



SAW Components

Data Sheet R 2701





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R 2701

Resonator

433,92 MHz

Data Sheet

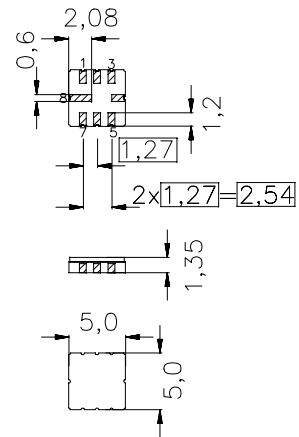
SMD Ceramic package **QCC8C**

Features

- 2-port resonator
- nominal 180°-phase at resonance
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators
- AEC-Q200 qualified component family

Terminals

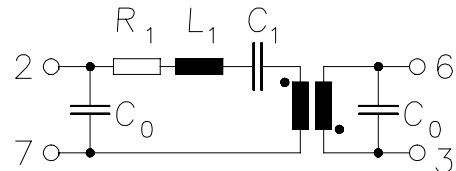
- Ni, gold plated



Dimensions in mm, approx. weight 0,1 g

Pin configuration

- | | |
|-----|-------------------------|
| 2 | Input / Output |
| 6 | Output / Input |
| 7 | Ground (Input / Output) |
| 3 | Ground (Output / Input) |
| 4,8 | Ground (case) |



| Type | Ordering code | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| R2701 | B39431-R2701-U310 | C61157-A7-A56 | F61074-V8070-Z000 |

Electrostatic Sensitive Device (ESD)

Maximum ratings

| | | | | |
|----------------------------|-----------|----------|-----|-----------------------|
| Operable temperature range | T_A | -45/+125 | °C | between any terminals |
| Storage temperature range | T_{stg} | -45/+125 | °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 | 433,845 | 433,920 | 433,995 | MHz |
| Minimum insertion attenuation | α_{\min} | — | 9,2 | 10,5 | dB |
| Phase at f_c | φ | — | 160 | — | ° el. |
| Loaded quality factor | Q_L | 5000 | 7800 | — | |
| Unloaded quality factor | Q_U | 8000 | 11200 | — | |
| Ageing of f_c | | — | — | ±50 | ppm |
| Equivalent circuit elements | | | | | |
| Motional capacitance | C_1 | — | 0,141 | — | fF |
| Motional inductance | L_1 | — | 954 | — | μH |
| Motional resistance | R_1 | — | 230 | — | Ω |
| Input / Output capacitance | C_0 | — | 2,3 | — | pF |
| Temperature coefficient of frequency ¹⁾ | TC_f | — | -0,03 | — | ppm/K ² |
| Turnover temperature | T_0 | — | 40 | — | °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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