



SAW Components

SAW Rx filter

PCS / WCDMA band II

Series/type:	B9034
Ordering code:	B39202B9034E210
Date:	October 20, 2006
Version:	1.1



Data Sheet



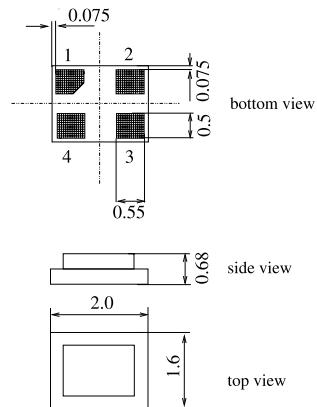
Application

- Low-loss RF filter for mobile telephone PCS systems, receive path (RX)
- Useable passband 60 MHz
- Useable for antenna diversity systems
- Suitable for GPRS class 1 to 12



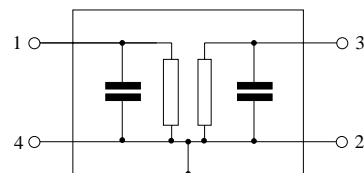
Features

- Package size 2.0 x 1.6 x 0.68 mm³
- Package code DCS4K
- RoHS compliant
- Approx. weight 0.009 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals



Pin configuration

- 1 Input, unbalanced
- 3 Output, unbalanced
- 2,4 To be grounded





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Characteristics with parallel matching elements

Operating temperature range: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega \parallel 56\text{ nH}$
 Terminating load impedance: $Z_L = 50\ \Omega \parallel 12\text{ nH}$

		B9034			
		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	1960.0	—	MHz
Maximum insertion attenuation	α_{\max}				
1930.6 ... 1989.4	MHz	—	2.7	4.4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930.6 ... 1989.4	MHz	—	1.2	2.9	dB
Input return loss					
1930.6 ... 1989.4	MHz	—	12	9	dB
Output return loss					
1930.6 ... 1989.4	MHz	—	11	8	dB
Attenuation	α				
DC ... 1850.6	MHz	40	48	—	dB
1850.6 ... 1909.4	MHz	46	48	—	dB
2040.0 ... 2070.0	MHz	35	47	—	dB
2070.0 ... 4500.0	MHz	35	46	—	dB
4500.0 ... 5200.0	MHz	28	35	—	dB
5200.0 ... 6000.0	MHz	18	24	—	dB



Data Sheet



Characteristics with serial matching elements

Operating temperature range: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega + 0.8\text{ nH}$
 Terminating load impedance: $Z_L = 50\ \Omega + 0.8\text{ nH}$

		B9034			
		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	1960.0	—	MHz
Maximum insertion attenuation	α_{max}				
1930.6 ... 1989.4	MHz	—	2.7	4.3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930.6 ... 1989.4	MHz	—	1.2	2.9	dB
Input return loss					
1930.6 ... 1989.4	MHz	—	11	9	dB
Output return loss					
1930.6 ... 1989.4	MHz	—	11	8	dB
Attenuation	α				
DC ... 1850.6	MHz	40	48	—	dB
1850.6 ... 1909.4	MHz	46	48	—	dB
2040.0 ... 2070.0	MHz	35	47	—	dB
2070.0 ... 4500.0	MHz	35	46	—	dB
4500.0 ... 5200.0	MHz	28	35	—	dB
5200.0 ... 6000.0	MHz	18	24	—	dB



Data Sheet



Characteristics without matching elements

Operating temperature range: $T = -30\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		B9034			
		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1960.0	—	MHz
Maximum insertion attenuation	α_{max}				
1930.6 ... 1989.4	MHz	—	2.8	4.3 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930.6 ... 1989.4	MHz	—	1.3	2.8	dB
Input return loss					
1930.6 ... 1989.4	MHz	—	9	—	dB
Output return loss					
1930.6 ... 1989.4	MHz	—	8	—	dB
Attenuation	α				
DC ... 1850.6	MHz	40	49	—	dB
1850.6 ... 1909.4	MHz	46	49	—	dB
2040.0 ... 2070.0	MHz	35	48	—	dB
2070.0 ... 4500.0	MHz	35	46	—	dB
4500.0 ... 5200.0	MHz	28	35	—	dB
5200.0 ... 6000.0	MHz	18	24	—	dB

¹⁾ 4.0 dB max. for 0 °C to 85 °C (with pcb losses deembedded)



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Maximum ratings

Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input Power at PCS Tx band	P _{IN}	15	dBm	CW signal for 2000h at T=50 °C

1) acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



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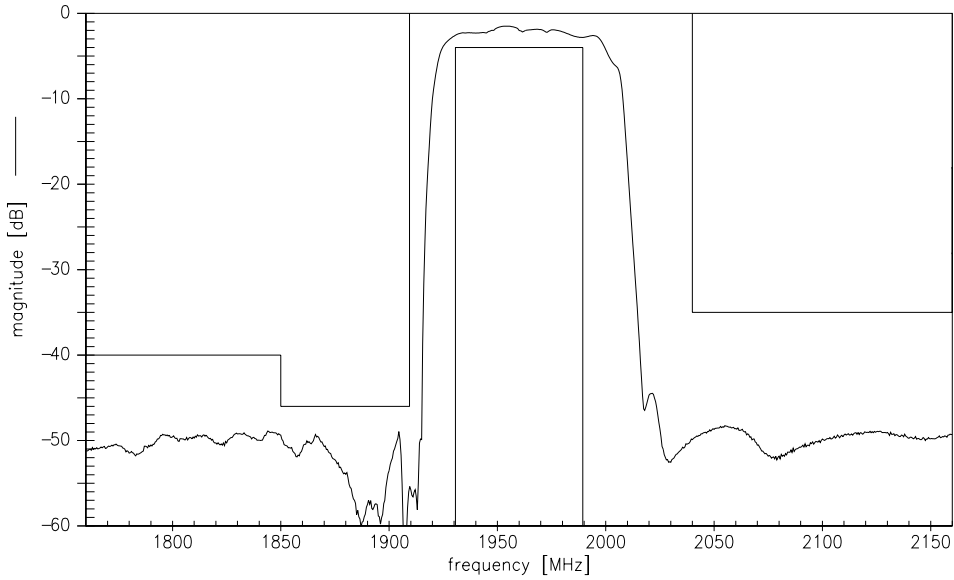
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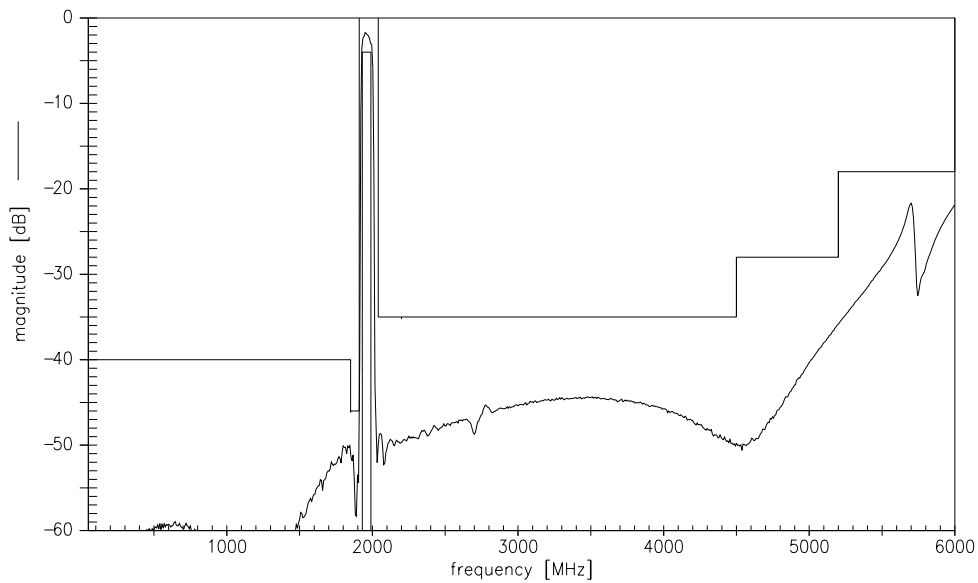
Data Sheet



Transfer function



Transfer function (wideband)



Please read *cautions and warnings and important notes* at the end of this document.



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1960.0 MHz

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References

Type	B9034
Ordering code	B39202B9034E210
Marking and package	C61157-A7-A144
Packaging	F61074-V8152-Z000
Date codes	L_1126
S-parameters	B9034_NB.s2p B9034_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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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