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# SAW Components

Preliminary Data R901

Data Sheet



EPCOS



## SAW Components

**R901**

## Resonator

**315,00 MHz**

### Preliminary Data

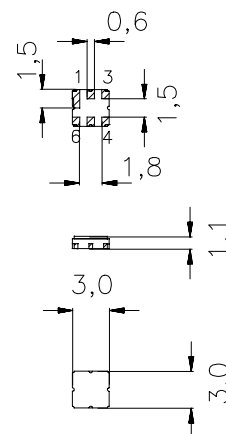
#### Features

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

#### Terminals

- Ni, gold plated

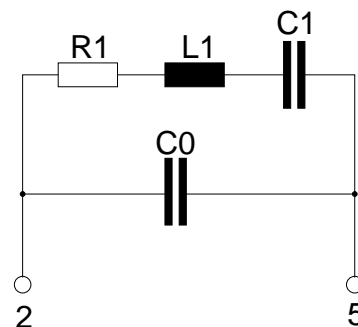
Ceramic package **DCC6C**



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
R901	B39321-R 901-U410	C61157-A7-A67	F61074-V8168-Z000

Electrostatic Sensitive Device (ESD)

#### Maximum ratings

Operable temperature range	$T_A$	-40/+95	°C	between any terminals
Storage temperature range	$T_{stg}$	-40/+95	°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>	$f_c$	314,925	315,000	315,075	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	1,4	1,8	dB
Unloaded quality factor	$Q_U$	7600	10800	—	
<b>Ageing of <math>f_c</math></b>		—	—	-50/+50	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	2,445	—	fF
Motional inductance	$L_1$	—	104,4	—	$\mu\text{H}$
Motional resistance	$R_1$	—	19	27	$\Omega$
Parallel capacitance <sup>2)</sup>	$C_0$	—	3,30	—	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 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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Preliminary Data

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This brochure replaces the previous edition.

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