



SAW Components

Data Sheet R709

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are rendered in a glowing, white, sans-serif font, appearing to be part of a larger, curved structure that resembles the company's logo symbol. The background is dark and textured, with a faint map of the world visible.



Data Sheet

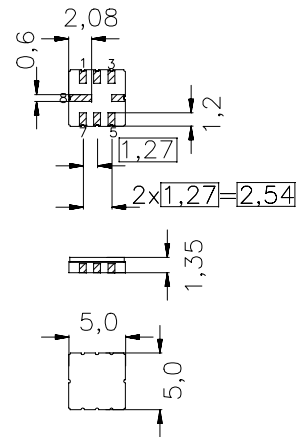
Ceramic package **QCC8C**

Features

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

Terminals

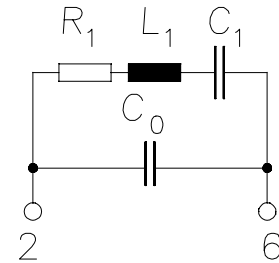
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 g

Pin configuration

- | | |
|-----|----------------------------------|
| 2 | Input |
| 6 | Output, grounded in 1-port conf. |
| 4,8 | Ground (case) |
| 1,3 | float |
| 5,7 | float / ground |



Type	Ordering code	Marking and Package according to	Packing according to
R 709	B39401-R 709-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	



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Resonator

403,55 MHz

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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.	
Center frequency ¹⁾	f_c	403,475	403,55	403,625	MHz
Minimum insertion attenuation	α_{\min}	—	1,4	1,9	dB
Unloaded quality factor	Q_U	6000	11000	—	
Ageing of f_c		—	—	± 50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2,2	—	fF
Motional inductance	L_1	—	70,70	—	μH
Motional resistance	R_1	—	18	30	Ω
Parallel capacitance ²⁾	C_0	—	3,7	—	pF
Temperature coefficient of frequency ³⁾	TC_f	—	- 0,03	—	ppm/K ²
Turnover temperature	T_0	5	—	45	$^{\circ}\text{C}$

¹⁾ Center frequency is defined as maximum of the real part of the admittance

²⁾ If used in two port configuration (pin 2-input, pin 6-output) C_0 is reduced by approx. 0,3 pF.

³⁾ 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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