

**SAW Components Resonator**

**R2530  
315.00 MHz**

**Preliminary Data**

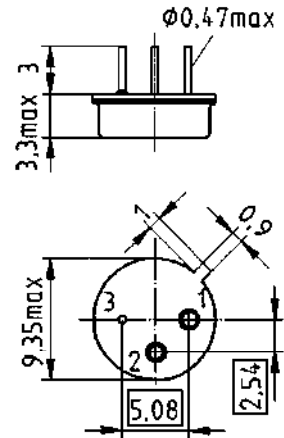
**Features**

- 2 - port resonator

**Terminals**

- NiFeCo, gold plated

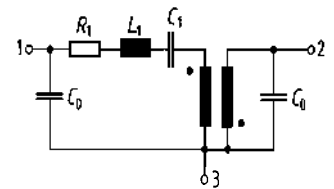
Metal package TO39



Dimensions in mm, approx. weight 1.0 g

**Pin configuration**

- 1 Input 1
- 2 Input 2
- 3 Ground



Type	Ordering code	Marking
R2530	B39321-R2530-B110	Type, date code

**Maximum ratings**

Ambient temperature	$T_A$	-45/+85	°C	-
Storage temperature	$T_{stg}$	-45/+85	°C	-
DC voltage	$V_{DC}$	0	V	between any terminals
AC voltage	$V_{pp}$	12	V	between any terminals
Power dissipation	$P_{max}$	0	dBm	

Electrostatic Sensitive Device (ESD)

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Resonator**

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Characteristics**

Ambient temperature  $T_A = 25\text{ °C}$   
 Source impedance  $Z_S = 50\ \Omega$   
 Load impedance  $Z_L = 50\ \Omega$

		min.	typ.	max.	
<b>Center frequency</b> (center between 3 dB points)	$f_C$	314.860	315.000	315.140	MHz
<b>Insertion attenuation at <math>f_C</math></b>	$\alpha$	-	9.5	11.0	dB
Phase at $f_C$	$\varphi$	120	150	180	°el.
Loaded quality factor <sup>1)</sup>	$Q_L$	6000	8000	-	
Unloaded quality factor	$Q_U$	10000	13000	-	
<b>Ageing of <math>f_C</math></b>		-	-	100	ppm
<b>Equivalent circuit elements</b>					
Motional capacitance	$C_1$	-	0.2	-	fF
Motional inductance	$L_1$	-	1.1	-	$\mu$ H
Motional resistance	$R_1$	-	160	-	$\Omega$
Parallel capacitance	$C_0$	-	1.4	-	pF
<b>Temperature coefficient of frequency <sup>2)</sup></b>	$TC_f$	-	-0.03	-	ppm/K <sup>2</sup>
Frequency inversion point	$T_0$	35	45	55	°C

1) Loaded quality factor:  $Q_L = Q_U (1 - 10^{-\alpha/20})$

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