



SAW Components

SAW IF filter

WiMAX

Series/type:	B5032
Ordering code:	B39461-B5032-H810
Date:	Jun 29, 2009
Version:	2.3



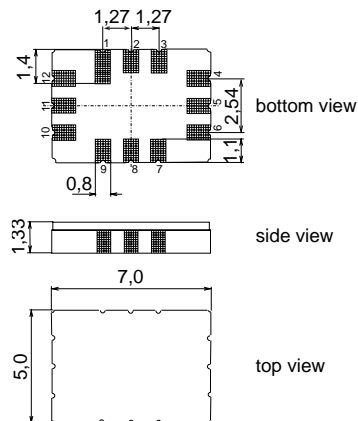
Application

- Low-loss IF filter for WiMAX
- Usable passband 10.4 MHz
- Balanced or unbalanced operation possible



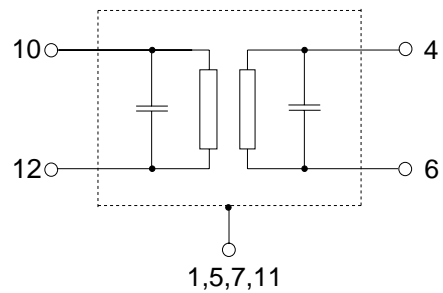
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12E
- RoHS compatible
- Approx. weight 0.2 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 or balanced input
- 4 Output
- 6 Output ground or balanced output
- 2, 3, 8, 9 To be grounded
- 1, 5, 7, 11 Case ground





SAW Components	B5032
SAW IF filter	456.00 MHz

Data Sheet



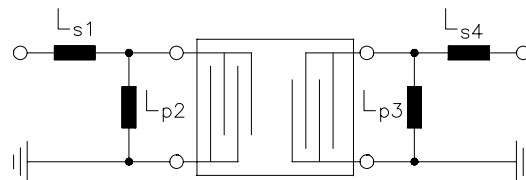
Characteristics

Operating temperature range: $T = -40$ to 90 °C
 Terminating source impedance: $Z_S = 50$ Ω single ended or 200 Ω balanced and matching network
 Terminating load impedance: $Z_L = 50$ Ω single ended or 200 Ω balanced and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	456.0	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	8.7	11.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 2.9$ MHz	—	0.4	1.5	dB
	$f_N \pm 5.2$ MHz	—	0.5	2.0	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 5.2$ MHz	—	35	150	ns
Absolute group delay (at f_N)	τ	—	0.7	2.0	μs
Relative attenuation (relative to α_{min})	α_{rel}				
	$f_N \pm 10.0$... $f_N \pm 43.0$ MHz	37 ¹⁾	43	—	dB
	411 - 413 MHz	40	50	—	dB
	393 - 411 MHz	40	50	—	dB
	343 - 393 MHz	42	50	—	dB
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K

¹⁾ for balanced operation mode only a minimum selectivity of 30 dB could be specified

Matching network to 50 Ω single ended (element values depend on PCB layout)



- $L_{s1} = 33.0$ nH
- $L_{p2} = 15.0$ nH
- $L_{p3} = 15.0$ nH
- $L_{s4} = 33.0$ nH

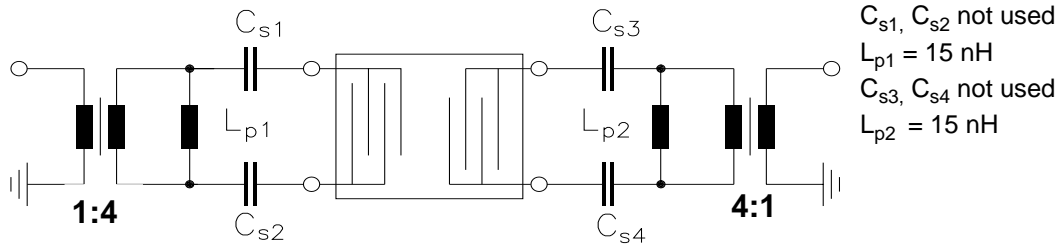


Data Sheet



Matching network to 200 Ω balanced (element values depend on PCB layout)

4:1 transformer is only required for measurement in a 50 Ω environment

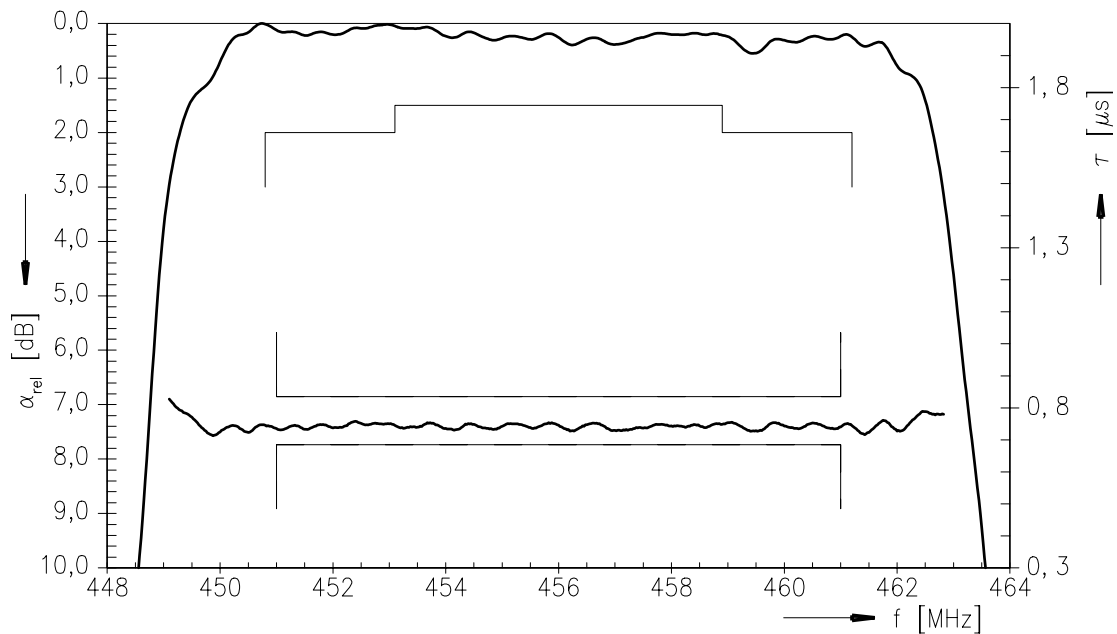


Maximum ratings

Operable temperature range	T	-40/+90	°C	
Storage temperature range	T _{sta}	-40/+90	°C	
DC voltage	V _{DC}	5	V	between input, output and ground
DC voltage	V _{DC}	0	V	between 10,12 and between 4,6
ESD voltage	V _{ESD}	200 ¹⁾	V	machine model, 1 pulse
Input power	P _{IN}	10	dBm	

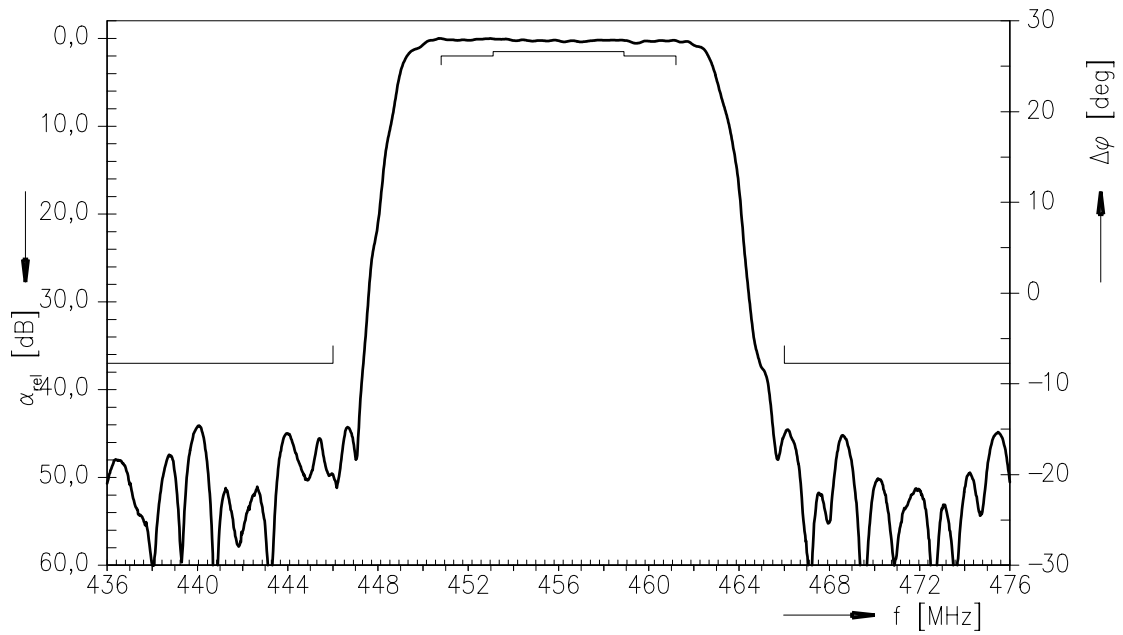
1) acc. to J-STD22A-0115A (machine model, 1 pulse +/-).

Normalized transfer function (pass band)

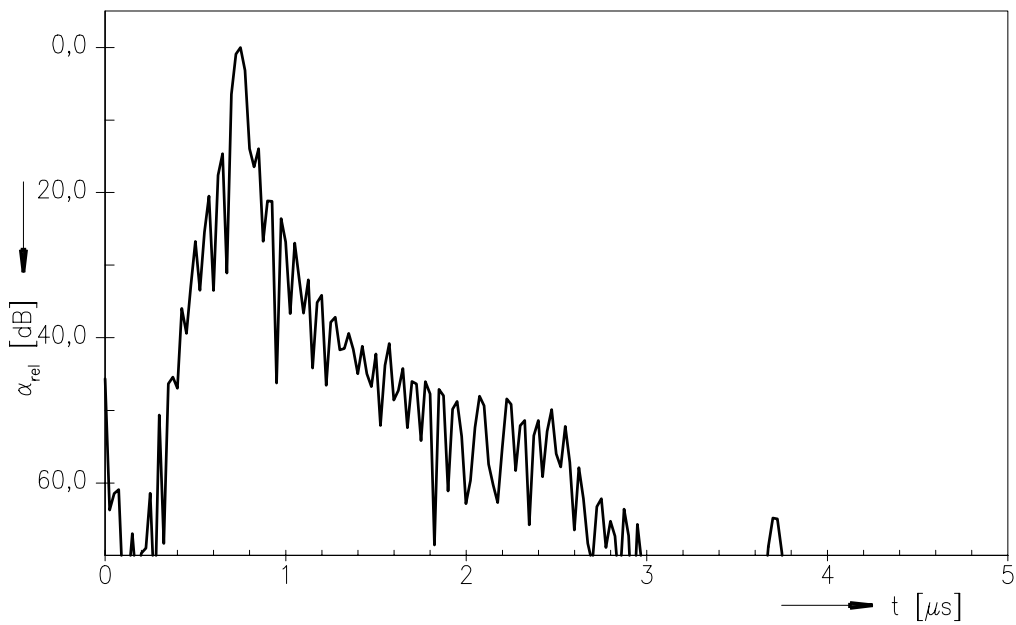




Transfer function (wide band)



Normalized time response





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456.00 MHz

Data Sheet



References

Type	B5032
Ordering code	B39461-B5032-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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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