



# SAW Components

Data Sheet R 883





**SAW Components**

**R 883**

**Resonator**

**315,15 MHz**

**Data Sheet**

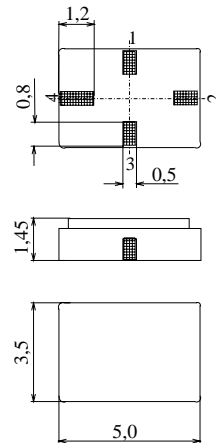
Ceramic package **QCC4A**

**Features**

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

**Terminals**

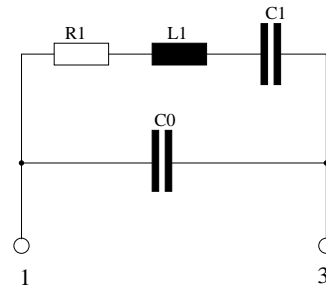
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 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 |
|-------|-------------------|----------------------------------|----------------------|
| R 883 | B39321-R 883-H210 | C61157-A7-A86                    | F61074-V8175-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 |                       |


**SAW Components**
**R 883**
**Resonator**
**315,15 MHz**
**Data Sheet**
**Characteristics**

Reference temperature:  $T_A = 25\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

|   |                 | <b>min.</b> | <b>typ.</b> | <b>max.</b> |                    |
|---|-----------------|-------------|-------------|-------------|--------------------|
| <b>Center frequency</b> <sup>1)</sup>                     | $f_c$           | 315,05      | 315,15      | 315,25      | MHz                |
| <b>Minimum insertion attenuation</b>                      | $\alpha_{\min}$ | —           | 1,5         | 1,9         | dB                 |
| Unloaded quality factor                                   | $Q_U$           | 9600        | 12800       | —           |                    |
| <b>Ageing of <math>f_c</math></b>                         |                 | —           | —           | -50/+50     | ppm                |
| <b>Equivalent circuit elements</b>                        |                 |             |             |             |                    |
| Motional capacitance                                      | $C_1$           | —           | 2,19        | —           | fF                 |
| Motional inductance                                       | $L_1$           | —           | 116,5       | —           | $\mu\text{H}$      |
| Motional resistance                                       | $R_1$           | —           | 18          | 24          | $\Omega$           |
| Parallel capacitance <sup>2)</sup>                        | $C_0$           | —           | 2,60        | —           | 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          | $^{\circ}\text{C}$ |

<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  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



**SAW Components**

**R 883**

**Resonator**

**315,15 MHz**

**Data Sheet**

**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW CE AE PD**

**P.O. Box 80 17 09, D-81617 München**

© EPCOS AG 2004. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.