



SAW Components

SAW Rx Filter

PCS / WCDMA Band II

Series/Type:	B9034
Ordering code:	B39202-B9034-E210
Date:	Nov 29, 2005
Version:	1



SAW Components

B9034

Low-Loss Filter for Mobile Communication

1960.0 MHz

Data Sheet



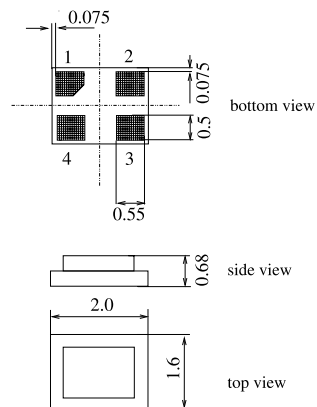
Application

- 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



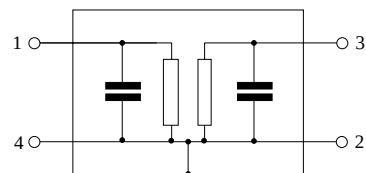
Features

- Package size 2.0 x 1.6 x 0.74 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





Important notes

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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		$\alpha_{\max}$						
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



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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		$\alpha_{\max}$						
	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



Important notes

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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	$\alpha_{\max}$							
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)

**SAW Components****B9034****Low-Loss Filter for Mobile Communication****1960.0 MHz****Data Sheet****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.



Important notes

B9034

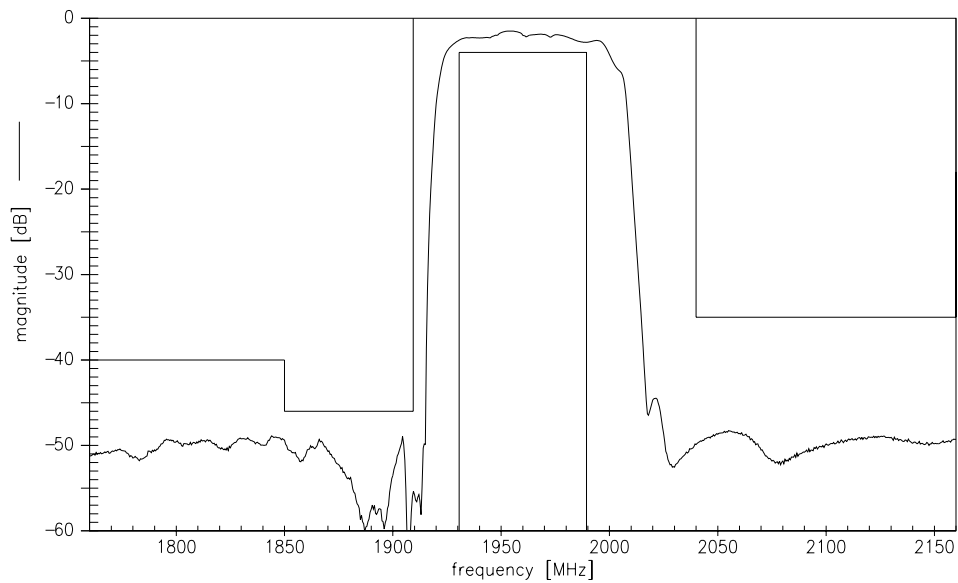
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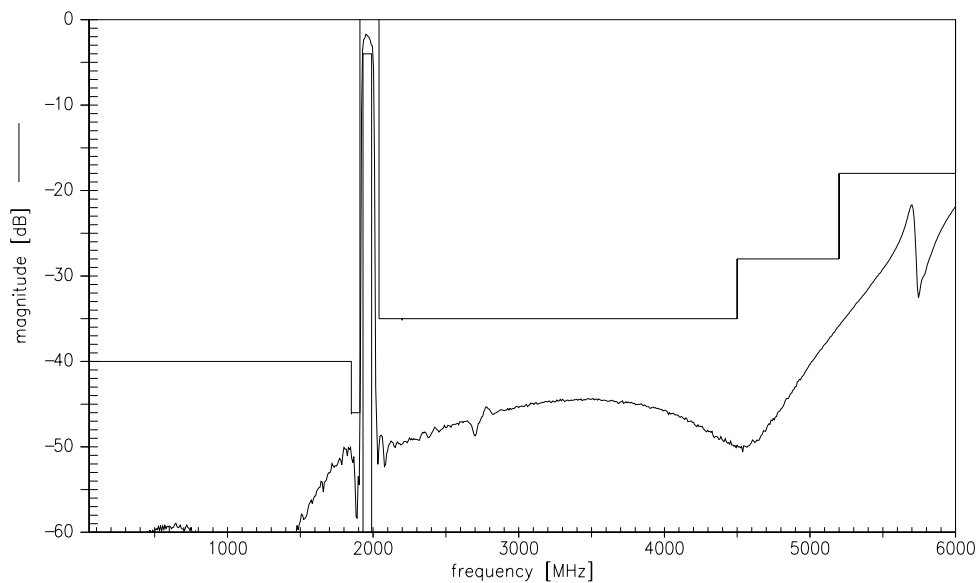
Data Sheet



Transfer function



Transfer function (wideband)



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

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Type	B9034	
Ordering code	B39202-B9034-E210	
Marking and Package	C61157-A7-A144	
Packaging	F61074-V8152-Z000	
Date Codes	L_1126	
S-Parameters	B9034_NB.s3p B9034_WB.s3p	
Soldering profile	S_6001	

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

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