



SAW Components

Data Sheet R 771

Data Sheet

EPCOS



SAW Components

R 771

Resonator

314,875 / 315,125 MHz

Data Sheet

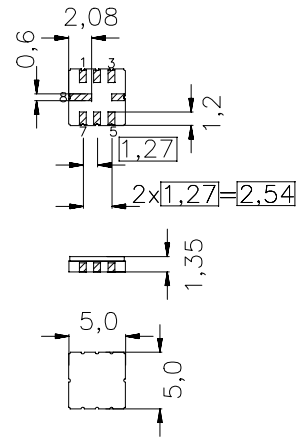
Ceramic package **QCC8C**

Features

- 1-port resonator (2 Resonators in 1 housing)
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators
- Protection layer: Protec

Terminals

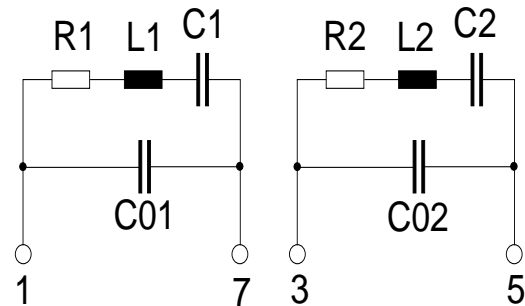
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 g

Pin configuration

- | | |
|-----|---------------|
| 1 | Input Reso 1 |
| 3 | Input Reso 2 |
| 7 | Output Reso 1 |
| 5 | Output Reso 2 |
| 4,8 | Ground (case) |
| 2,6 | float |



Type	Ordering code	Marking and Package according to	Packing according to
R 771	B39311-R 771-U310	C61157-A7-A56	F61074-V8169-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-45/+120	°C	between any terminals
Storage temperature range	T_{stg}	-45/+120	°C	
DC voltage	V_{DC}	12	V	
Source power	P_s	0	dBm	



SAW Components

R 771

Resonator

314,875 / 315,125 MHz

Data Sheet

Characteristics Resonator 1

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 Resonator 1¹⁾	f_c	314,825	314,875	314,925	MHz
Frequency offset Resonator 2 to Resonator 1	f_{offset}	200,0	250,0	300,0	KHz
Minimum insertion attenuation	α_{min}	—	1,3	1,6	dB
Unloaded quality factor	Q_U	9600	13200	—	
Ageing of f_c		—	—	± 50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2,39	—	fF
Motional inductance	L_1	—	106,94	—	μH
Motional resistance	R_1	—	16	22	Ω
Parallel capacitance ²⁾	C_{01}	—	3,1	—	pF
Temperature coefficient of frequency³⁾	TC_f	—	- 0,03	—	ppm/K ²
Turnover temperature	T_0	0	—	30	°C

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

2) If used in two port configuration (pin 1-input, pin 7-output) C_0 is reduced by approx. 0,3 pF.

3) Temperature dependence of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



SAW Components

R 771

Resonator

314,875 / 315,125 MHz

Data Sheet

Characteristics Resonator 2

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

		min.	typ.	max.	
Center frequency Resonator 2¹⁾	f_c	315,075	315,125	315,175	MHz
Frequency offset Resonator 2 to Resonator 1	f_{offset}	200,0	250,0	300,0	KHz
Minimum insertion attenuation	α_{min}	—	1,3	1,6	dB
Unloaded quality factor	Q_U	9600	13200	—	
Ageing of f_c		—	—	± 50	ppm
Equivalent circuit elements					
Motional capacitance	C_2	—	2,38	—	fF
Motional inductance	L_2	—	107,32	—	μH
Motional resistance	R_2	—	16	22	Ω
Parallel capacitance ²⁾	C_{02}	—	3,1	—	pF
Temperature coefficient of frequency³⁾	TC_f	—	- 0,03	—	ppm/K ²
Turnover temperature	T_0	0	—	30	°C

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

2) If used in two port configuration (pin 3-input, pin 5-output) C_0 is reduced by approx. 0,3 pF.

3) Temperature dependence of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



SAW Components

R 771

Resonator

314,875 / 315,125 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.