



SAW Components

SAW IF filter

Clean up filter

Series/type:	B5245
Ordering code:	B39121B5245H310
Date:	Jul 27, 2011
Version:	2.0



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B5245

SAW IF filter

122.88 MHz

Data Sheet



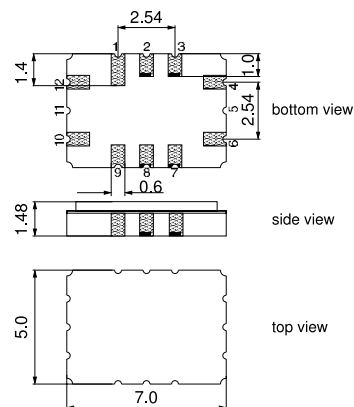
Application

- Low-loss IF filter
- Clean up filter for LTU
- Usable passband 0.1 MHz
- Balanced operation



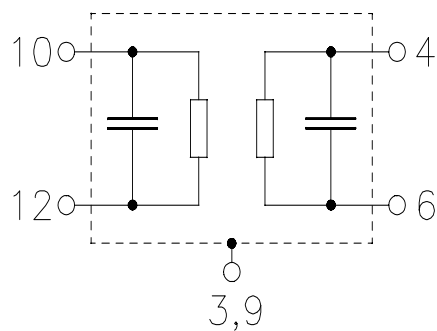
Features

- 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)**
- Filter surface passivated
- Moisture Sensitivity Level 1



Pin configuration

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





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Characteristics

Operating temperature range: $T = -40$ to $85\text{ }^{\circ}\text{C}$
Terminating source impedance: $Z_S = 100\ \Omega$ and matching network
Terminating load impedance: $Z_L = 400\ \Omega$ and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	122.88	—	MHz
Insertion attenuation at f_N ($T = 25^{\circ}\text{C}$)	α_n	5.5	6.2	7.5	dB
Variation of insertion attenuation in $[-40\text{ }^{\circ}\text{C}, 85^{\circ}\text{C}]$		—	—	± 0.9	dB
Passband width					
$\alpha_{\text{rel}} \leq 1.0\text{ dB}$	$B_{1.0\text{dB}}$	0.1	0.49	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm 0.05\text{ MHz}$		—	0.2	0.5	dB
Group Delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 0.05\text{ MHz}$		—	30	100	ns
Average Group Delay	τ_{mean}				
$f_N \pm 0.05\text{ MHz}$		—	1.04	1.08	μs
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N - 100.00\text{ MHz} \dots f_N - 10.000\text{ MHz}$		40	48	—	dB
$f_N - 10.000\text{ MHz} \dots f_N - 3.0000\text{ MHz}$		35	40	—	dB
$f_N - 1.000\text{ MHz} \dots f_N - 0.8000\text{ MHz}$		10	15	—	dB
$f_N + 0.8000\text{ MHz} \dots f_N + 1.0000\text{ MHz}$		10	15	—	dB
$f_N + 3.0000\text{ MHz} \dots f_N + 10.000\text{ MHz}$		35	41	—	dB
$f_N + 10.000\text{ MHz} \dots f_N + 100.00\text{ MHz}$		40	50	—	dB
Temperature coefficient of frequency¹⁾	TC_f	—	-0.036	—	ppm/K ²

¹⁾ Temperature dependance of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

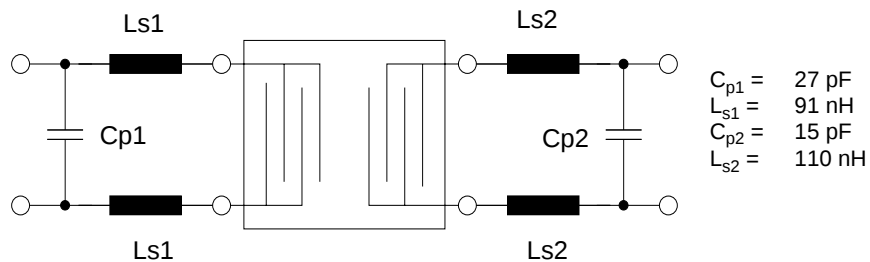


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Matching network to 100 Ω Input balanced - 400 Ω Output balanced



(matching element values depend on PCB layout)

Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
Input power	P _{IN}	10	dBm	



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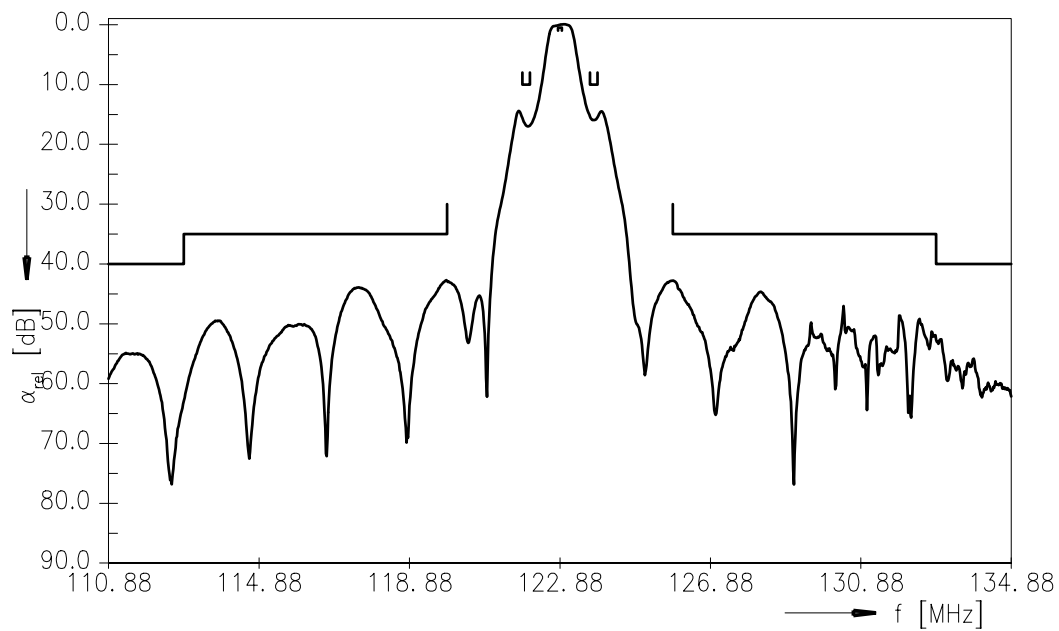
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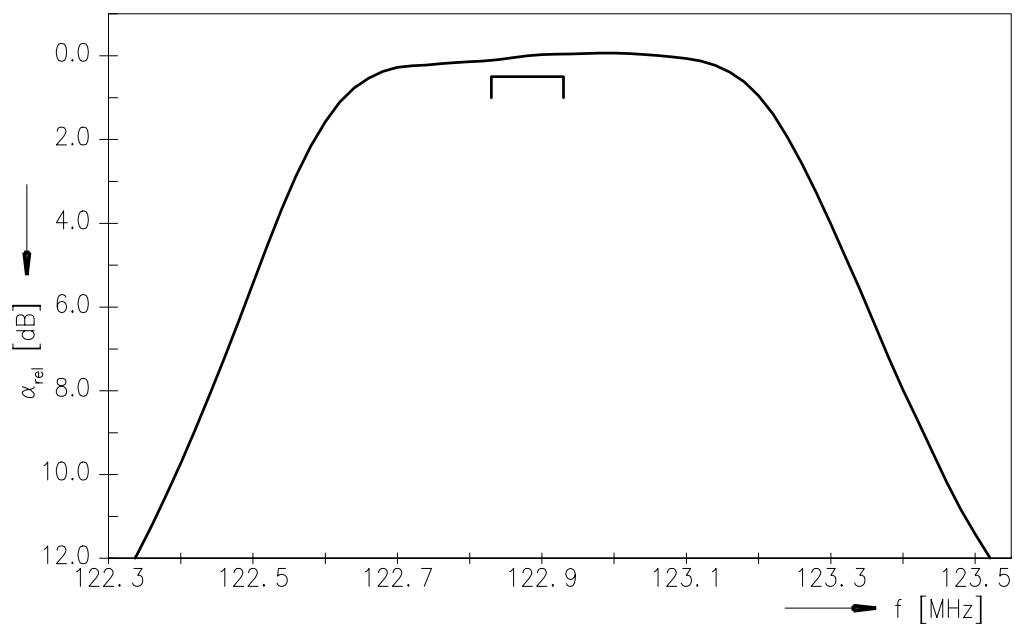
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Transfer function (Wide band)



Transfer function (Passband)



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

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**References**

Type	B5245
Ordering code	B39121B5245H310
Marking and package	C61157-A7-A95
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B5245_NB.s2p; B5245_WB.s2p
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."
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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