



SAW Components

Data Sheet R 2523

Data Sheet

A large, stylized, 3D-rendered graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is a sense of depth and modernity.



SAW Components

R 2523

Resonator

224,50 MHz

Data Sheet

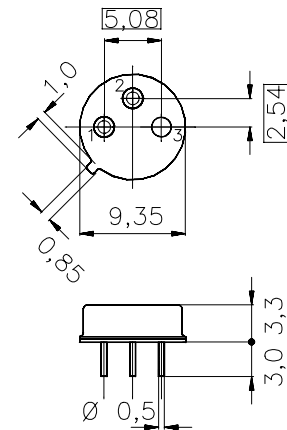
Metal package TO-39

Features

- 2-port resonator
- nominal 180°-phase at resonance
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators

Terminals

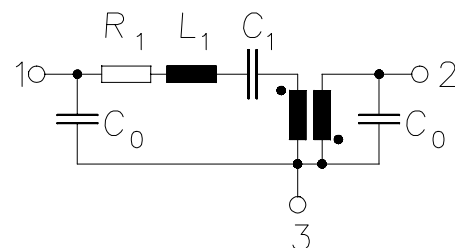
- NiFeCo, gold plated



Dimensions in mm, approx. weight 1,0 g

Pin configuration

- | | |
|---|----------------|
| 1 | Input / Output |
| 2 | Output / Input |
| 3 | Ground |



Type	Ordering code	Marking and Package according to	Packing according to
R2523	B39221-R2523-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: $Z_S = 50\ \Omega$
 Terminating Load impedance: $Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency (center frequency between 3 dB points)	f_c	224,450	224,500	224,550	MHz
Minimum insertion attenuation	α_{\min}	—	8,5	10,0	dB
Phase at f_c	φ	150	165	180	° el.
Loaded quality factor	Q_L	7000	9300	—	
Unloaded quality factor	Q_U	11000	15000	—	
Ageing of f_c		—	—	±50	ppm
Equivalent circuit elements					
Motional capacitance	C_1	—	0,3	—	fF
Motional inductance	L_1	—	1,8	—	μH
Motional resistance	R_1	—	180	—	Ω
Input / Output capacitance	C_0	—	2,1	—	pF
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,03	—	ppm/K ²
Turnover temperature	T_0	35	45	55	°C

¹⁾ 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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Surface Acoustic Wave Components Division, OFW E UE

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