency <sup>3)</sup>	TC <sub>f</sub>	_	-0.032	_	ppm/K <sup>2</sup>
Turnover temperature	$T_0$	10	_	30	°C

<sup>1)</sup> Center frequency is defined as maximum of the real part of the admittance.

## **Maximum ratings**

Operable temperature range	T	-40/+125	°C
Storage temperature range	T <sub>stg</sub>	-40/+125	°C
DC voltage	$V_{DC}$	12	V
Source power	$P_S$	0	dBm

<sup>2)</sup> 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 +  $TC_f(T_A - T_0)^2$ )



SAW Components		R 922
SAW resonator		321.00 MHz
Data sheet	SMD	

#### References

Туре	R 922
Ordering code	B39321-R 922-H110
Marking and package	C61157-A7-A143
Packaging	F61074-V8168-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."

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

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For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.



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