



## **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>

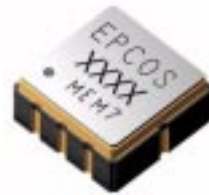


Data sheet



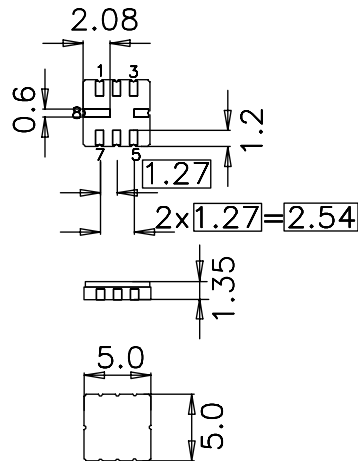
**Application**

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



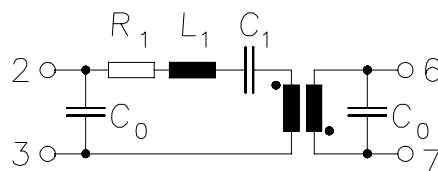
**Features**

- 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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<b>Type</b>	R2706
<b>Ordering code</b>	B39921R2706U310
<b>Marking and package</b>	C61157-A7-A56
<b>Packaging</b>	F61074-V8169-Z000
<b>Date codes</b>	L_1126
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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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