



SAW Components

Data Sheet R820

Data Sheet

An abstract, high-tech graphic. The word "EPCOS" is rendered in large, glowing, 3D letters that appear to be floating or emerging from a dark, textured background. Behind the letters, a faint, stylized globe is visible, along with abstract patterns that suggest circuitry or data flow. The overall aesthetic is futuristic and technological.



SAW Components	R820
Resonator	433,92 MHz

Data Sheet

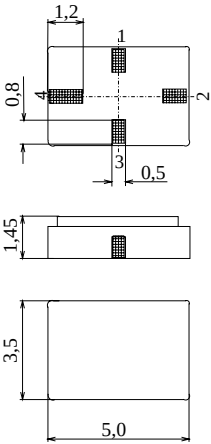
Ceramic package **QCC4A**

Features

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

Terminals

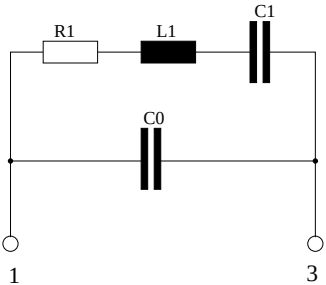
- Ni, gold plated



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
R820	B39431-R 820-H210	C61157-A7-A86	F61074-V8120-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:	$Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency ¹⁾	f_c	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 f_c		—	—	-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 ²⁾	C_0	—	2,5	—	pF
Temperature coefficient of frequency ³⁾	TC_f	—	-0,032	—	ppm/K ²
Turnover temperature	T_0	10	—	40	°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 : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



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This brochure replaces the previous edition.

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