



SAW Components

SAW IF filter

WCDMA

Series/type:	B5087
Ordering code:	B39191B5087H810
Date:	Mar 25, 2008
Version:	2.0



SAW Components

B5087

SAW IF filter

192.0 MHz

Data sheet



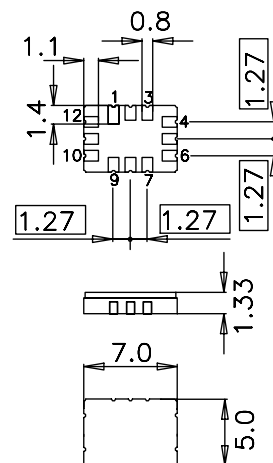
Application

- Low-loss IF filter for WCDMA base station
- Usable passband 60 MHz
- Balanced or unbalanced operation possible



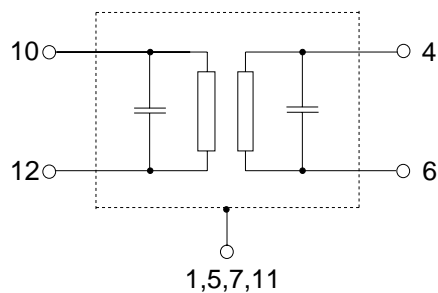
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12E
- RoHS compatible
- Approx. weight 0.25 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 or input balance
- 4 Output
- 6 Output ground or output balance
- 2, 3, 8, 9 To be grounded
- 1, 5, 7, 11 Case ground





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Characteristics

Operating temperature range:	$T = -30$ to 85 °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	—	192.0	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	15.2	16.0	dB
Passband width					
	$\alpha_{\text{rel}} \leq 1.2\text{ dB}$	$B_{1.2\text{dB}}$	60.0	64.7	— MHz
Amplitude ripple (p-p)					
	$f_N \pm 30\text{ MHz}$	$\Delta\alpha$	—	0.6	1.2 dB
Group delay ripple (p-p)					
	$f_N \pm 30\text{ MHz}$	$\Delta\tau$	—	30	60 ns
Mean value of absolute group delay					
	$f_N \pm 30\text{ MHz}$	$\bar{\tau}$	—	550	— ns
Relative attenuation (relative to α_{\min})					
	α_{rel}				
	10.0 MHz ... 145.5 MHz	40	47	—	dB
	238.5 MHz ... 450.0 MHz	40	49	—	dB
	450.0 MHz ... 770.0 MHz	35	46	—	dB
	770.0 MHz ... 1000.0 MHz	40	66	—	dB
Temperature coefficient of frequency	TC_f	—	−87	—	ppm/K

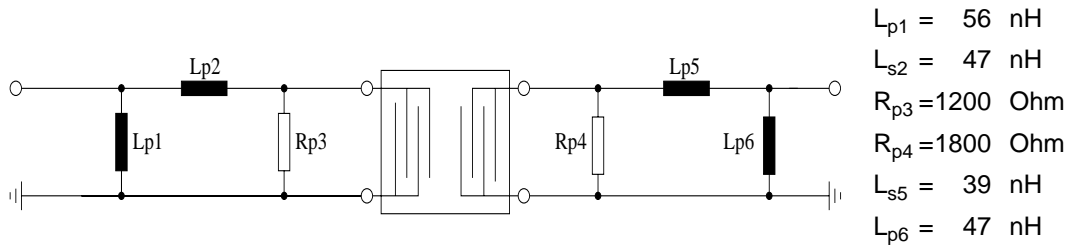


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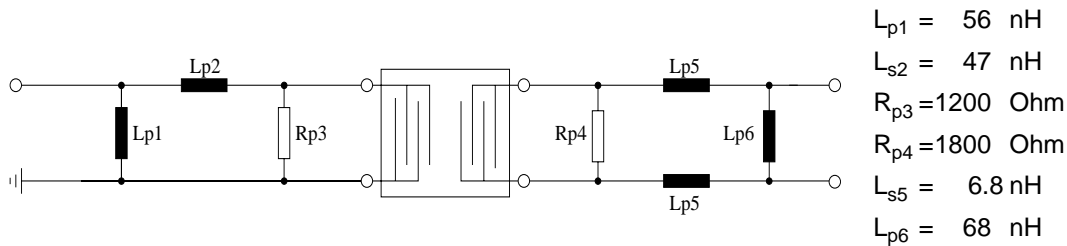


Matching network to 50 Ω (input unbalanced) and 50 Ω (output unbalanced)



Element values depend upon PCB layout.

Alternative matching network to 50 Ω (input unbalanced) and 150 Ω (output balanced)



Element values depend upon 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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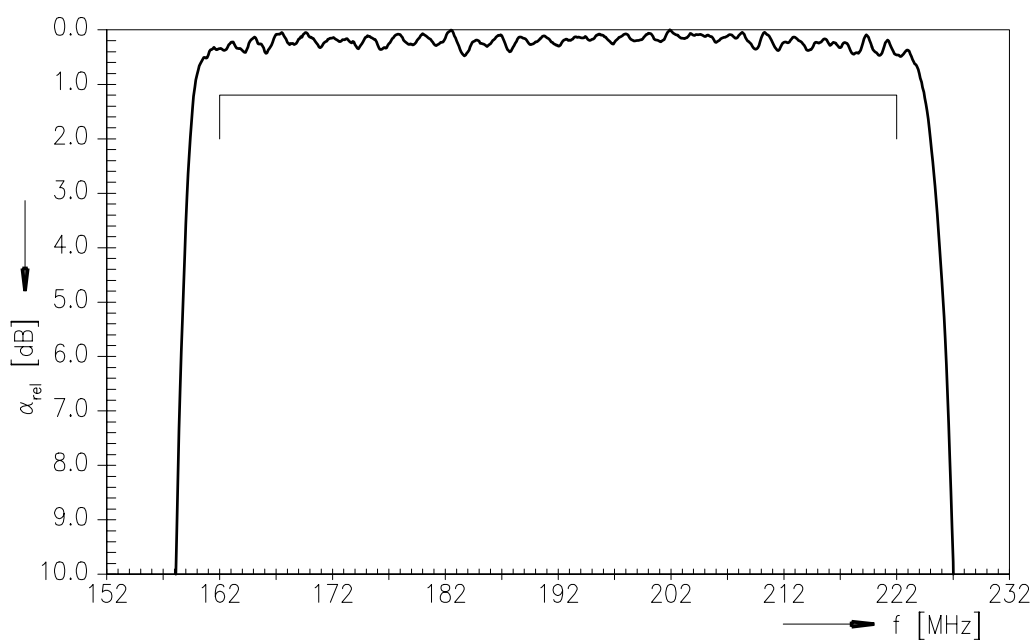
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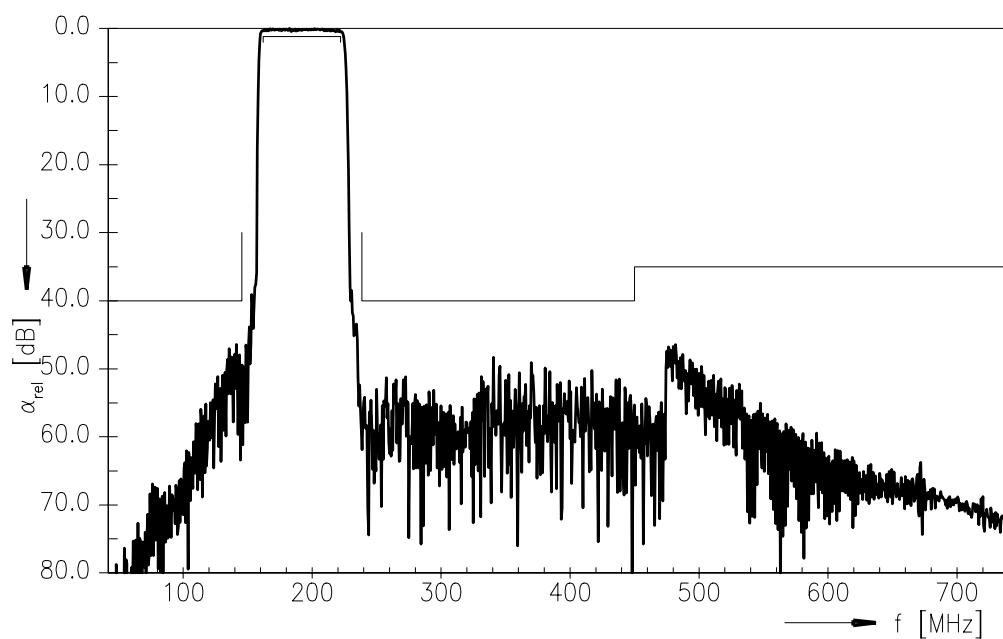
Data sheet



Transfer function



Transfer function (wideband)





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Data sheet	SMD

References

Type	B5087
Ordering code	B39191B5087H810
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 .

Published by EPCOS AG
Surface Acoustic Wave Components Division
P.O. Box 80 17 09, 81617 Munich, GERMANY

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