



SAW Components

SAW IF filter

WiMAX

Series/type:	B5034
Ordering code:	B39461-B5034-H810
Date:	Jul 21, 2008
Version:	2.1



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B5034

SAW IF filter

456.0 MHz

Data sheet



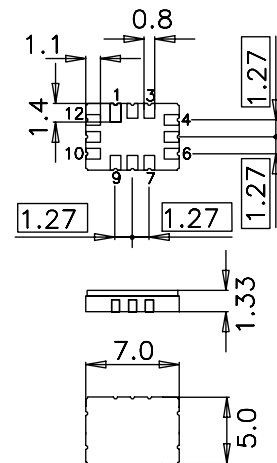
Application

- Low-loss IF filter for WiMAX
- Usable passband 4.8 MHz
- Low insertion attenuation



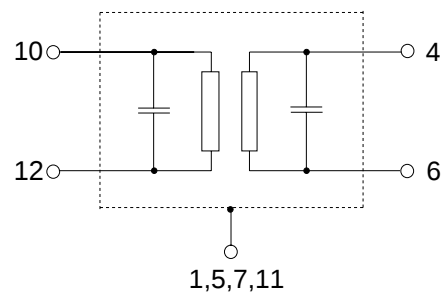
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12E
- 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
- 2, 3, 8, 9 To be grounded
- 1, 5, 7, 11 Case ground





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Characteristics

Temperature range for specification:	$T = -40$ to 85 °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	—	456.0	—	MHz
Minimum insertion attenuation (including matching network)	$\alpha_{\min}$	—	6.8	9.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 2.1\text{ MHz}$	—	0.4	1.3	dB
	$f_N \pm 2.4\text{ MHz}$	—	0.5	2.5	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 2.4\text{ MHz}$	—	75	250	ns
Impulse response attenuation (Time/Height values are relative to the main time response lobe) > 3 μs		30	55	—	dB
Relative attenuation (relative to $\alpha_{\min}$)	α_{rel}				
	365 MHz ... 371 MHz	40	48	—	dB
	412 MHz	45	57	—	dB
	412 MHz ... 450.0 MHz	40	48	—	dB
	$f_N \pm 5.3\text{ MHz}$... $f_N \pm 6.0\text{ MHz}$	35	45	—	dB
	462.0 MHz ... 600 MHz ¹⁾	40	50	—	dB
Temperature coefficient of frequency	TC_f	—	−18	—	ppm/K

¹⁾ A narrow response around 550 MHz of up to 37 dB is possible

Maximum ratings

Operable temperature range	T	−40/+85	°C	
Storage temperature range	T_{stg}	−40/+85	°C	
DC voltage	V_{DC}	3	V	between input, output and ground
DC voltage	V_{DC}	0	V	between 10, 12 and between 4,6

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



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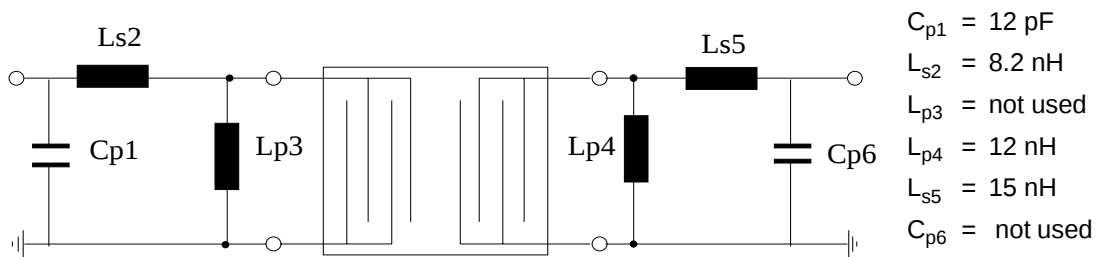
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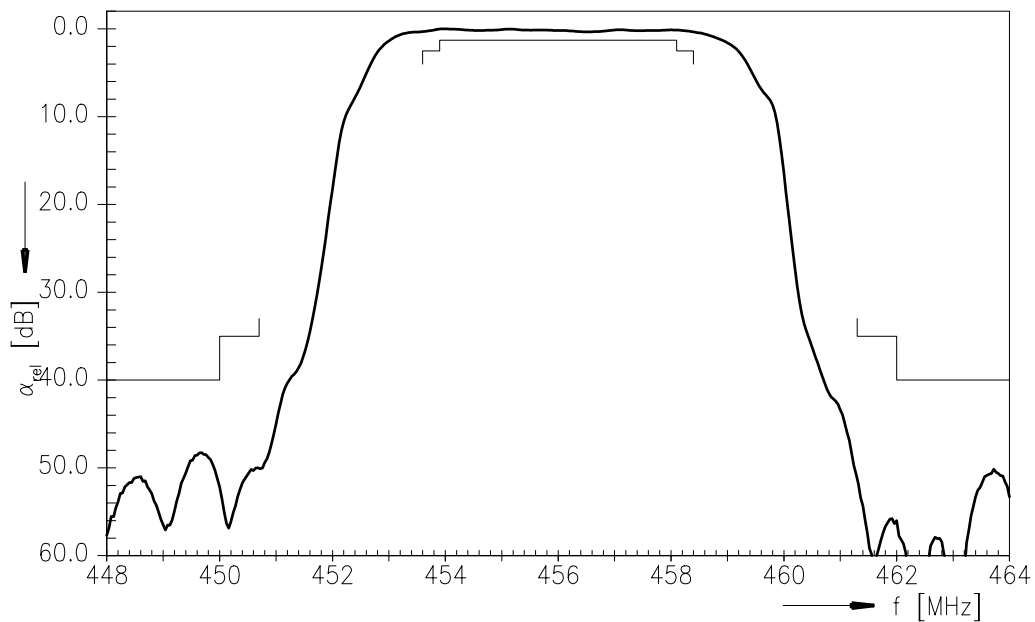


Matching network to 50 Ω



Element values depend upon PCB layout.

Normalized transfer function



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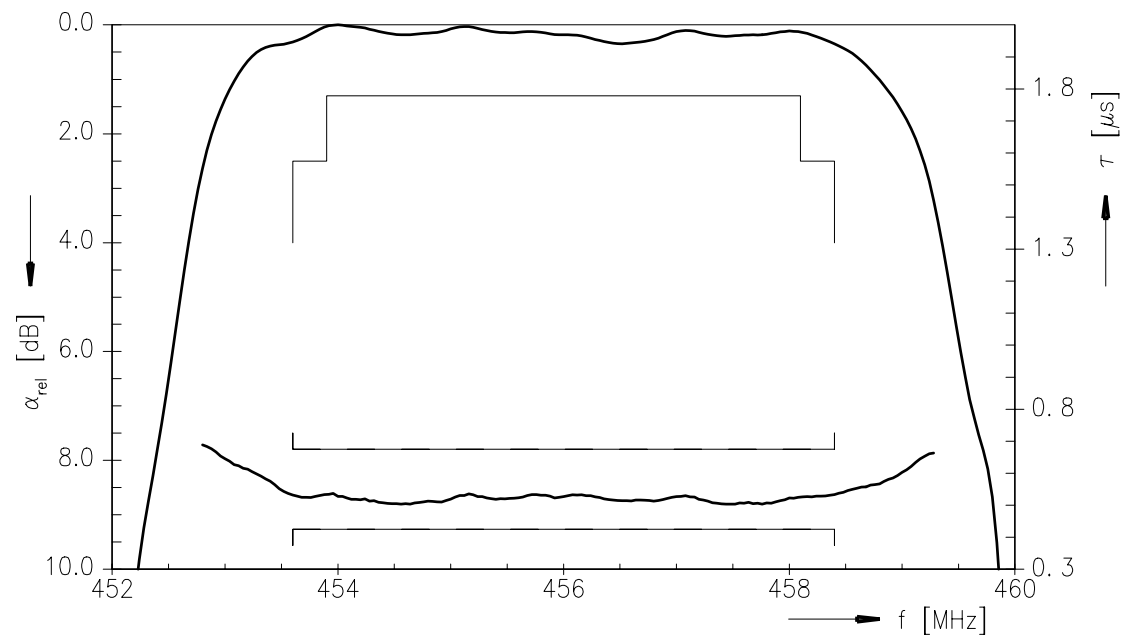
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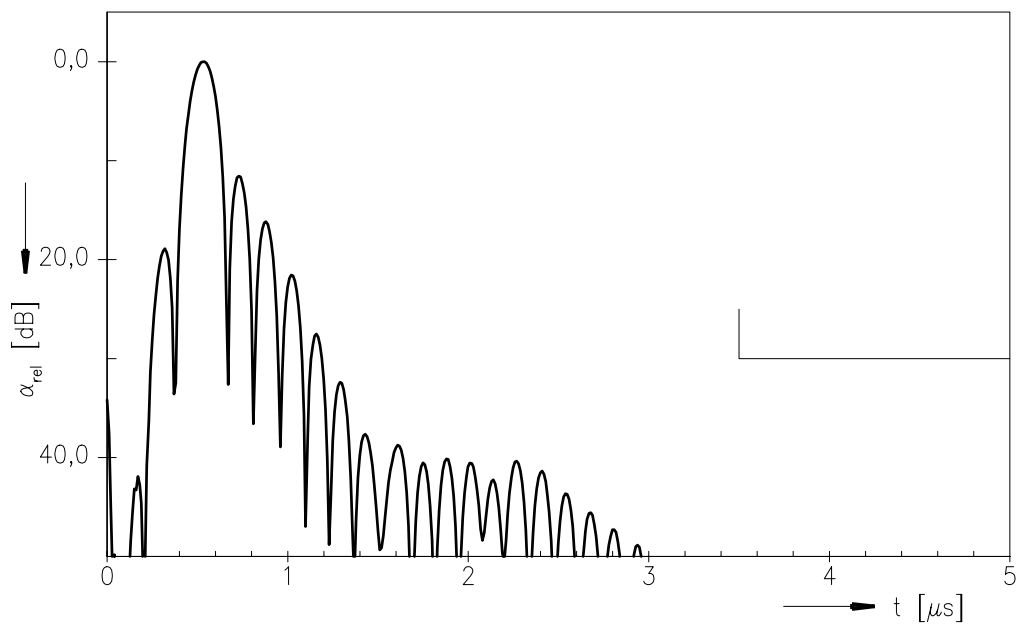
Data sheet



Normalized transfer function (pass band)



Transfer function (Impulse response)



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**References**

Type	B5034
Ordering code	B39461-B5034-H810
Marking and package	C61157-A7-A103
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	
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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6 Jul 21, 2008



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