



## **SAW Components**

### **SAW resonator**

Short range devices

<b>Series/type:</b>	<b>R2706</b>
<b>Ordering code:</b>	<b>B39921R2706U310</b>
<b>Date:</b>	<b>May 22, 2009</b>
<b>Version:</b>	<b>2.0</b>



Data sheet



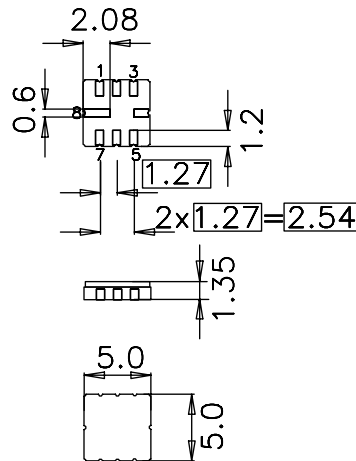
**Application**

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



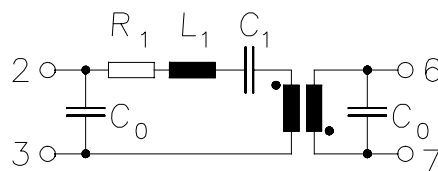
**Features**

- Package size 5.0 x 5.0 x 1.35 mm<sup>3</sup>
- Package code QCC8C
- RoHS compatible
- Approximate weight 0.1 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- Protection layer Protec
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



**Pin configuration**

- |     |                         |
|-----|-------------------------|
| 2   | Input / Output          |
| 6   | Output / Input          |
| 3   | Ground (Input / Output) |
| 7   | Ground (Output / Input) |
| 4,8 | Ground (case)           |
| 1,5 | Ground                  |




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**915.00 MHz**
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**Characteristics**

Reference temperature:  $T_A = 25\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b> (center frequency between 3 dB points)	$f_C$	914.65	915.00	915.35	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	7.0	9.0	dB
Phase at $f_C$	$\varphi$	—	130	—	° el.
Loaded quality factor	$Q_L$	3500	4300	—	
Unloaded quality factor	$Q_U$	6000	7600	—	
<b>Ageing of <math>f_C</math></b>		—	—	±50	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	—	0.225	—	fF
Motional inductance	$L_1$	—	134.5	—	μH
Motional resistance	$R_1$	—	100	—	Ω
Input / Output capacitance	$C_0$	—	1.9	—	pF
<b>Temperature coefficient of frequency<sup>1)</sup></b>	$TC_f$	—	-0.03	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	$T_0$	0	—	30	°C

<sup>1)</sup> Temperature dependence of  $f_C$ :  $f_C(T_A) = f_C(T_0) (1 + TC_f (T_A - T_0)^2)$

**Maximum ratings**

Operable temperature range	T	-45/+125	°C	between any terminals
Storage temperature range	$T_{\text{stg}}$	-45/+125	°C	
DC voltage	$V_{\text{DC}}$	0	V	
Source power	$P_S$	0	dBm	



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## References

Type	R2706
Ordering code	B39921R2706U310
Marking and package	C61157-A7-A56
Packaging	F61074-V8169-Z000
Date codes	L_1126
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at [www.epcos.com](http://www.epcos.com).

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Please read *cautions and warnings and important notes* at the end of this document.



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