



RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW IF filter for base stations

Series/type:	B5087
Ordering code:	B39191B5087H810
Date:	Mar 21, 2016
Version:	2.3

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SAW Components

SAW IF filter for base stations

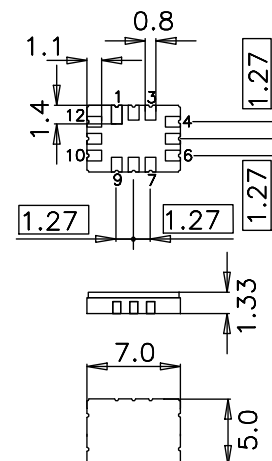
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Application

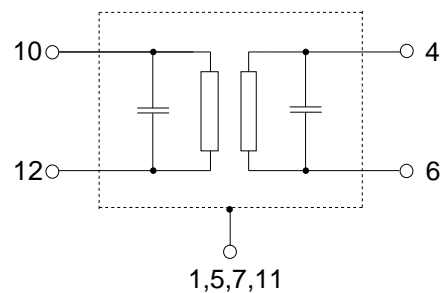
- Low-loss IF filter for WCDMA base station
- Usable passband 60 MHz
- Balanced or unbalanced operation possible

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



SAW Components
B5087
SAW IF filter
192.0 MHz

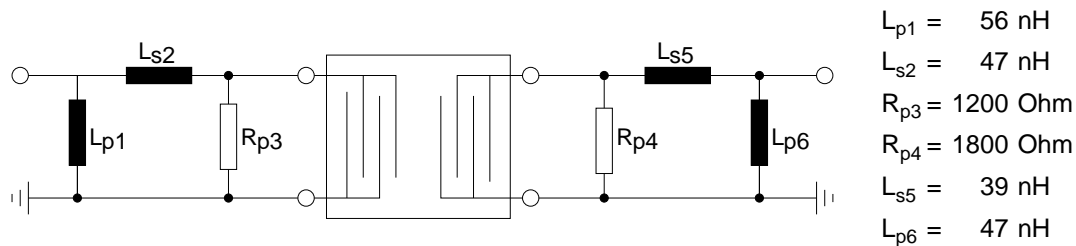
Data sheet


Characteristics

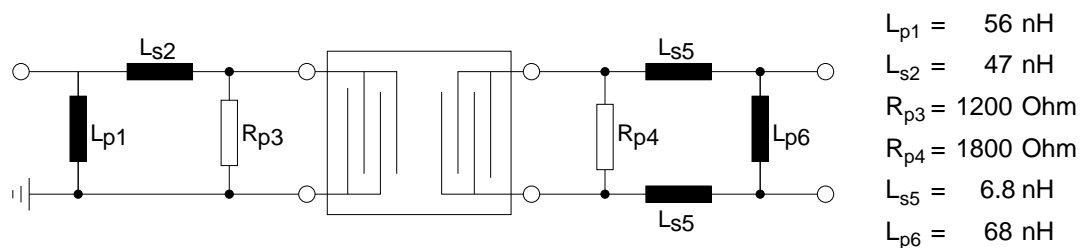
Operating temperature range: $T = -30$ to 85 °C
 Terminating source impedance: $Z_S = 50 \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \Omega$ and matching network

		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	$\alpha_{\text{rel}} \leq 1.2$ dB	$B_{1.2\text{dB}}$	60.0	64.7	—
					MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 30$ MHz	—	0.6	1.2	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 30$ MHz	—	30	60	ns
Mean value of absolute group delay	$\bar{\tau}$				
	$f_N \pm 30$ MHz	—	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.

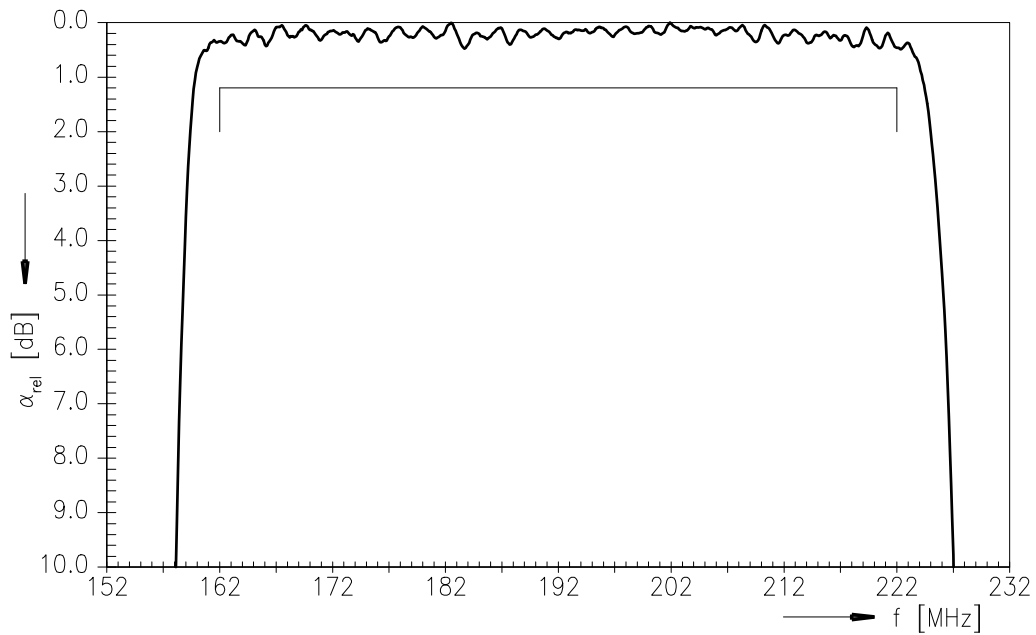
Maximum ratings

Operable temperature range	T	-40/+85	°C	Machine Model Human Body Model
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	200 ¹⁾	V	
		350 ²⁾	V	
Input power	P _{IN}	10	dBm	

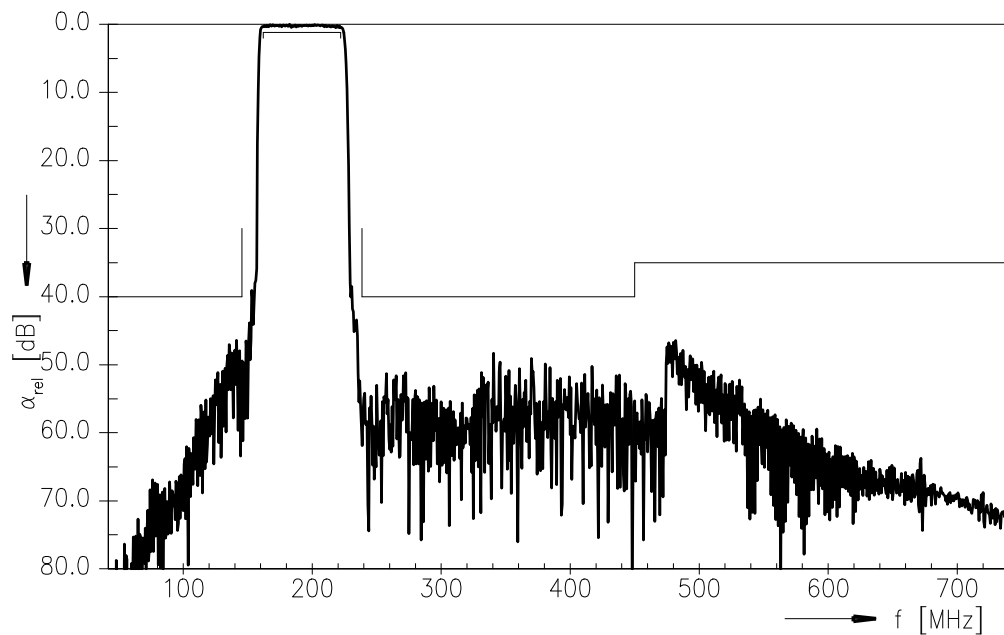
1) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulses

2) acc. to JESD22-A114F (HBM - Human Body Model), 1 negative & 1 positive pulse

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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