EPCOS

SAW Components

Data Sheet R820

Data Sheet

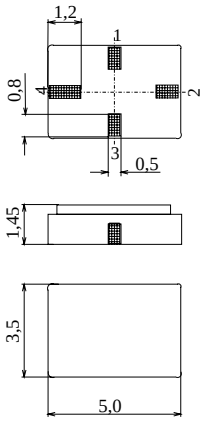
Ceramic package **QCC4A**

Features

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

Terminals

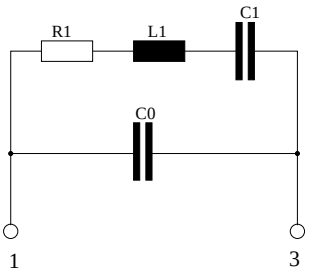
- Ni, gold plated



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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

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

Data Sheet

Characteristics

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

		min.	typ.	max.	
Center frequency [1]	f_c	433,845	433,920	433,995	MHz
Minimum insertion attenuation	α_{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/K²
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: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW CE AE
P.O. Box 80 17 09, 81617 Munich, GERMANY

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

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.