



# SAW Components

Data Sheet R 822





**SAW Components**

**R 822**

**Resonator**

**319,508 MHz**

**Data Sheet**

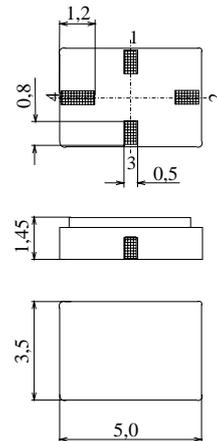
Ceramic package **QCC4A**

**Features**

- 1-port resonator
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators
- Protection layer: Elpas
- AEC-Q200 qualified component family

**Terminals**

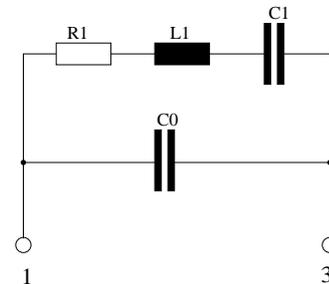
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 g

**Pin configuration**

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



Type	Ordering code	Marking and Package according to	Packing according to
R 822	B39321-R 822-H210	C61157-A7-A86	F61074-V8175-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T_A$	-40/+125	°C	between any terminals
Storage temperature range	$T_{stg}$	-40/+125	°C	
DC voltage	$V_{DC}$	12	V	
Source power	$P_s$	0	dBm	



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**Characteristics**

Reference temperature:  $T_A = 25\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b> <sup>1)</sup>	$f_c$	319,433	319,508	319,583	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	1,5	1,9	dB
Unloaded quality factor	$Q_U$	8500	11000	—	
<b>Ageing of <math>f_c</math></b>		—	—	-50/+50	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	2,145	—	fF
Motional inductance	$L_1$	—	115,70	—	$\mu\text{H}$
Motional resistance	$R_1$	—	19	25	$\Omega$
Parallel capacitance <sup>2)</sup>	$C_0$	—	2,70	—	pF
<b>Temperature coefficient of frequency</b> <sup>3)</sup>	$TC_f$	—	-0,032	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	$T_0$	20	—	50	$^{\circ}\text{C}$

<sup>1)</sup> 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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**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW CE AE PD**

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This brochure replaces the previous edition.

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