



# SAW Components

Data Sheet R904

Data Sheet

An abstract, grayscale graphic featuring a stylized, three-dimensional representation of the EPCOS logo. The letters "EPCOS" are rendered in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a globe or a stylized wave. The background is dark and textured, with light reflecting off the surfaces of the logo.



## SAW Components

R904

## Resonator

433,42 MHz

## Data Sheet



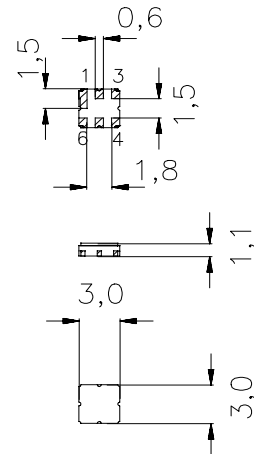
Ceramic package **DCC6C**

### 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
- Compliant to EU RoHs Directive (2002/95/EC)

### Terminals

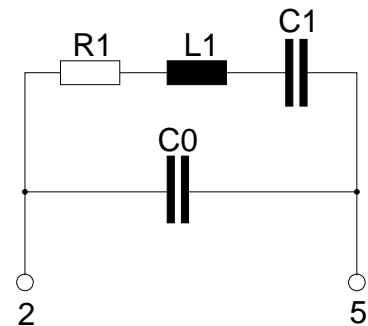
- Ni, gold plated



Dimensions in mm, approx. weight 0,037 g

### Pin configuration

- |            |                                  |
|------------|----------------------------------|
| 2          | Input                            |
| 5          | Output, grounded in 1-port conf. |
| 1, 3, 4, 6 | Ground (case)                    |



Type	Ordering code	Marking and Package according to	Packing according to
R904	B39431-R 904-U410	C61157-A7-A67	F61074-V8168-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.	
<b>Center frequency</b> <sup>1)</sup>	$f_c$	433,345	433,42	433,495	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	1,4	—	dB
Unloaded quality factor	$Q_U$	8300	11600	—	
<b>Ageing of <math>f_c</math></b>		—	—	-50/+50	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	1,76	—	fF
Motional inductance	$L_1$	—	76,7	—	$\mu\text{H}$
Motional resistance	$R_1$	—	18	25	$\Omega$
Parallel capacitance <sup>2)</sup>	$C_0$	—	2,4	—	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	°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 2-input, pin 5-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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<b>Resonator</b>	<b>433,42 MHz</b>
<b>Data Sheet</b>	<b>SMD</b>

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