



# SAW Components

Data Sheet R980

Data Sheet

A large, stylized, 3D-rendered graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is a sense of depth and modernity.



<b>SAW Components</b>	<b>R980</b>
<b>Resonator</b>	<b>433,92 MHz</b>

Data Sheet



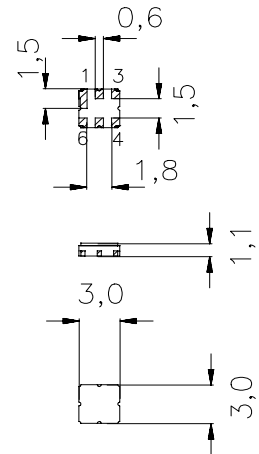
Ceramic package **DCC6C**

#### Features

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

#### Terminals

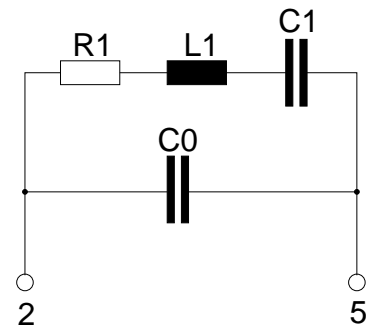
- Ni, gold plated



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
R980	B39431-R 980-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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### Resonator

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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>	$f_c$	433,820	433,920	434,020	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	1,4	1,9	dB
Unloaded quality factor	$Q_U$	8300	12000	—	
<b>Ageing of <math>f_c</math></b>		—	—	-50/+50	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	1,685	—	fF
Motional inductance	$L_1$	—	79,82	—	$\mu\text{H}$
Motional resistance	$R_1$	—	18	26	$\Omega$
Parallel capacitance <sup>2)</sup>	$C_0$	—	2,3	—	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>433,92 MHz</b>
<b>Data Sheet</b>	<b>SMD</b>

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