

# SAW Components

Data Sheet R820





# SAW ComponentsR820Resonator433,92 MHz

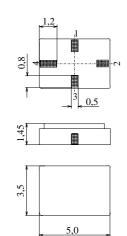
**Data Sheet** 

## Features

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

#### Terminals

Ni, gold plated

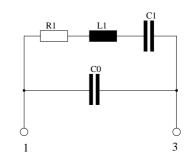


Ceramic package QCC4A

Dimensions in mm, approx. weight 0,1 g

# Pin configuration

1Input3Output, grounded in 1-port conf.2,4Ground (case)



Туре	Ordering code	Marking and Package	Packing		
		according to	according to		
R820	B39431-R 820-H210	C61157-A7-A86	F61074-V8120-Z000		

Electrostatic Sensitive Device (ESD)

### **Maximum ratings**

Operable temperature range	T <sub>A</sub>	-40/+125	°C	
Storage temperature range	T <sub>stg</sub>	-40/+125	°C	
DC voltage	V <sub>DC</sub>	12	V	between any terminals
Source power	Ps	0	dBm	

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Characteristics		
Reference temperature: Terminating source impedance: Terminating load impedance:	$T_{A} = 25 \degree C$ $Z_{S} = 50 \Omega$ $Z_{L} = 50 \Omega$	

		min.	typ.	max.	
Center frequency 1)	f <sub>c</sub>	433,845	433,920	433,995	MHz
Minimum insertion attenuation	$\alpha_{min}$		1,2	1,7	dB
Unloaded quality factor	$Q_{U}$	7500	11500	_	
Ageing of <i>f</i> <sub>c</sub>			_	-50/+50	ppm
Equivalent circuit elements					
Motional capacitance	$C_1$		2,13	_	fF
Motional inductance	$L_1$		63,16	_	μH
Motional resistance	$R_1$		14	22	Ω
Parallel capacitance <sup>2)</sup>	$C_0$	—	2,5	_	pF
Temperature coefficient of frequency <sup>3)</sup>	TC <sub>f</sub>	—	-0,032	—	ppm/K <sup>2</sup>
Turnover temperature	$T_0$	10		40	°C

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

<sup>2)</sup> If used in two port configuration (pin 1-input, pin 3-output)  $C_0$  is reduced by approx. 0,3 pF. <sup>3)</sup>Temperature dependence of  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$ 



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