



SAW Components

Data Sheet R 690

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or electronic theme.



SAW Components

R 690

Resonator

418,00 MHz

Data Sheet

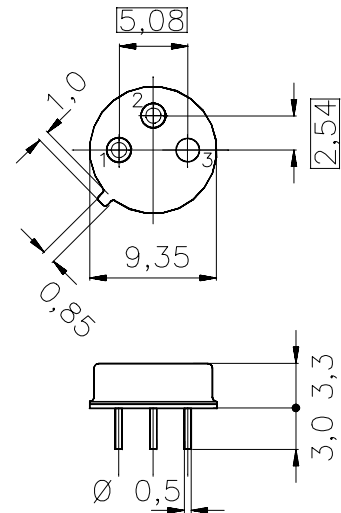
Features

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

Terminals

- NiFeCo, gold plated

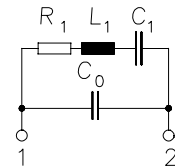
Metal package TO 39



Dimensions in mm, approx. weight 1,0 g

Pin configuration

- | | |
|---|---------------|
| 1 | Input |
| 2 | Ground |
| 3 | Ground (case) |



Type	Ordering code	Marking and Package according to	Packing according to
R 690	B39421-R 690-B110	C61157-A7-A24	F61074-V8072-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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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.	
Center frequency ¹⁾	f_c	417,925	418,000	418,075	MHz
Minimum insertion attenuation	$\alpha_{\min}$	—	1,1	1,7	dB
Unloaded quality factor	Q_U	7000	12500	—	
Ageing of f_c		—	—	± 50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	2,539	—	fF
Motional inductance	L_1	—	57,10	—	μH
Motional resistance	R_1	—	12	22	Ω
Parallel capacitance	C_0	—	2,8	—	pF
Temperature coefficient of frequency ²⁾	TC_f	—	- 0,03	—	ppm/K ²
Turnover temperature	T_0	40	—	70	°C

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

²⁾ 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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