



SAW Components

SAW IF filter for base stations

Series/type:	B5087
Ordering code:	B39191B5087H810
Date:	Sep 03, 2010
Version:	2.2

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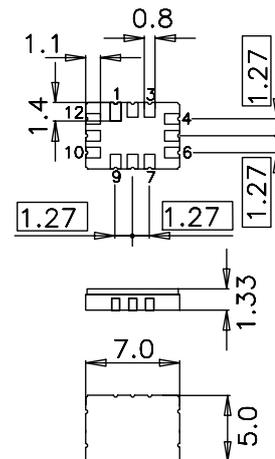
Data sheet


Application

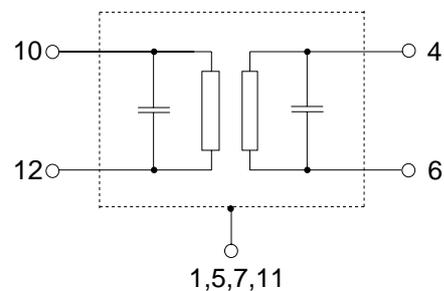
- Low-loss IF filter for WCDMA base station
- Usable passband 60 MHz
- Balanced or unbalanced operation possible


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



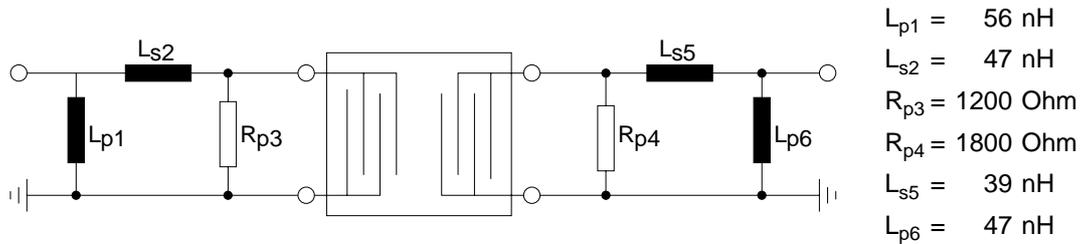
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Characteristics

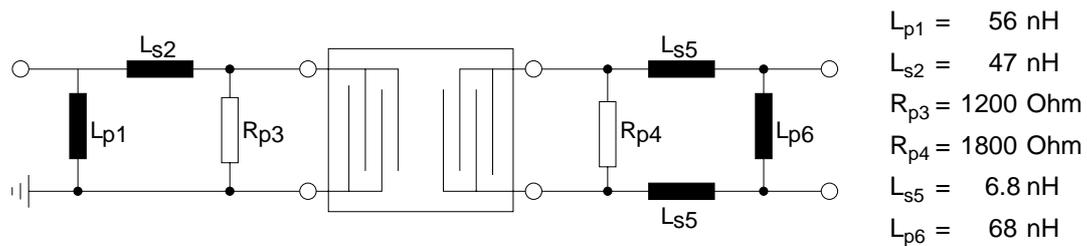
Operating temperature range:	T = -30 to 85 °C
Terminating source impedance:	Z _S = 50 Ω and matching network
Terminating load impedance:	Z _L = 50 Ω and matching network

		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					
	α _{rel} ≤ 1.2 dB	B _{1,2dB}	60.0	64.7	— MHz
Amplitude ripple (p-p)					
	f _N ± 30 MHz	Δα	—	0.6	1.2 dB
Group delay ripple (p-p)					
	f _N ± 30 MHz	Δτ	—	30	60 ns
Mean value of absolute group delay					
	f _N ± 30 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

Data sheet

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)


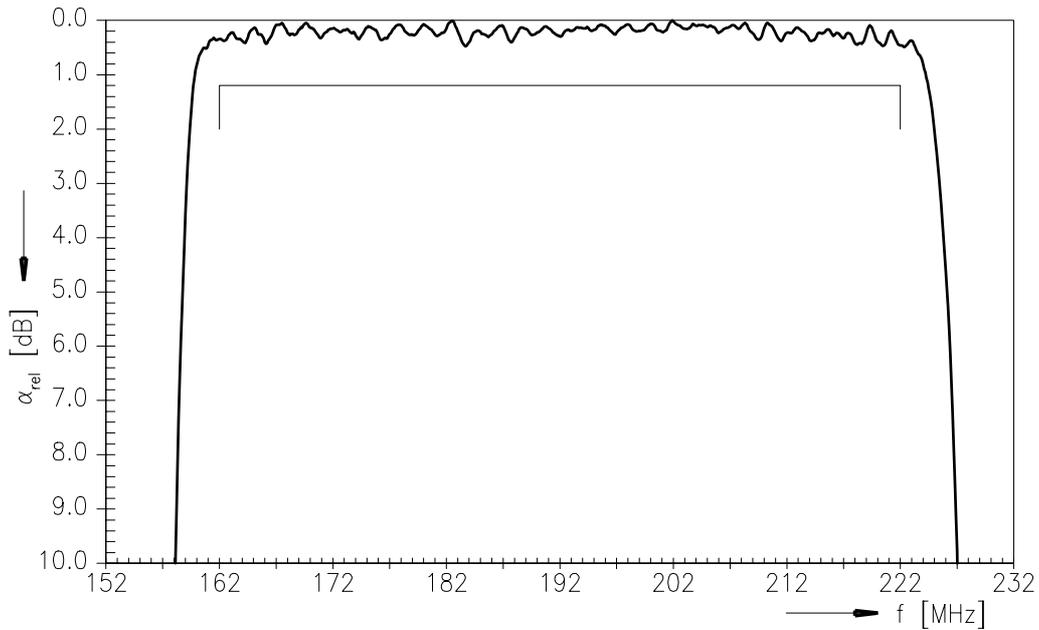
Element values depend upon PCB layout.

Maximum ratings

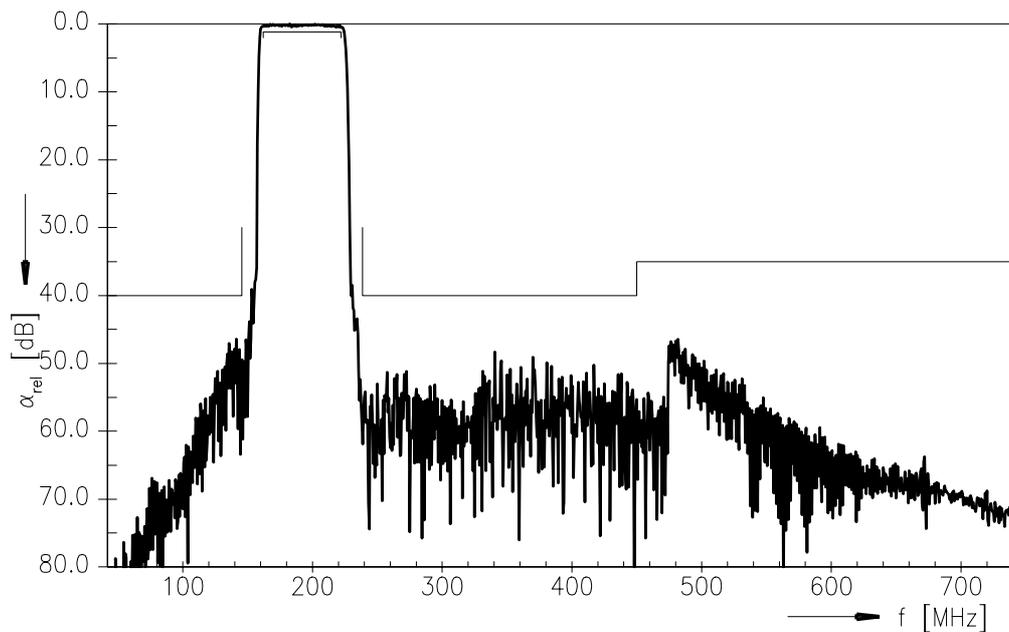
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{sta}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
Input power	P _{IN}	10	dBm	



Transfer function



Transfer function (wideband)



SAW Components	B5087
SAW IF filter	192.0 MHz

Data sheet



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."
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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