



# SAW Components

Data Sheet R 854

Data Sheet

A large, stylized EPCOS logo is superimposed over a grayscale image of a globe. The logo is rendered in a light, glowing font, and the globe shows the outlines of continents.



SAW Components		R 854
Resonator		314,50 MHz
Data Sheet	SMD	

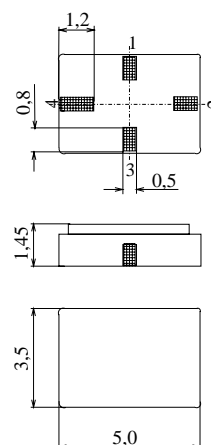
Ceramic package QCC4A

## Features

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

## Terminals

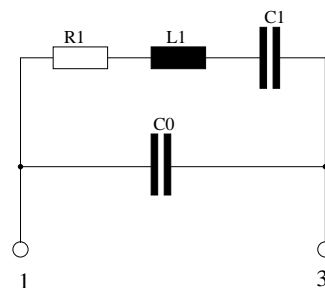
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 g

## Pin configuration

- 1 Input
- 3 Output, grounded in 1-port conf.
- 2,4 Ground (case)



Type	Ordering code	Marking and Package according to	Packing according to
R854	B39311-R854-H210	C61157-A7-A86	F61074-V8175-Z000

Electrostatic Sensitive Device (ESD)

## Maximum ratings

Operable temperature range	$T_A$	-40/+125	°C	between any terminals
Storage temperature range	$T_{stg}$	-40/+125	°C	
DC voltage	$V_{DC}$	12	V	
Source power	$P_s$	0	dBm	



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## Resonator

314,50 MHz

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### Characteristics

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.	
<b>Center frequency</b> <sup>1)</sup>	$f_c$	314,45	314,50	314,55	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	1,3	1,6	dB
Unloaded quality factor	$Q_U$	9700	13200	—	
<b>Ageing of <math>f_c</math></b>		—	—	-10/+50	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	2,37	—	fF
Motional inductance	$L_1$	—	107,99	—	$\mu$ H
Motional resistance	$R_1$	—	16	22	$\Omega$
Parallel capacitance <sup>2)</sup>	$C_0$	—	3,0	—	pF
<b>Temperature coefficient of frequency</b> <sup>3)</sup>	$TC_f$	—	-0,032	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	$T_0$	15	—	35	°C

<sup>1)</sup> Center frequency is defined as maximum of the real part of the admittance

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

<sup>3)</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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Resonator		314,50 MHz
Data Sheet		The SMD logo is a stylized, bold, sans-serif font where the letters "S", "M", and "D" are interconnected. The "S" and "M" are joined together, and the "D" is slightly separated but still part of the overall design.

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