



# SAW Components

Data Sheet R 2709

Farnell Code - 7455445

Data Sheet

A large, stylized, 3D-rendered version of the EPCOS logo is shown in a dark, atmospheric setting. The logo is rendered in a light, glowing color, with the word "EPCOS" in a large, bold, sans-serif font. The background features a globe and some abstract, glowing lines, suggesting a global or technological theme.



**SAW Components**

**R 2709**

**Resonator**

**868,30 MHz**

**Data Sheet**

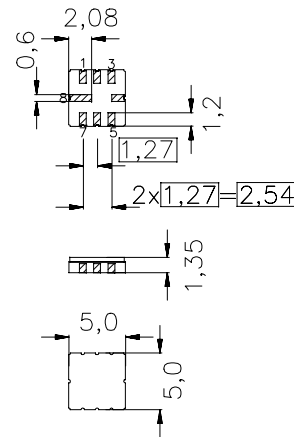
SMD Ceramic package **QCC8C**

**Features**

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

**Terminals**

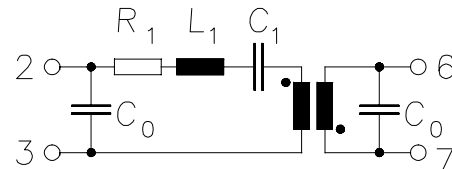
- Ni, gold plated



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
R2709	B39871-R2709-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	$V_{DC}$	0	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:  $Z_L = 50\ \Omega$

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b> (center frequency between 3 dB points)	$f_c$	868,10	868,30	868,50	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	7,0	9,0	dB
Phase at $f_c$	$\varphi$	—	130	—	° el.
Loaded quality factor	$Q_L$	3000	3600	—	
Unloaded quality factor	$Q_U$	5500	6600	—	
<b>Ageing of <math>f_c</math></b>		—	—	-10/+40	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	0,279	—	fF
Motional inductance	$L_1$	—	120,4	—	$\mu\text{H}$
Motional resistance	$R_1$	—	100	—	$\Omega$
Input / Output capacitance	$C_0$	—	1,9	—	pF
<b>Temperature coefficient of frequency</b> <sup>1)</sup>	$TC_f$	—	-0,03	—	ppm/K <sup>2</sup>
Turnover temperature	$T_0$	15	—	35	°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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