



SAW Components

SAW Rx Filter

GSM 1900

Series/Type:	B9407
Ordering code:	B39202-B9407-K610
Date:	Nov 17, 2005
Version:	2.0



SAW Components

B9407

Low-Loss Filter for Mobile Communication

1960.0 MHz

Data Sheet



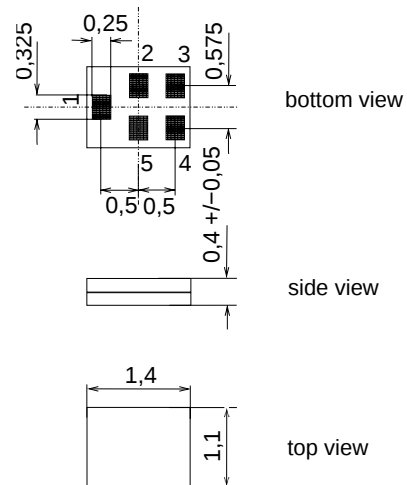
Application

- Low-loss RF filter for mobile telephone PCS systems, receive path (RX)
- Impedance transform from 50 Ω to 100 Ω
- Unbalanced to balanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 60 MHz
- Suitable for GPRS class 1 to 12



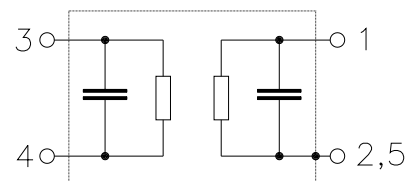
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compliant
- Approx. weight 0.003 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals



Pin configuration

- 1 Input, unbalanced
- 3,4 Output balanced
- 2,5 To be grounded





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Characteristics

Operating temperature range: $T = -10$ to $+85$ °C
Terminating source impedance: $Z_S = 50\Omega$
Terminating load impedance: $Z_L = 100\Omega \parallel 12$ nH (balanced)

		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	1960	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	2.0	3.2	dB
1930.0 ... 1990.0 MHz		—	2.0	3.2	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.8	1.6	dB
1930.0 ... 1990.0 MHz		—	0.8	1.6	dB
Input VSWR		—	1.7	2.3	
1930.0 ... 1990.0 MHz		—	1.7	2.3	
Output VSWR		—	1.7	2.3	
1930.0 ... 1990.0 MHz		—	1.7	2.3	
Output amplitude balance (S_{31}/S_{21})		—1.5	-0.6/0.6	1.5	dB
1930.0 ... 1990.0 MHz		—1.5	-0.6/0.6	1.5	dB
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	6/3	10	°
1930.0 ... 1990.0 MHz		-10	6/3	10	°
Common mode suppression	S_{cs21}	20	42	—	
824.0 ... 995.0 MHz		20	42	—	
1648.0 ... 1990.0 MHz		20	26	—	
1930.0 ... 1990.0 MHz		20	26	—	
3296.0 ... 3980.0 MHz		20	31	—	
Attenuation	α	30	40	—	
0.0 ... 1830.0 MHz		30	40	—	
1830.0 ... 1910.0 MHz		10	22	—	
2010.0 ... 2070.0 MHz		10	17	—	
2070.0 ... 2400.0 MHz		28	33	—	
2400.0 ... 2500.0 MHz		40	45	—	
2500.0 ... 4000.0 MHz		30	36	—	
4000.0 ... 6000.0 MHz		30	40	—	



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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				
GSM850, GSM900	P _{IN}	15	dBm	effective power in the on-state, duty cycle 4:8
GSM1800, GSM1900	P _{IN}	15	dBm	
Tx bands				

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



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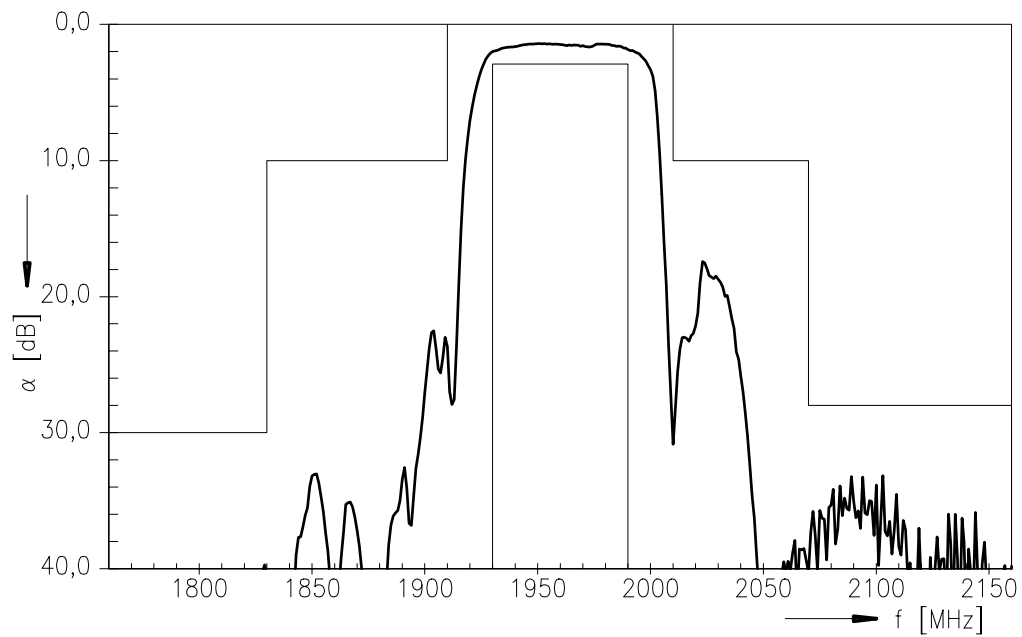
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1960.0 MHz

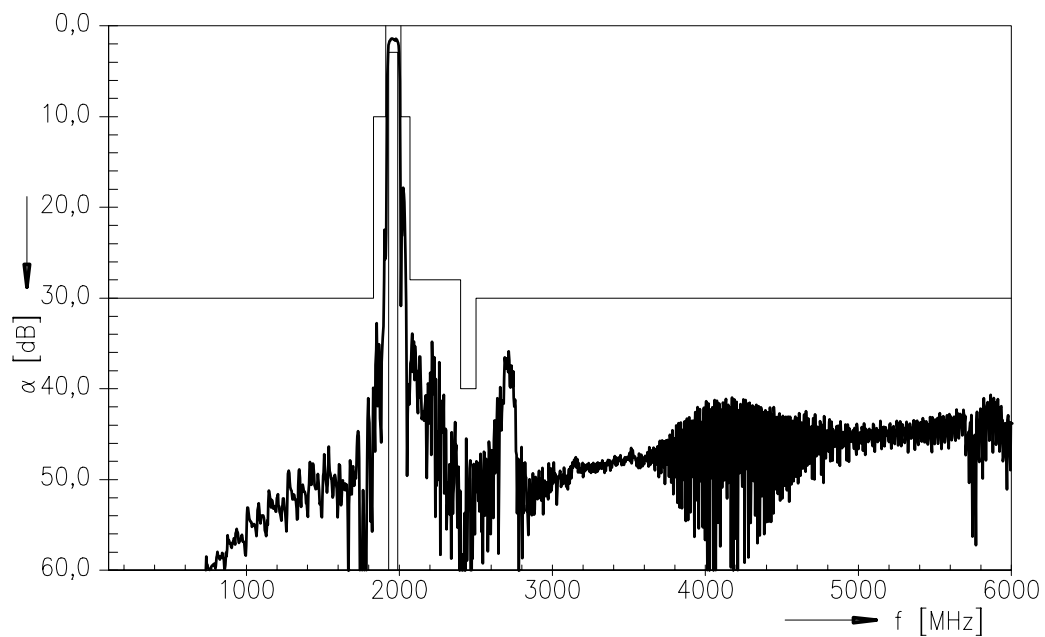
Data Sheet



Transfer function



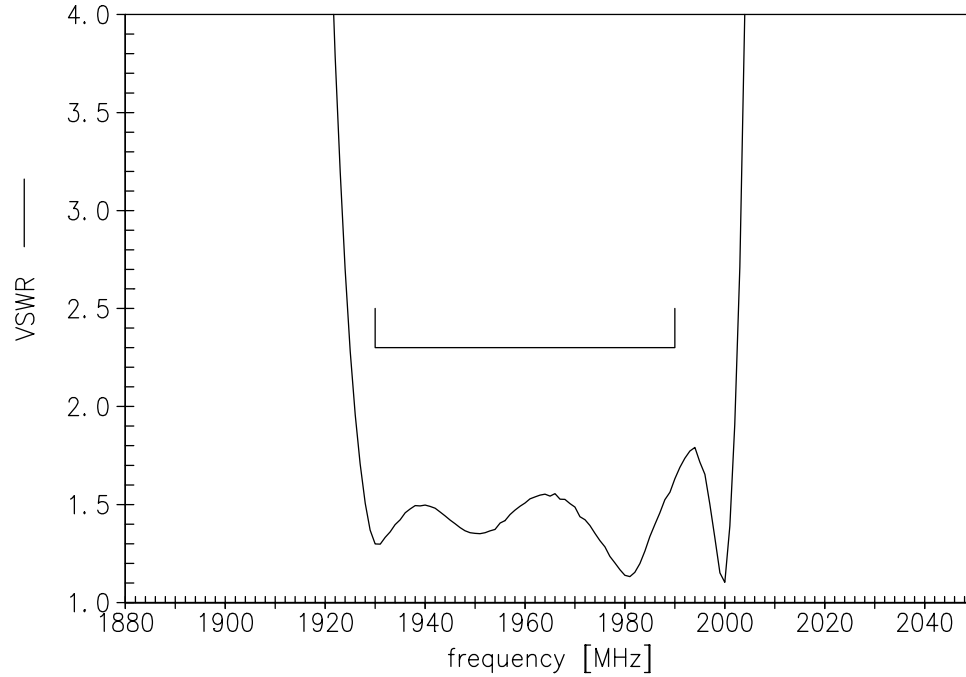
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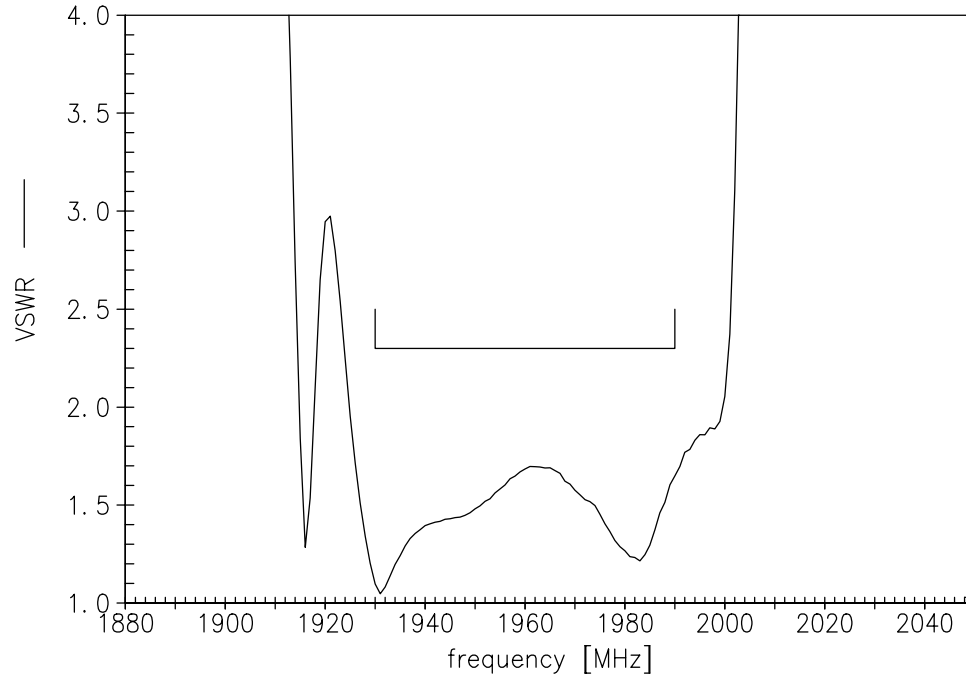
Please read *cautions and warnings* and *important notes* at the end of this document.



S₁₁ function



S₂₂ function



**SAW Components****B9407****Low-Loss Filter for Mobile Communication****1960.0 MHz**

Data Sheet



Type	B9407	
Ordering code	B39202-B9407-K610	
Marking and Package	C61157-A8-A1	
Packaging	F61074-V8212-Z000	
Date Codes	L_1126	
S-Parameters	B9407_NB.s3p B9407_WB.s3p	
Soldering profile	S_6001	

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

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC

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