



SAW Components

SAW RF filter

Radiolink

Series/type:	B5169
Ordering code:	B39112B5169B510
Date:	October 15, 2012
Version:	2.0

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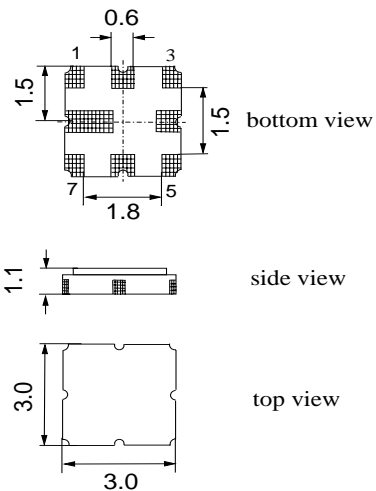
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Application

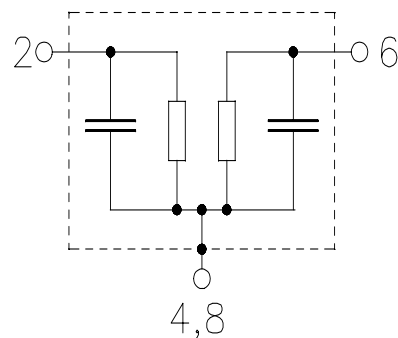
- RF filter for Radiolink system
- Usable band width 7 MHz
- No matching required for operation at 50 Ω


Features

- Package size 3.0 x3.0 x 1.1 mm³
- Package code QCC8F
- RoHS compatible
- Approximate weight 0.037 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated
- Moisture sensitivity Level 1


Pin configuration

- 2 Input
- 6 Output
- 4,8 Case ground
- 1, 3, 5, 7 To be grounded



Data Sheet

Characteristics

Temperature range for specification: $T = -20\text{ °C to }+70\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	1080	—	MHz
Maximum insertion attenuation	α_{\max}	—	2.5	3.5	dB
1076.5 ... 1083.5 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1.0	1.6	dB
1076.5 ... 1083.5 MHz					
Return loss (input / output)		9.0	13	—	dB
1076.5 ... 1083.5 MHz					
Group delay ripple (p-p)	$\Delta\tau$	—	25	50	ns
1076.5 ... 1083.5 MHz		—	15	35	ns
1077.5 ... 1082.5 MHz		—	10	25	ns
1078.25 ... 1081.75 MHz					
Absolute attenuation	α	40	45	—	dB
10.0 ... 1050.0 MHz		35	40	—	
1050.0 ... 1062.5 MHz		5	24	—	dB
1062.5 ... 1067.5 MHz		30	38	—	
1097.5 ... 1100.0 MHz		35	50	—	dB
1100.0 ... 1110.0 MHz		40	50	—	
1110.0 ... 1500.0 MHz		30	34	—	dB
1500.0 ... 2500.0 MHz					

Data Sheet

Characteristics

Temperature range for specification:	T	=	-30 °C to +85 °C
Terminating source impedance:	Z _S	=	50 Ω
Terminating load impedance:	Z _L	=	50 Ω

		min.	typ. @ 25 °C	max.	
Nominal frequency	f _N	—	1080	—	MHz
Maximum insertion attenuation	α _{max}	—	2.5	3.5	dB
1076.5 ... 1083.5 MHz					
Amplitude ripple (p-p)	Δα	—	1.0	1.8	dB
1076.5 ... 1083.5 MHz					
Return loss (input / output)		9.0	13	—	dB
1076.5 ... 1083.5 MHz					
Group delay ripple (p-p)	Δτ	—	25	50	ns
1076.5 ... 1083.5 MHz		—	15	35	
1077.5 ... 1082.5 MHz		—	10	25	
Absolute attenuation	α	40	45	—	dB
10.0 ... 1050.0 MHz		35	40	—	
1050.0 ... 1062.5 MHz		5	24	—	
1062.5 ... 1067.5 MHz		26	38	—	
1097.5 ... 1100.0 MHz		35	50	—	
1100.0 ... 1110.0 MHz		40	50	—	
1110.0 ... 1500.0 MHz		30	34	—	
1500.0 ... 2500.0 MHz					

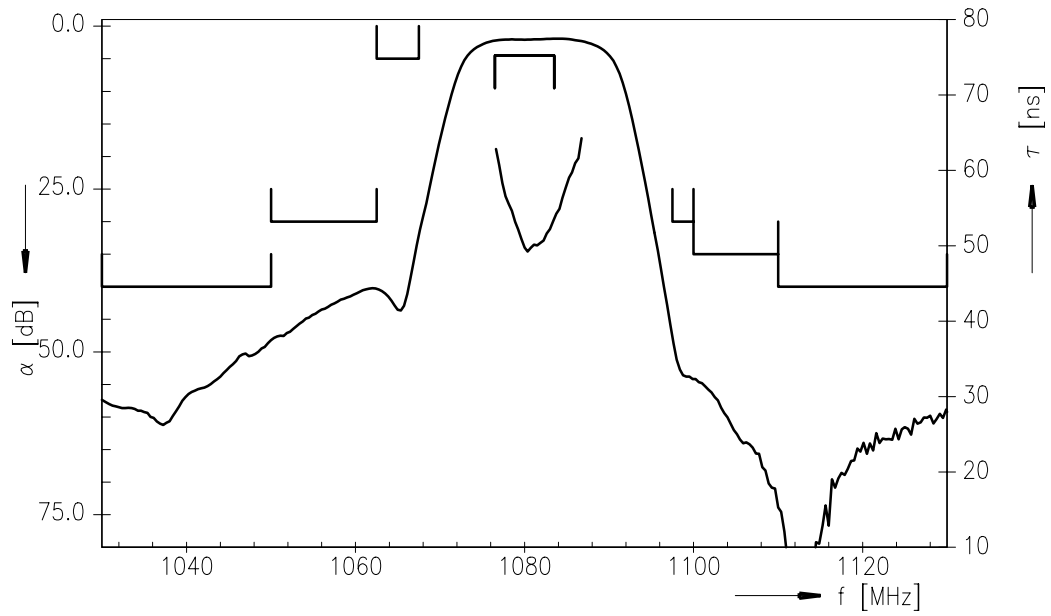
Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-55/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input power at 1076.5 - 1083.5	P _{IN}	10	dBm	CW

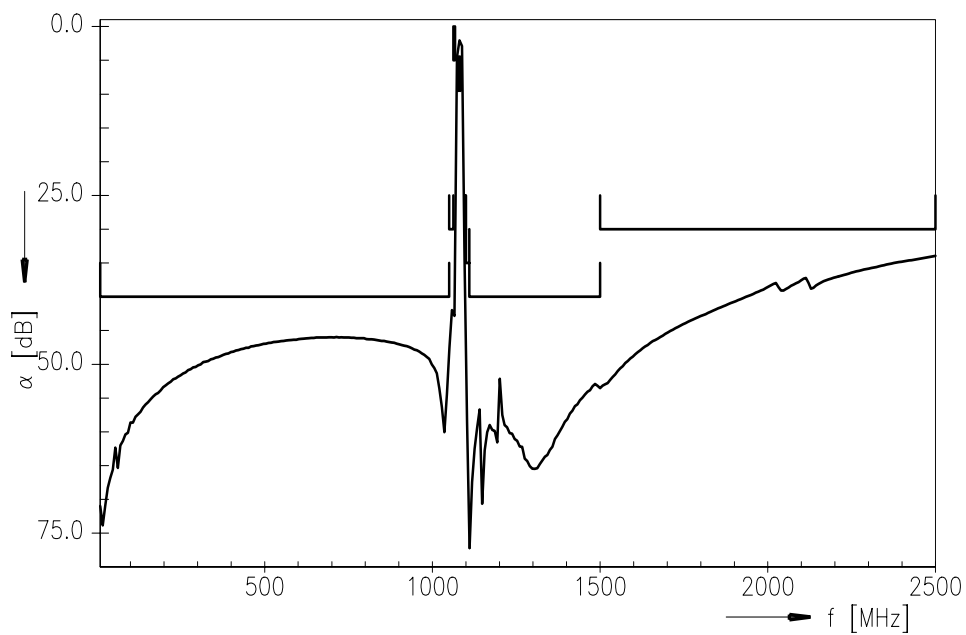
¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulses.



Transfert function (S21 narrow band)



Transfert function (S21 wide band)



SAW Components	B5169
SAW RF filter	1080.00 MHz

Data Sheet



References

Type	B5169
Ordering code	B39112B5169B510
Marking and package	C61157-A7-A165
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B5169_NB.s2p,B5169_WB.s2p see file header for port/in assignment table
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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