



# SAW Components

Data Sheet R 2709

Farnell Code - 7455445

Data Sheet

A large, stylized, 3D-rendered version of the EPCOS logo is centered on a dark background. The logo is rendered in a light, glowing color, giving it a sense of depth and movement. The word "EPCOS" is written in a bold, sans-serif font, with the letters appearing to be part of a curved, metallic-looking structure.



**SAW Components**

**R 2709**

**Resonator**

**868,30 MHz**

**Data Sheet**

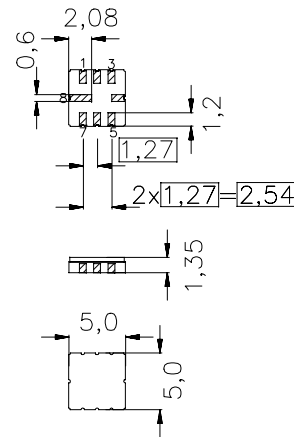
SMD Ceramic package **QCC8C**

**Features**

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

**Terminals**

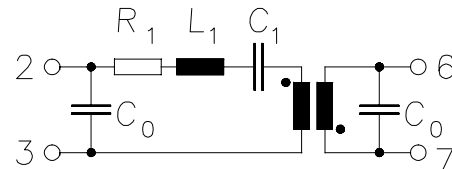
- Ni, gold plated



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	


**SAW Components**
**R 2709**
**Resonator**
**868,30 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> (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  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



**SAW Components**

**R 2709**

**Resonator**

**868,30 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 2001. All Rights Reserved.

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.

Terms of delivery and rights to change design reserved.

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.