SAW Components

SAW IF filter

TD-SCDMA

Series/type:	**B5062**
Ordering code:	**B39960B5062H310**
Date:	June 16, 2008
Version:	2.0

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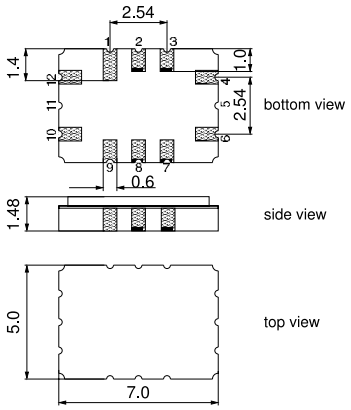
Application

- Low-loss IF filter for TD-SCDMA base station
- Unbalanced or balanced operation possible
- High stopband suppression
- Usable passband 20.0 MHz



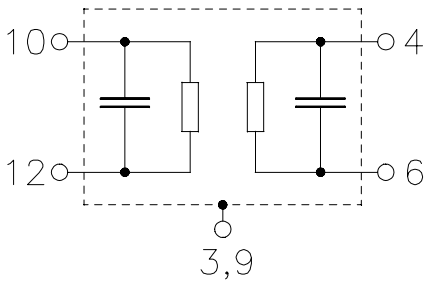
Features

- Package size 7.0 x 5.0 x 1.48 mm^3
- Package code QCC12C
- RoHS compatible
- Approximate weight 0.25 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- Filter surface passivated



Pin configuration

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



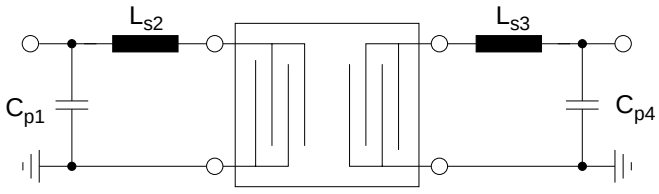
Data sheet SMD

Characteristics

Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω and matching network
Termnating load impedance: Z_L = 50 Ω and matching network
Group delay aperture: 200 kHz

		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	96.0	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	8.0	9.0	dB
Passband width					
$\alpha_{rel} \leq$ 1.4 dB	$B_{1.4dB}$	20	21.8	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm$ 10.0 MHz		—	1.0	1.4	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm$ 10.0 MHz		—	100	150	ns
Relative attenuation (relative to α_{min})	α_{rel}				
10.0 MHz ... 68.4 MHz		55	60	—	dB
76.8 MHz		40	45	—	dB
123.6 MHz ... 162.8 MHz		55	60	—	dB
162.8 MHz ... 1.0 GHz		35	50	—	dB
Return loss					
Input $f_N \pm$ 10.0 MHz		—	7	—	dB
Output $f_N \pm$ 10.0 MHz		—	8	—	dB
1 dB compression point		12	—	—	dBm
Input IP3		35	—	—	dBm
Temperature coefficient of frequency	TC_f	—	–78	—	ppm/K

Matching network to 50 Ω



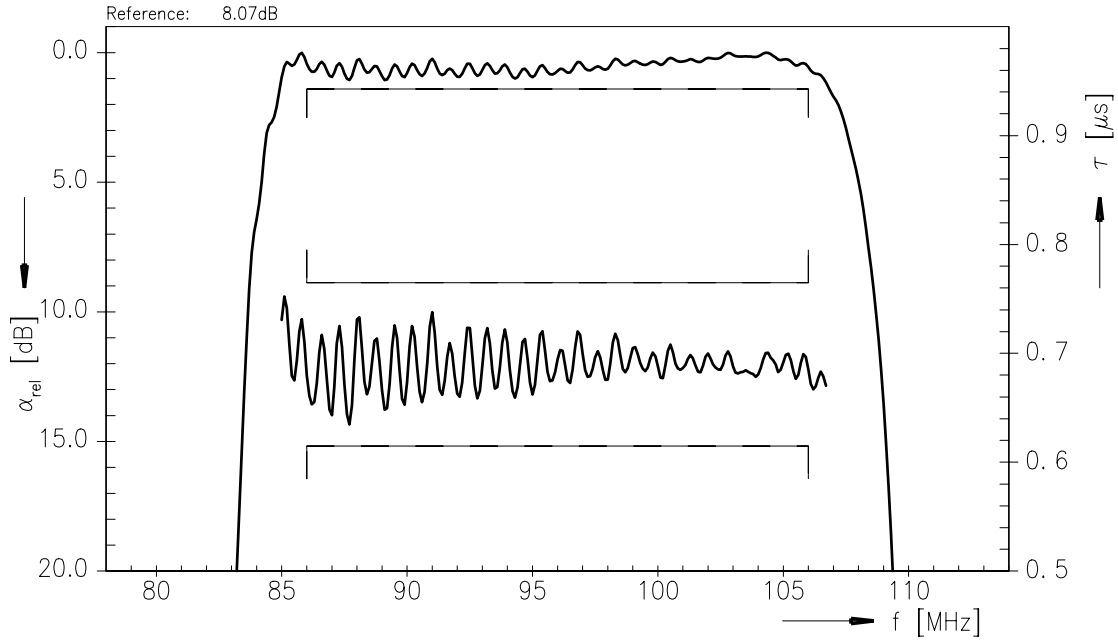
C_{p1} = 33 pF
L_{s2} = 180 nH
L_{s3} = 270 nH
C_{p4} = 22 pF

(Element values depend upon board layout and properties)

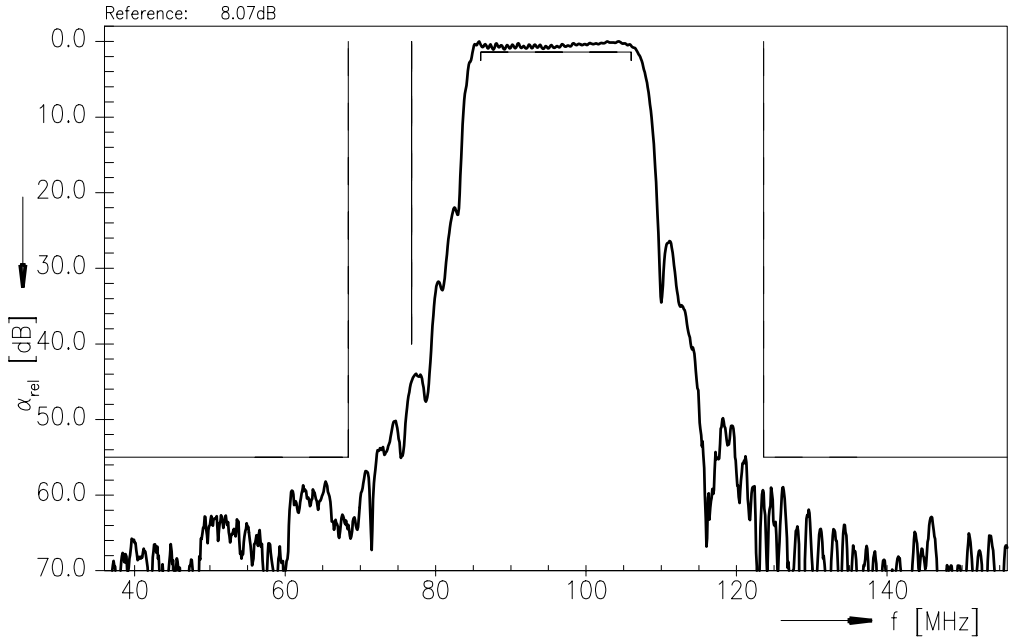
Maximum ratings

Operable temperature range	T	–40/+85	°C	
Storage temperature range	T_{stg}	–40/+85	°C	
DC voltage	V_{DC}	5	V	
Input Power	P_{IN}	12	dBm	

Transfer function (S21, Narrowband)



Transfer function (S21, Wideband)



References

Type	B5062
Ordering code	B39960B5062H310
Marking and package	C61157-A7-A94
Packaging	F61074-V8163-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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Published by EPCOS AG
Surface Acoustic Wave Components Division
P.O. Box 80 17 09, 81617 Munich, GERMANY

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