



SAW Components

SAW RF filter

Radiolink

Series/type:	B5168
Ordering code:	B39112B5168B510
Date:	July 24, 2012
Version:	1.0

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SAW Components**B5168****SAW****1080.00 MHz**

Preliminary data

**Revision History**

Changes compared to previously issued iteration

Issue	Originator	Detailed specification changes	Date
DG0610A01	Martin Stoerkle	Design goal release	07.06.2010
DGLY81A02	Martin Stoerkle	update package, pinning	08.11.2010
LY81A_1.0	Martin Stoerkle	first samples; bw, selectivity relaxed	15.12.2010
B5168_1.0	Martin Stoerkle	introduce order code; adjust orientation in tape to EIA standard	24.07.2012

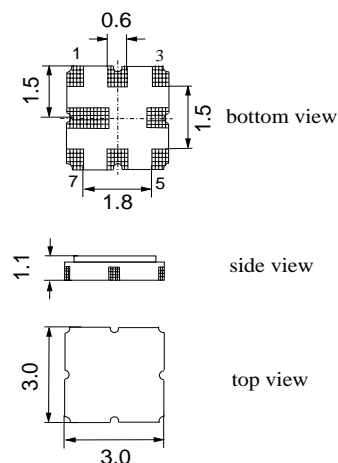
Preliminary data

Application

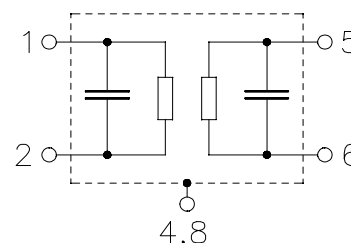
- Low-loss RF filter
- Unbalanced operation


Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code QCC8F
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Filter surface passivated
- **Electrostatic Sensitive Device (ESD)**
- Moisture Sensitivity Level 1


Pin configuration¹⁾

- 1 Input ground (recommended) or input
- 2 Input (recommended) or input ground
- 5 Output (recommended) or output ground
- 6 Output ground (recommended) or output
- 3, 7 to be grounded
- 4,8 Case ground



1) The recommended pin configuration usually offers best suppression of electrical crosstalk. The filter characteristics refer to this configuration.

Preliminary data

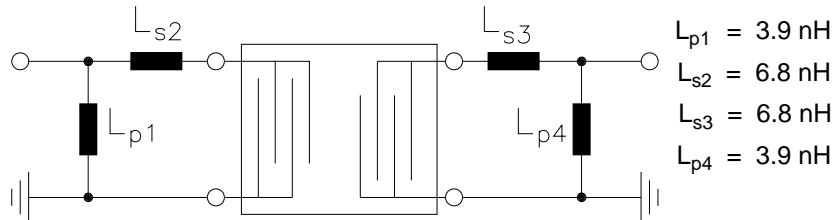
Characteristics

Temperature range for specification:	T = -40 °C 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	—	1080.00	—	MHz
Minimum insertion attenuation	α _{min}	—	3.6	6	dB
Amplitude ripple(p-p)					
	1079.95 ... 1080.05 MHz	—	0.25	1.5	dB
	1079.80 ... 1080.20 MHz	—	0.5	3.0	dB
Passband width					
	α _{rel} ≤ 1.5 dB B _{1.5dB}	0.9	1.1	—	MHz
	α _{rel} ≤ 3.0 dB B _{3.0dB}	1.1	1.3	—	MHz
Return loss					
	1079.95 ... 1080.05 MHz	8	12	—	dB
	1079.80 ... 1080.20 MHz	6	12	—	dB
Relative attenuation (relative to α_{min})	α _{rel}				
	900.0 ... 1071.5 MHz	30	40	—	dB
	1071.5 ... 1076.5 MHz	15	25	—	dB
	1083.5 ... 1088.5 MHz	15	25	—	dB
	1088.5 ... 1200.0 MHz	27 ¹⁾	35	—	dB

¹⁾ Apart from a narrow peak around 1100 MHz which may reach up to around 25 dB

Preliminary data

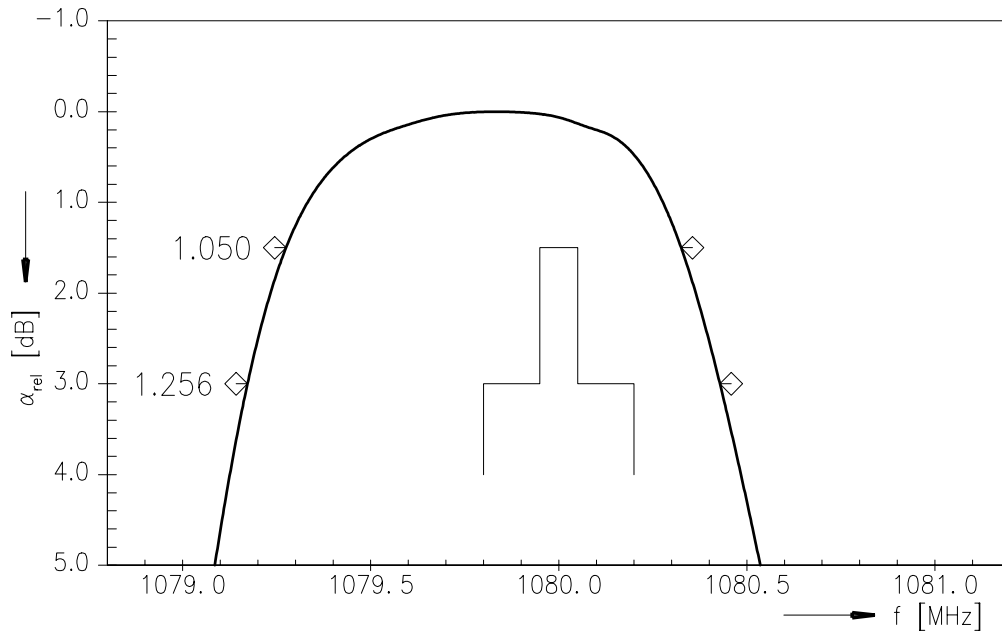
Matching network to 50 Ω (element values depend on pcb layout)

Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-55/+85	°C	
DC voltage	V _{DC}	0	V	
Source power	P _S	0	dBm	

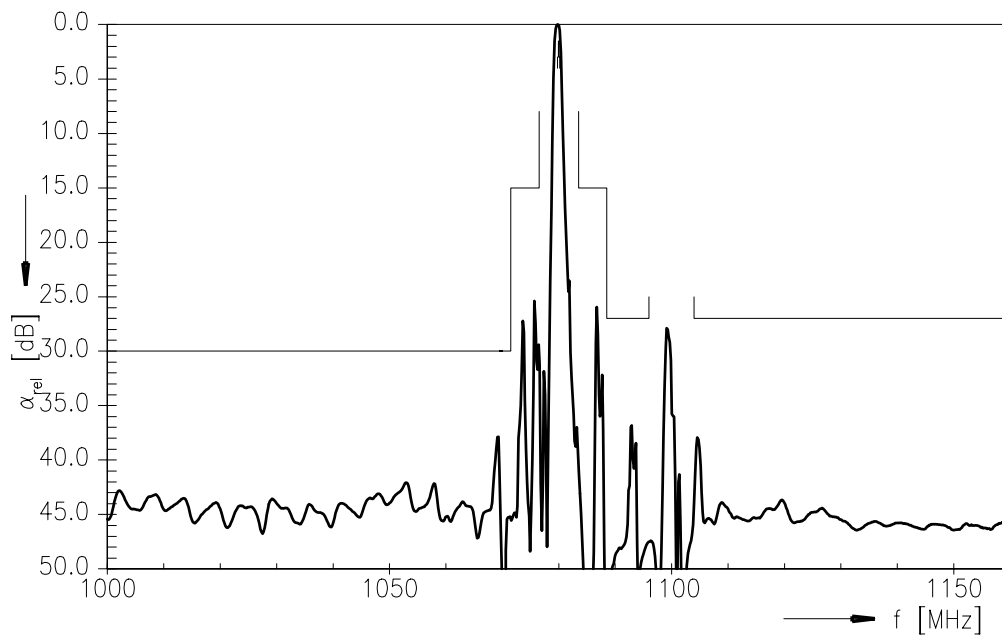
Preliminary data



Transfer function (S21, narrowband, normalized)



Transfer function (S21, wideband, normalized)



SAW Components	B5168
SAW	1080.00 MHz

Preliminary data



References

Type	B5168
Ordering code	B39112B5168B510
Marking and package	C61157-A7-A165
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B5168_NB.s2p; B5168_WB.s2p
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 for a large variety of matching coils.

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