



SAW Components

Data Sheet R 770

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a globe or a stylized wave. The graphic is rendered in shades of gray and white, with a glowing effect around the letters.



SAW Components

R 770

Resonator

433,81 / 434,06 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	433,76	433,81	433,86	MHz
Frequency offset Resonator 2 to Resonator 1	f_{offset}	200,0	250,0	300,0	KHz
Minimum insertion attenuation	α_{min}	—	1,3	1,7	dB
Unloaded quality factor	Q_U	7500	10100	—	
Ageing of f_c		—	—	± 50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2,12	—	fF
Motional inductance	L_1	—	63,43	—	μH
Motional resistance	R_1	—	17	23	Ω
Parallel capacitance ²⁾	C_{01}	—	2,4	—	pF
Temperature coefficient of frequency³⁾	TC_f	—	- 0,03	—	ppm/K ²
Turnover temperature	T_0	5	—	35	°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 : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



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Characteristics Resonator 2

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 2¹⁾	f_c	434,01	434,06	434,11	MHz
Frequency offset Resonator 2 to Resonator 1	f_{offset}	200,0	250,0	300,0	KHz
Minimum insertion attenuation	α_{min}	—	1,3	1,7	dB
Unloaded quality factor	Q_U	7500	10100	—	
Ageing of f_c		—	—	± 50	ppm
Equivalent circuit elements					
Motional capacitance	C_2	—	2,14	—	fF
Motional inductance	L_2	—	62,86	—	μH
Motional resistance	R_2	—	17	23	Ω
Parallel capacitance ²⁾	C_{02}	—	2,4	—	pF
Temperature coefficient of frequency³⁾	TC_f	—	- 0,03	—	ppm/K ²
Turnover temperature	T_0	5	—	35	°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 : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



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