



SAW Components

SAW IF filter

TD-SCDMA

Series/type:	B5206
Ordering code:	B39151B5206H810
Date:	October 28, 2009
Version:	2.1



SAW Components

B5206

SAW IF filter

153.6 MHz

Data sheet



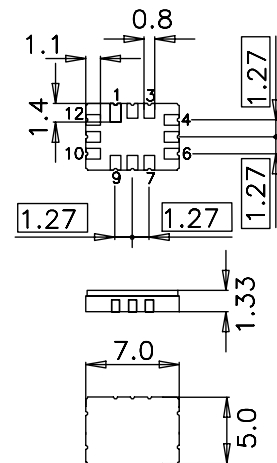
Application

- Low-loss IF filter for TD-SCDMA base station
- Usable passband 20.0 MHz
- Balanced or unbalanced operation



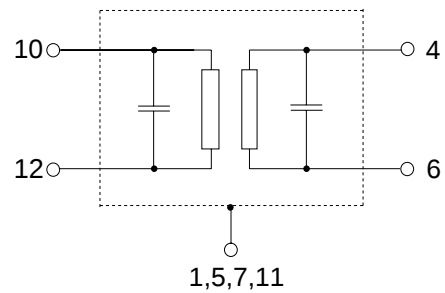
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12E
- RoHS compatible
- Approximate 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:

$T = -40\text{ °C to }+85\text{ °C}$

Terminating source impedance:

$Z_S = 50\ \Omega$ and matching network

Terminating load impedance:

$Z_L = 50\ \Omega$ and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	153.6	—	MHz
Minimum insertion attenuation (including matching network)	$\alpha_{\min}$	—	7.8	10	dB
Passband width					
$\alpha_{\text{rel}} \leq 1.0\text{ dB}$	$B_{1.0\text{dB}}$	20	23.9	—	MHz
Amplitude ripple (p-p)					
$f_N \pm 10\text{ MHz}$	$\Delta\alpha$	—	0.6	1.0	dB
Phase ripple (p-p)					
$f_N \pm 10\text{ MHz}$	$\Delta\phi$	—	2.5	5.0	°
Absolute group delay					
$f_N \pm 10\text{ MHz}$	τ	—	0.51	1	µs
VSWR					
Input $f_N \pm 10\text{ MHz}$		—	1.5	2:1	
Output $f_N \pm 10\text{ MHz}$		—	1.2	2:1	
Relative attenuation (relative to $\alpha_{\min}$)	α_{rel}				
10 MHz ... 80 MHz		40	75	—	dB
80 MHz ... 105 MHz		55	65	—	dB
200 MHz ... 230 MHz		40	57	—	dB
230 MHz ... 280 MHz		45	57	—	dB
230 MHz ... 1 GHz		40	47	—	dB
Temperature coefficient of frequency	TC_f	—	−87	—	ppm/K

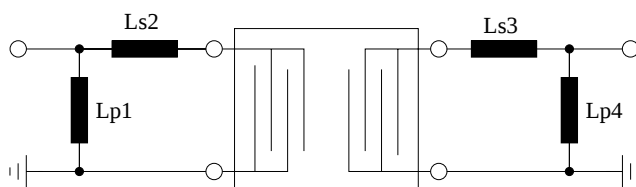


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Matching network to 50 Ω



$L_{p1} = 33 \text{ nH}$
 $L_{s2} = 39 \text{ nH}$
 $L_{s3} = 27 \text{ nH}$
 $L_{p4} = 33 \text{ nH}$

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}	0	V	
Input Power	P _{IN}	13	dBm	



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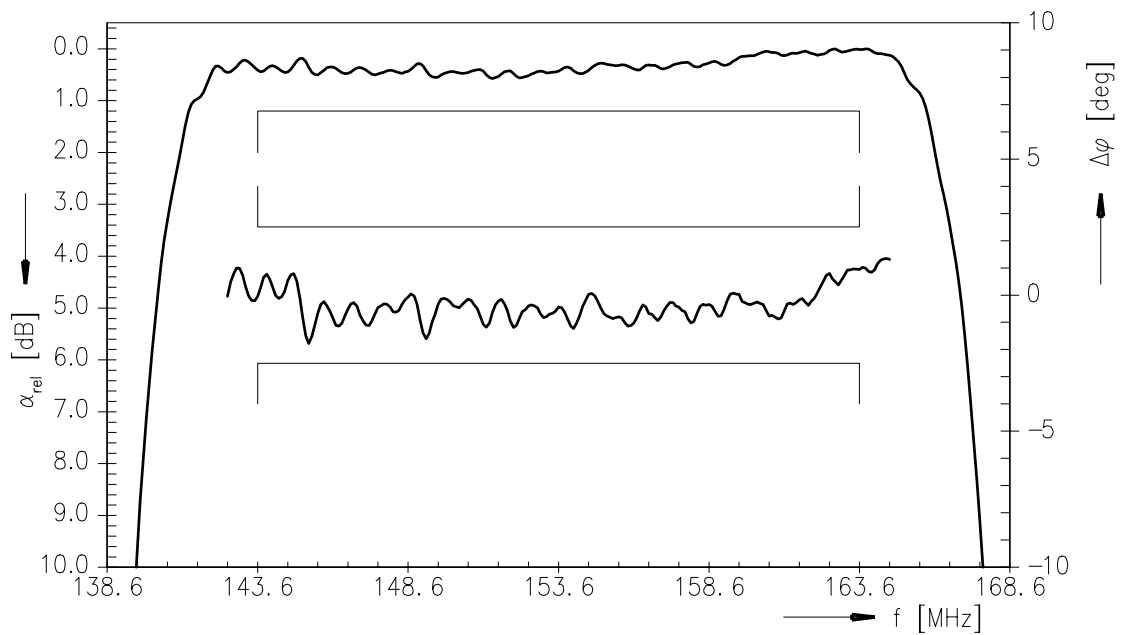
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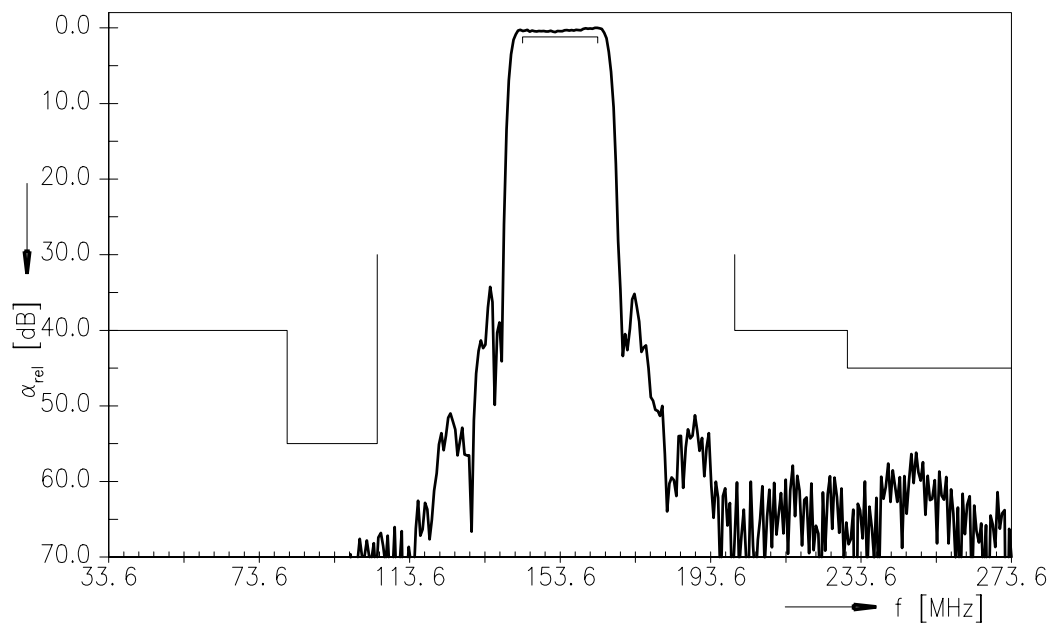
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Transfer function (S21, Narrowband)



Transfer function (S21, Wideband)



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

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**References**

Type	B5206
Ordering code	B39151B5206H810
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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