



SAW Components

SAW IF filter

DECT

Series/type:	B5232
Ordering code:	B39111B5232H310
Date:	May 25, 2010
Version:	2.0



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B5232

SAW IF filter

110.592 MHz

Data Sheet



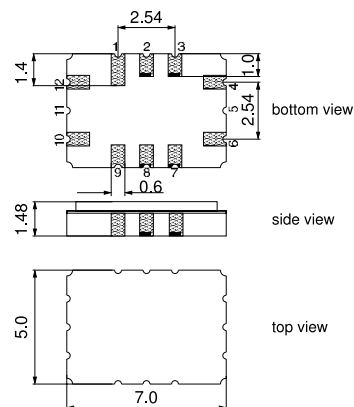
Application

- Low-loss IF filter for DECT applications
- Usable passband 1.152 MHz at 3 dB
- Single ended configuration on 50 Ω



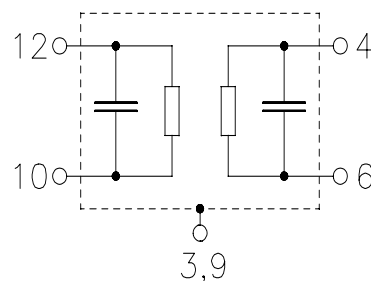
Features

- Package size 7.0 x 5.0 x 1.48 mm³
- 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)



Pin configuration

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





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Characteristics

Operating temperature range:	$T = -20\text{ °C to }70\text{ °C}$
Terminating source impedance:	$Z_S = 50\ \Omega$ single ended and matching network
Terminating load impedance:	$Z_L = 50\ \Omega$ single ended and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	110.592	—	MHz
Minimum insertion attenuation (including matching network)	$\alpha_{\min}$	—	4.0	5.0	dB
Passband width					
$\alpha_{\text{rel}} \leq 3.0\text{ dB}$	$B_{3.0\text{dB}}$	1.152	1.41	—	MHz
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 0.576\text{ MHz}$		—	300	700	ns
Relative attenuation (relative to $\alpha_{\min}$)	α_{rel}				
$f_N - 5.184\text{ MHz}$		50	53.5	—	dB
$f_N - 5.184\text{ MHz} \dots\dots f_N - 3.456\text{ MHz}$		45	49	—	dB
$f_N \pm 3.456\text{ MHz} \dots\dots f_N \pm 1.728\text{ MHz}$		30	36	—	dB
$f_N \pm 1.728\text{ MHz} \dots\dots f_N \pm 1.150\text{ MHz}$		10	13	—	dB
$f_N + 3.456\text{ MHz} \dots\dots f_N + 5.184\text{ MHz}$		40	46	—	dB
$f_N + 5.184\text{ MHz}$		40	46	—	dB
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K



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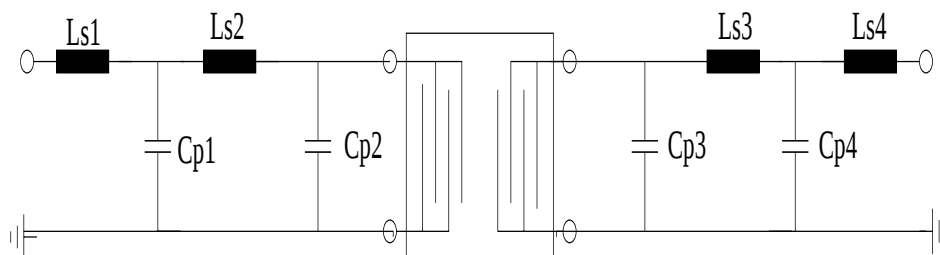
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Matching network to 50 Ω single input and output



Ls1 = 10 nH

Ls2 = 68 nH

Ls3 = 68 nH

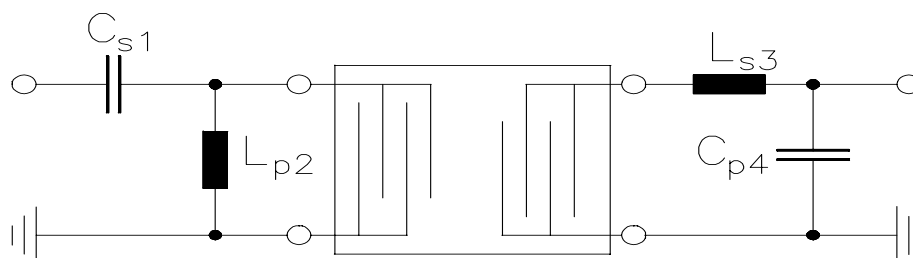
Ls4 = 10 nH

Cp1 = 56 pF

Cp2 = 1 pF

Cp3 = 1 pF

Cp4 = 56 pF



Lp2 = 33 nH

Ls3 = 33 nH

Cs1 = 33 pF

Cp4 = 33 pF

(Element values depend upon PCB layout and board parasitics)

Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{sta}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
Input power	P _{IN}	10	dBm	

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



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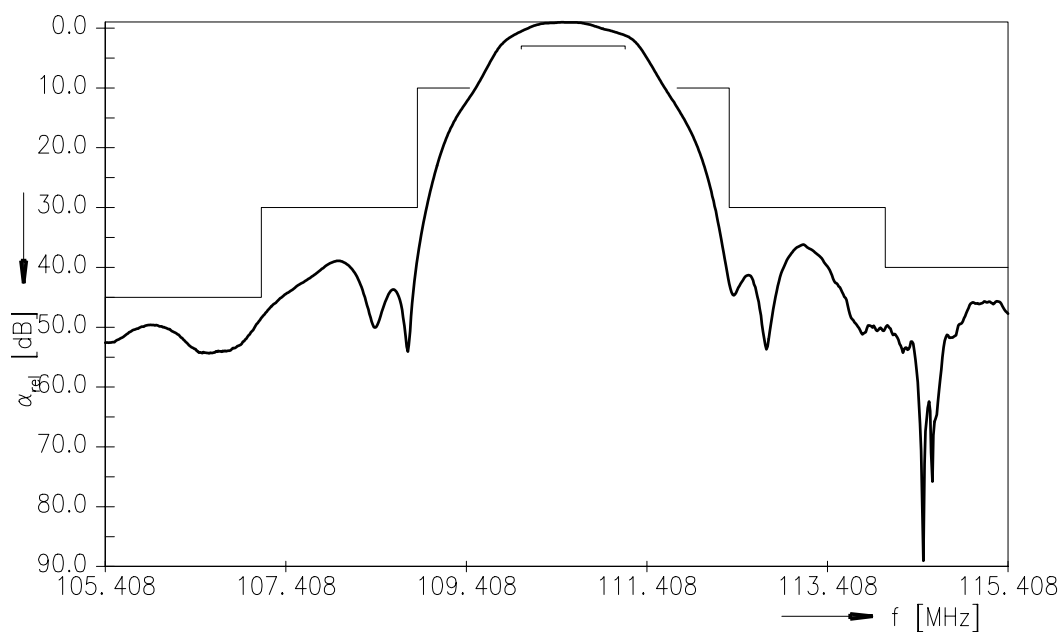
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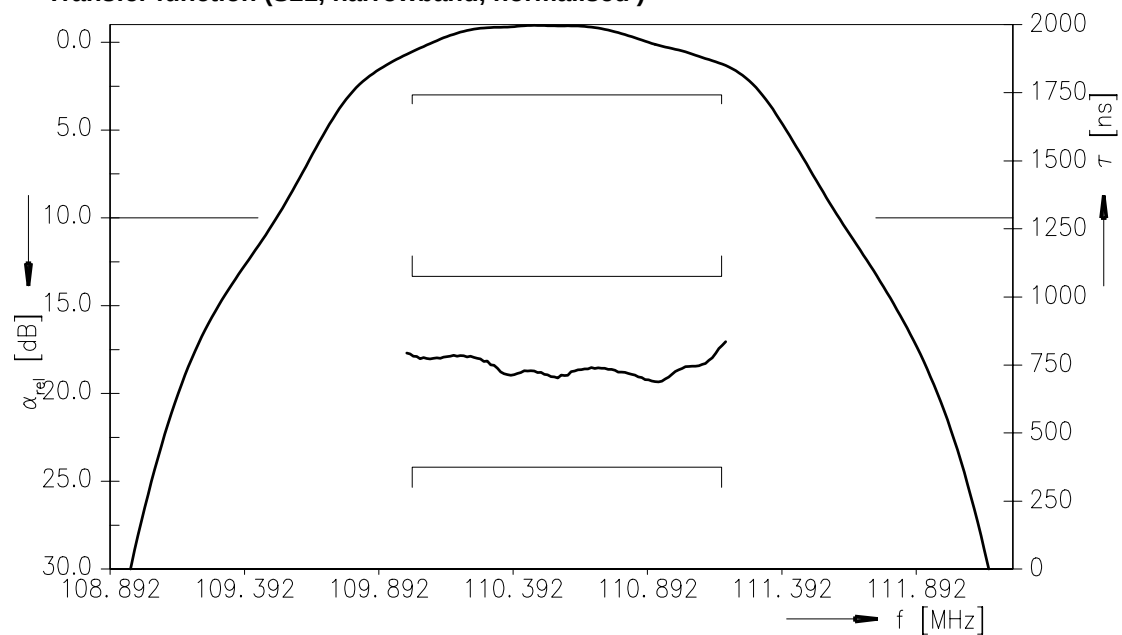
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Transfer function (S21, wideband, normalised)



Transfer function (S21, narrowband, normalised)



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**References**

Type	B5232
Ordering code	B39111B5232H310
Marking and package	C61157-A7-A95
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B5232_NB.s2p see file header for port/pin assignment table
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.

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