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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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# *SAW Components*

*Data Sheet R2710*

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are rendered in a white, glowing, 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.



**SAW Components**

**R 2710**

**Resonator**

**311,063 MHz**

**Data Sheet**

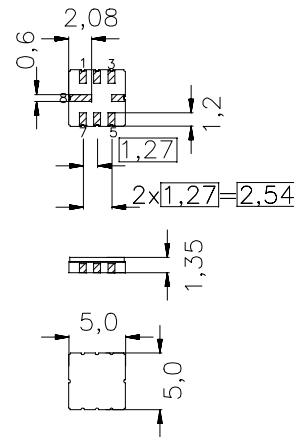
SMD Ceramic package **QCC8C**

**Features**

- 2-port resonator
- nominal 180°-phase at resonance
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators

**Terminals**

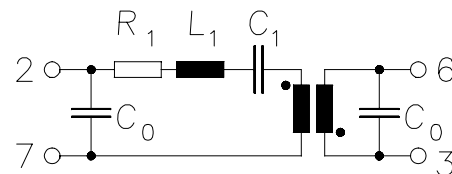
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 g

**Pin configuration**

- 2 Input / Output
- 6 Output / Input
- 7 Ground (Input / Output)
- 3 Ground (Output / Input)
- 4,8 Ground (case)



| Type   | Ordering code     | Marking and Package according to | Packing according to |
|--------|-------------------|----------------------------------|----------------------|
| R 2710 | B39311-R2710-U310 | C61157-A7-A56                    | F61074-V8070-Z000    |

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

|                            |           |         |     |                       |
|----------------------------|-----------|---------|-----|-----------------------|
| Operable temperature range | $T_A$     | -45/+85 | °C  | between any terminals |
| Storage temperature range  | $T_{stg}$ | -45/+85 | °C  |                       |
| DC voltage                 | $V_{DC}$  | 12      | V   |                       |
| Source power               | $P_s$     | 0       | dBm |                       |


**SAW Components**
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**Characteristics**

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

|   |                 | <b>min.</b> | <b>typ.</b> | <b>max.</b> |                    |
|---|-----------------|-------------|-------------|-------------|--------------------|
| <b>Center frequency</b><br>(center frequency between 3 dB points) | $f_c$           | 310,988     | 311,063     | 311,138     | MHz                |
| <b>Minimum insertion attenuation</b>                              | $\alpha_{\min}$ | —           | 8,7         | 10,7        | dB                 |
| Phase at $f_c$  | $\varphi$       | —           | 158         | —           | ° el.              |
| Loaded quality factor   | $Q_L$           | 4200        | 7000        | —           |                    |
| Unloaded quality factor   | $Q_U$           | 6000        | 10800       | —           |                    |
| <b>Ageing of <math>f_c</math></b>                                 |                 | —           | —           | ±50         | ppm                |
| <b>Equivalent circuit elements</b>                                |                 |             |             |             |                    |
| Motional capacitance  | $C_1$           | —           | 0,284       | —           | fF                 |
| Motional inductance   | $L_1$           | —           | 922         | —           | μH                 |
| Motional resistance   | $R_1$           | —           | 160         | —           | Ω                  |
| Input / Output capacitance  | $C_0$           | —           | 1,8         | —           | pF                 |
| <b>Temperature coefficient of frequency</b> <sup>1)</sup>         | $TC_f$          | —           | -0,03       | —           | ppm/K <sup>2</sup> |
| Turnover temperature  | $T_0$           | 10          | —           | 40          | °C                 |

<sup>1)</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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**R 2710**

**Resonator**

**311,063 MHz**

**Data Sheet**

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