



SAW Components

SAW IF filter

Clean up filter

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



Data Sheet



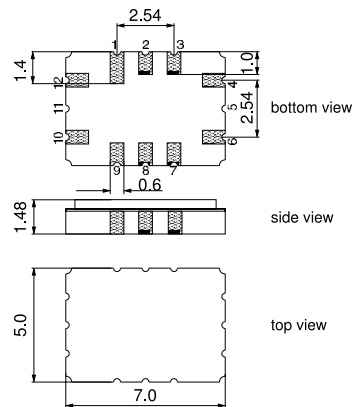
Application

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



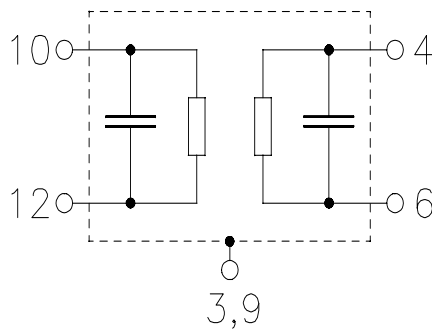
Features

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

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

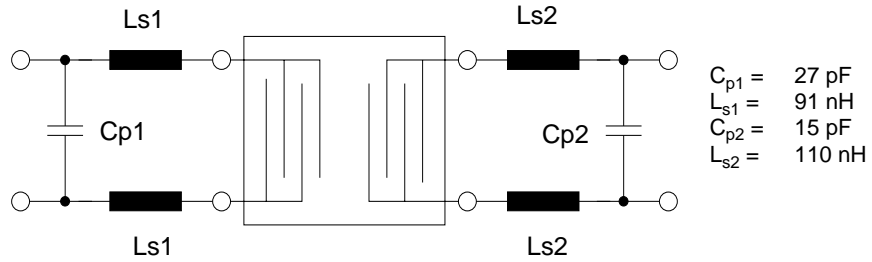


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Matching network to 100 Ω Input balanced - 400 Ω Output balanced



(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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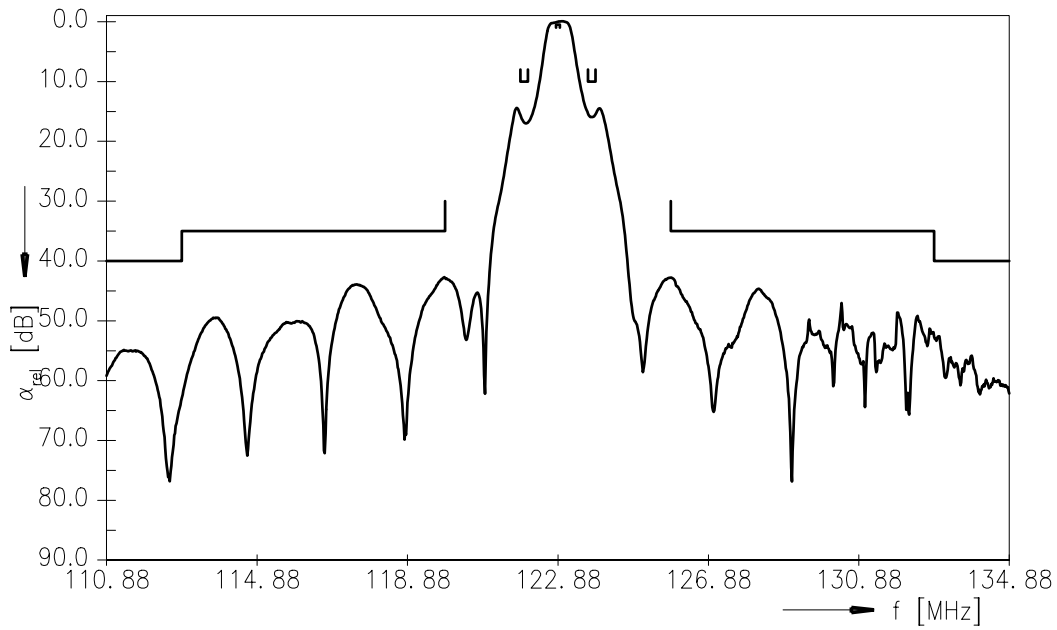
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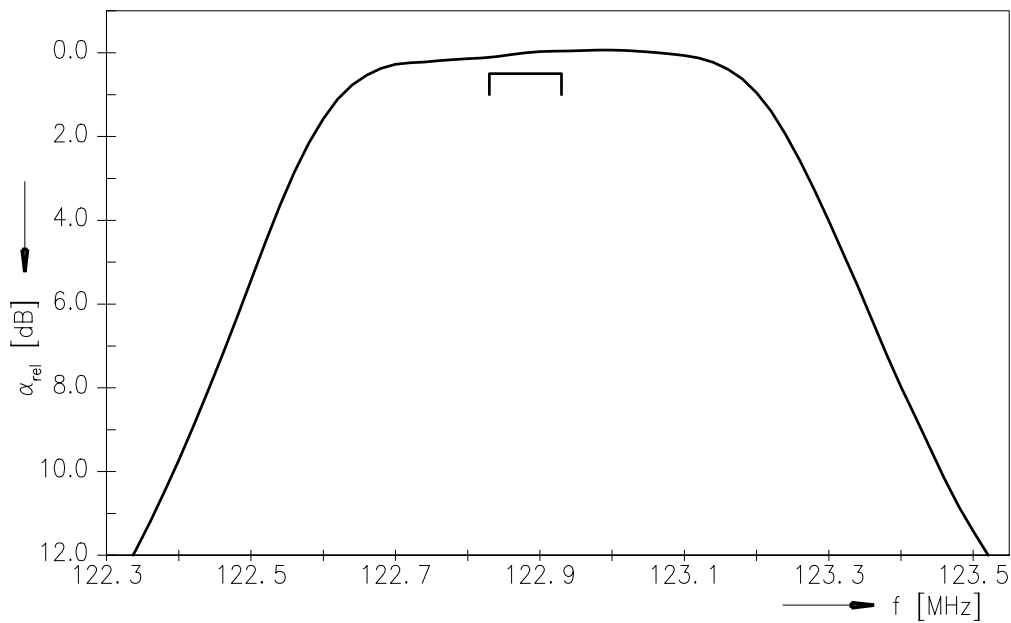
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Transfer function (Wide band)



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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