



## SAW Components

SAW IF filter

Clean up filter

<b>Series/type:</b>	<b>B5217</b>
<b>Ordering code:</b>	<b>B39491B5217H310</b>
Date:	Sep 11, 2009
Version:	2.0

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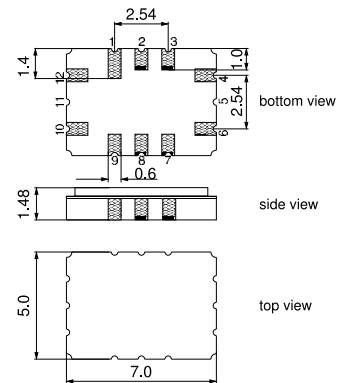
**Application**

- Low-loss IF filter
- VCXO clean up filter
- Temperature stable



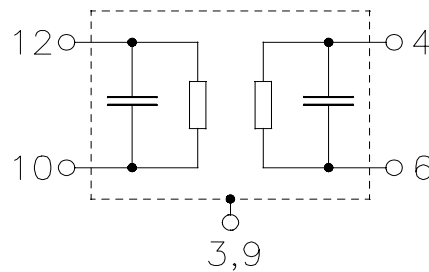
**Features**

- Package size 7.0 x 5.0 x 1.35 mm<sup>3</sup>
- Package code QCC12C
- RoHS compatible
- Approx. weight 0.25 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



**Pin configuration**

- 10 Input
- 12 Input ground
- 4 Output
- 6 Output ground
- 3, 9 Case ground
- 1, 2, 7, 8 To be grounded



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



Data Sheet



Characteristics

Operating temperature range: T = -40 to 85 °C  
 Terminating source impedance: Z<sub>S</sub> = 50 Ω and matching network  
 Terminating load impedance: Z<sub>L</sub> = 50 Ω and matching network

		min.	typ. @ 25	max.	
<b>Nominal frequency</b>	f <sub>N</sub>	—	491.52	—	MHz
<b>Insertion attenuation at f<sub>N</sub></b> (T=25°C)	α <sub>n</sub>	6.0	7.0	8.0	dB
<b>Variation of Insertion att.</b> (rel. to α <sub>n</sub> )	α <sub>rel</sub>	—	—	±0.9	dB
<b>Passband bandwidth</b> α <sub>rel</sub> ≤ 3 dB	B <sub>3dB</sub>	1.0	1.67	—	MHz
<b>Amplitude ripple (p-p)</b> f <sub>N</sub> ± 0.1 MHz	Δα	—	0.3	0.5	dB
<b>Relative attenuation</b> (relative to α <sub>n</sub> )	α <sub>rel</sub>				
f <sub>N</sub> -200.00 MHz ... f <sub>N</sub> - 10.00 MHz		40	46	—	dB
f <sub>N</sub> -10.00 MHz ... f <sub>N</sub> - 3.00 MHz		35	44	—	dB
f <sub>N</sub> + 3.00 MHz ... f <sub>N</sub> + 10.00 MHz		35	43	—	dB
f <sub>N</sub> + 10.00 MHz ... f <sub>N</sub> +200.00 MHz		40	48	—	dB
<b>Temperature coefficient of frequency</b> <sup>1)</sup>	TC <sub>f</sub>	—	-0.036	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	T <sub>0</sub>	—	25	—	°C

1) Temperature dependance of f<sub>c</sub>: f<sub>c</sub>(T<sub>A</sub>) = f<sub>c</sub>(T<sub>0</sub>)(1 + TC<sub>f</sub>(T<sub>A</sub> - T<sub>0</sub>)<sup>2</sup>)



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B5217

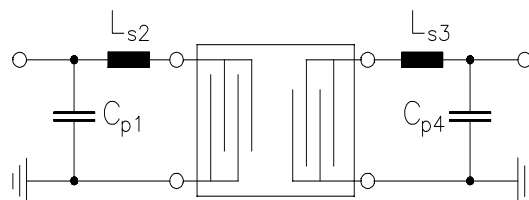
SAW IF filter

491.52 MHz

Data Sheet



Matching network to 50  $\Omega$



$C_{p1} = 10 \text{ pF}$   
 $L_{s2} = 33 \text{ nH}$   
 $L_{s3} = 27 \text{ nH}$   
 $C_{p4} = 10 \text{ pF}$

Element values depend upon board layout

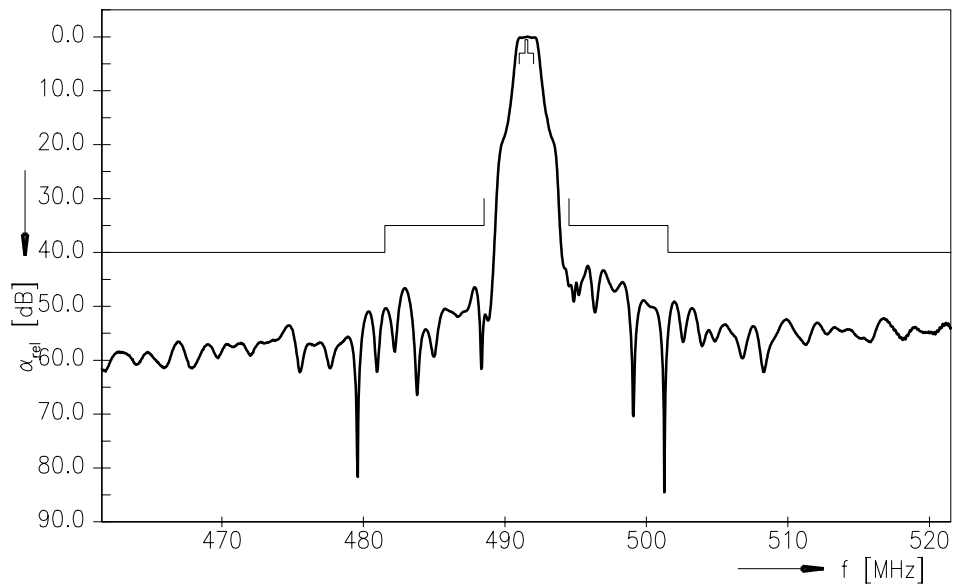
#### Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>sta</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
Input power	P <sub>IN</sub>	10	dBm	

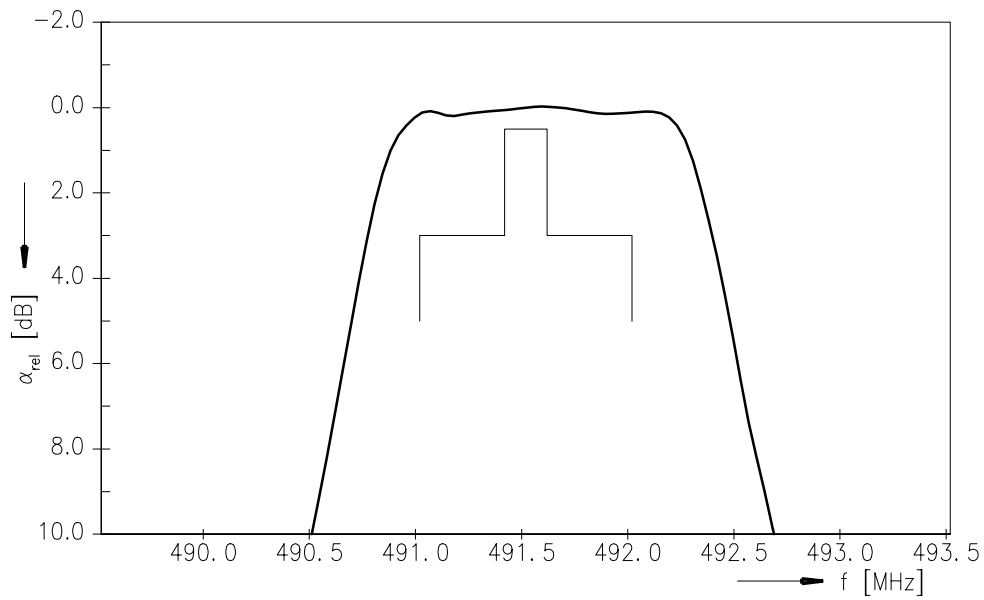
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Transfer function



Transfer function (Passband)



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**B5217**

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**491.52 MHz**

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## References

<b>Type</b>	B5217
<b>Ordering code</b>	B39491B5217H310
<b>Marking and package</b>	C61157-A7-A95
<b>Packaging</b>	F61074-V8170-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	LI62A_NB.s2p
<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."

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