SAW Components

SAW IF filter

DECT

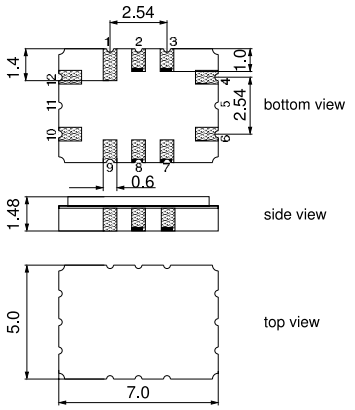
Series/type:	**B5232**
Ordering code:	**B39111B5232H310**
Date:	May 25, 2010
Version:	2.0

Application

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

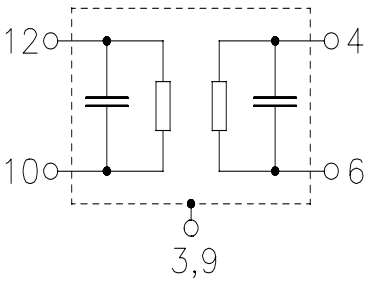
Features

- Package size 7.0 x 5.0 x 1.48 mm³
- Package code QCC12C
- RoHS compatible
- Approx. weight 0.25 g
- Ceramic package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**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



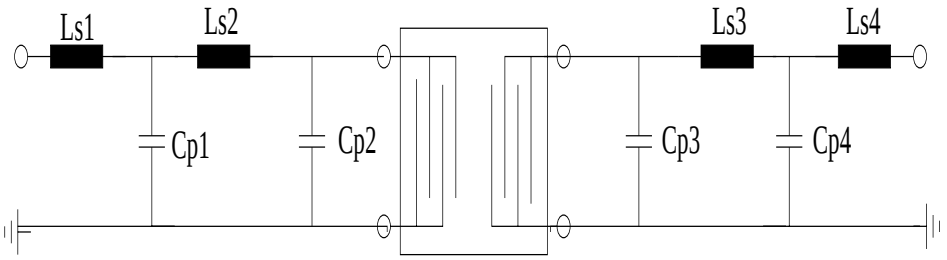
Data Sheet SMD

Characteristics

Operating temperature range: T = –20 ˚C to 70 ˚C
Terminating source impedance: Z_S = 50 Ω single ended and matching network
Terminating load impedance: Z_L = 50 Ω single ended and matching network

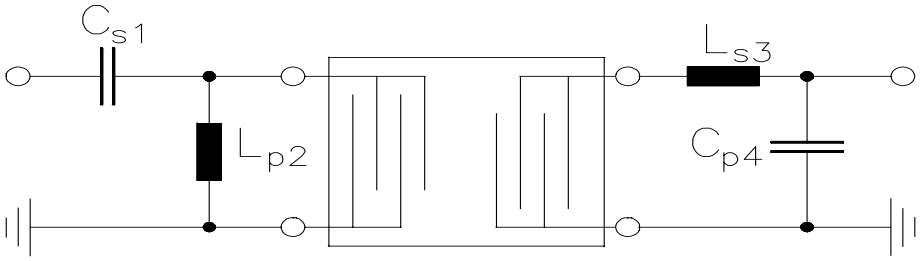
		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	110.592	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	4.0	5.0	dB
Passband width $\alpha_{rel} \leq$ 3.0 dB	$B_{3.0dB}$	1.152	1.41	—	MHz
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm$ 0.576 MHz		—	300	700	ns
Relative attenuation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

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 = 1pF** **Cp3 = 1pF** **Cp4 = 56 pF**



Lp2 = 33 nH **Ls3 = 33 nH**

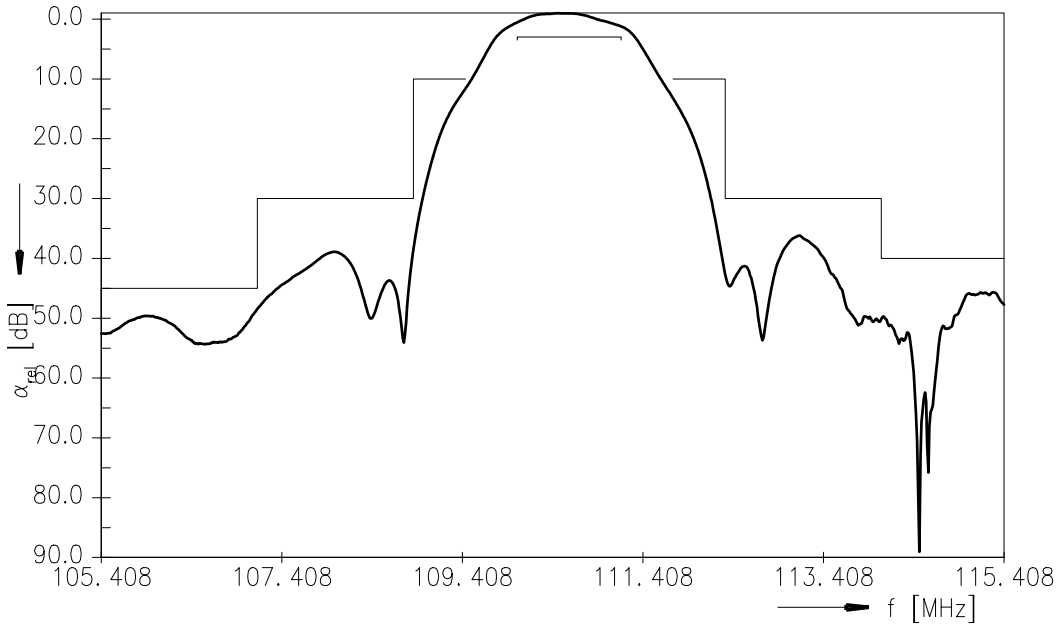
Cs1= 33 pF **Cp4 = 33 pF**

(Element values depend upon PCB layout and board parasitics)

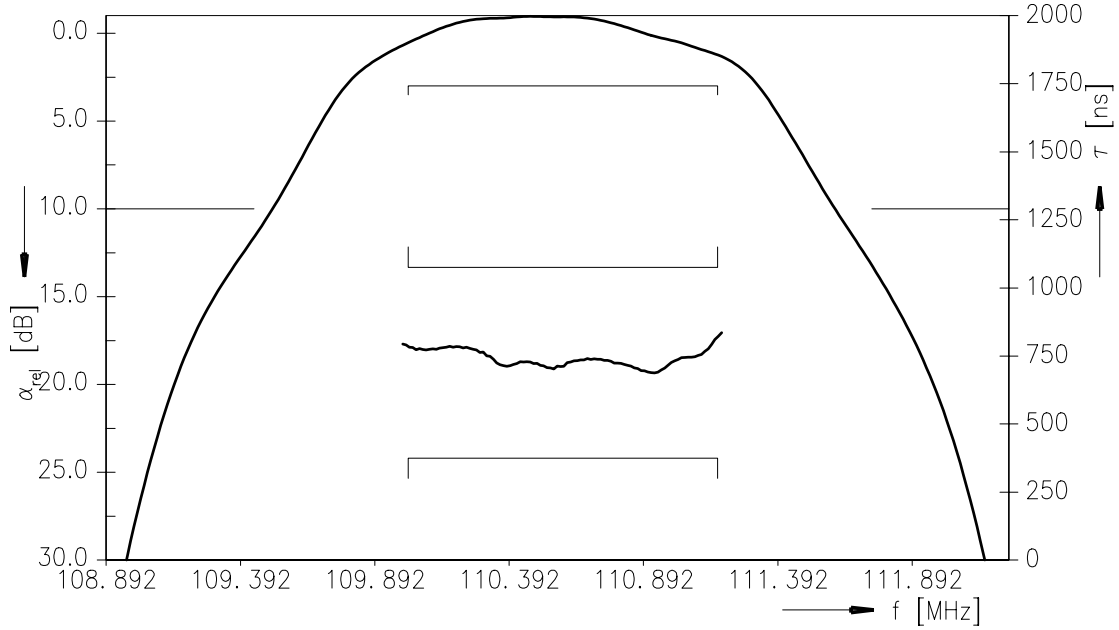
Maximum ratings

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	

Transfer function (S21, wideband, normalised)



Transfer function (S21, narrowband, normalised)



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."

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