



## **SAW Components**

### **SAW Rx filter**

GSM850 / WCDMA band V

<b>Series/type:</b>	<b>B9432</b>
<b>Ordering code:</b>	<b>B39881B9432M410</b>
<b>Date:</b>	<b>May 11, 2007</b>
<b>Version:</b>	<b>2.3</b>



Data Sheet



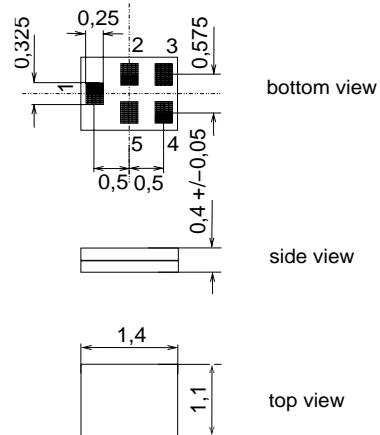
Application

- Low-loss RF filter for mobile telephone GSM850/WCDMA Band V systems, receive path (RX)
- Useable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 100 Ω
- Suitable to GPRS class 1 to 12



Features

- Package size 1.4 x 1.1 x 0.4 mm<sup>3</sup>
- Package code QCS51
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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





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**Characteristics**

Temperature range for specification: T = -30 °C to +85 °C  
 Terminating source impedance: Z<sub>S</sub> = 50 Ω  
 Terminating load impedance: Z<sub>L</sub> = 100 Ω

		<b>B9432</b>			
		<b>min.</b>	<b>typ. @ 25 °C</b>	<b>max.</b>	
<b>Center frequency</b>	f <sub>C</sub>	—	881.5	—	MHz
<b>Maximum insertion attenuation</b>	α <sub>max</sub>				
869.0 ... 894.0 MHz		—	1.8	2.5	dB
<b>Amplitude ripple (p-p)</b>	Δα				
869.0 ... 894.0 MHz		—	0.7	1.3	dB
<b>Amplitude ripple at 5 MHz BW</b>	Δα				
869.0 ... 894.0 MHz		—	0.5	0.9	dB
<b>Group delay variation at 5 MHz BW</b>					
869.0 ... 894.0 MHz		—	18	30	ns
<b>Error Vector Magnitude<sup>1)</sup> @f<sub>Carrier</sub></b>					
871.4 ... 891.6 MHz		—	1.8	2.5	%
<b>Input return loss</b>					
869.0 ... 894.0 MHz		10	14	—	dB
<b>Output return loss</b>					
869.0 ... 894.0 MHz		10	14	—	dB
<b>Output amplitude balance ( S<sub>31</sub>/S<sub>21</sub> )</b>					
869.0 ... 894.0 MHz		-0.8	-0.4/0.2	0.8	dB
<b>Output phase balance (φ(S<sub>31</sub>) - φ(S<sub>21</sub>)+180°)</b>					
869.0 ... 894.0 MHz		-8	-5/+5	8	°
<b>Attenuation</b>	α				
DC ... 840.0 MHz		47	51	—	dB
840.0 ... 849.0 MHz		40	50	—	dB
914.0 ... 950.0 MHz		24	28	—	dB
950.0 ... 1150.0 MHz		45	50	—	dB
1150.0 ... 1250.0 MHz		40	47	—	dB
1250.0 ... 3000.0 MHz		45	50	—	dB
3000.0 ... 6000.0 MHz		40	58	—	dB

<sup>1)</sup> Error Vector Magnitude (EVM) based on definition given in 3GPP TS 25.141.



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### Maximum ratings

Operable temperature range	T	-30/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 10 pulses
Input power at				
GSM850, GSM900	P <sub>IN</sub>	15	dBm	effective power in the on-state
GSM1800, GSM1900	P <sub>IN</sub>	15	dBm	duty cycle 4:8
Tx bands				

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



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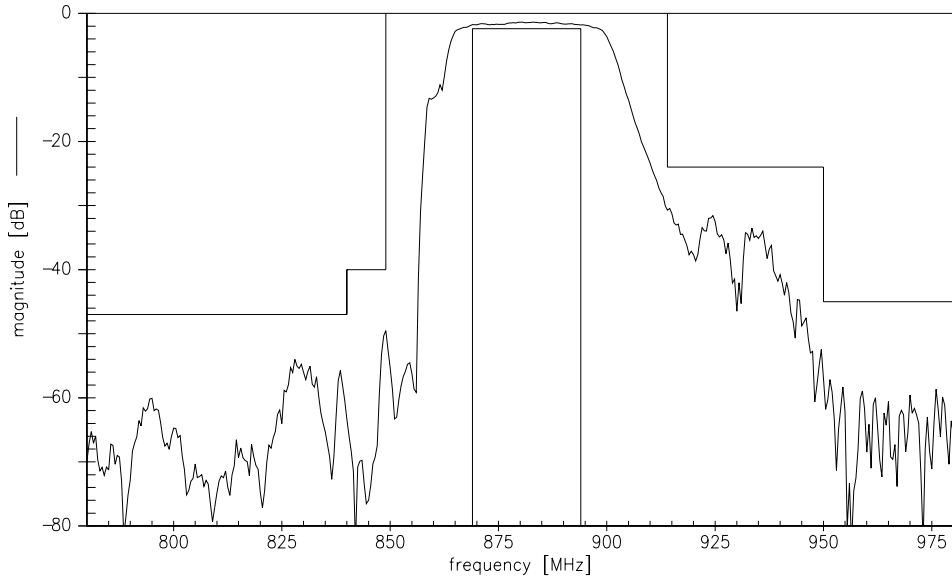
SAW Rx filter

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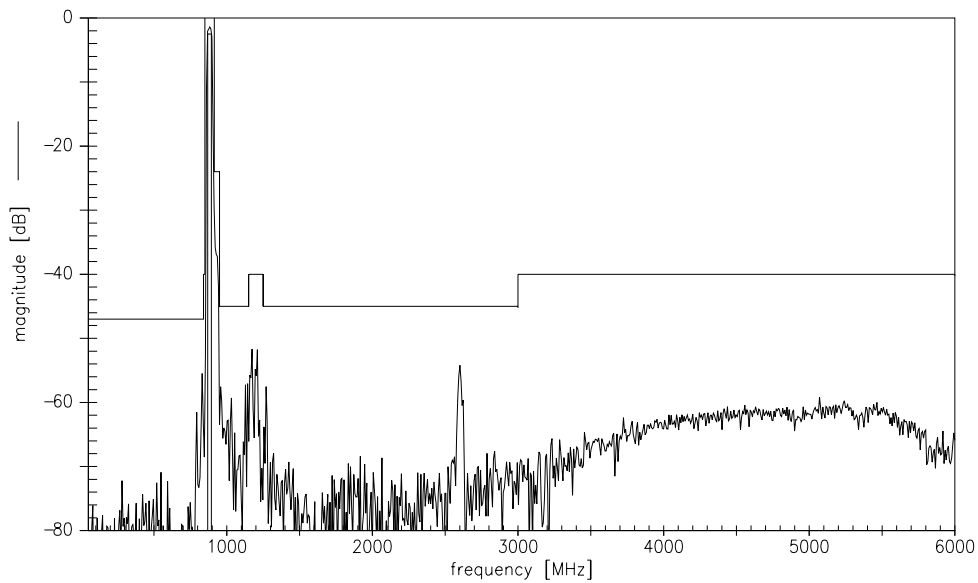
Data Sheet



Transfer function



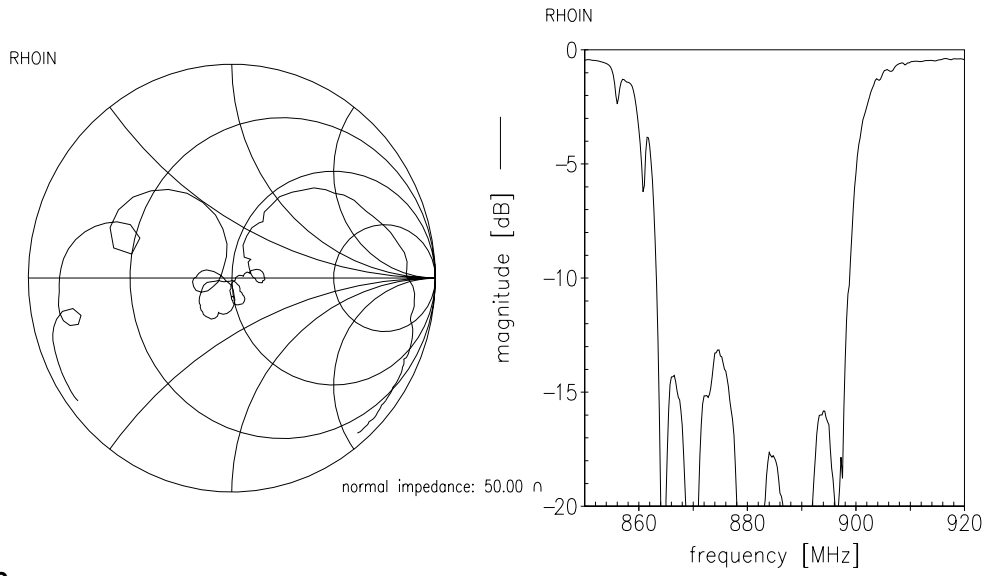
Transfer function (wideband)



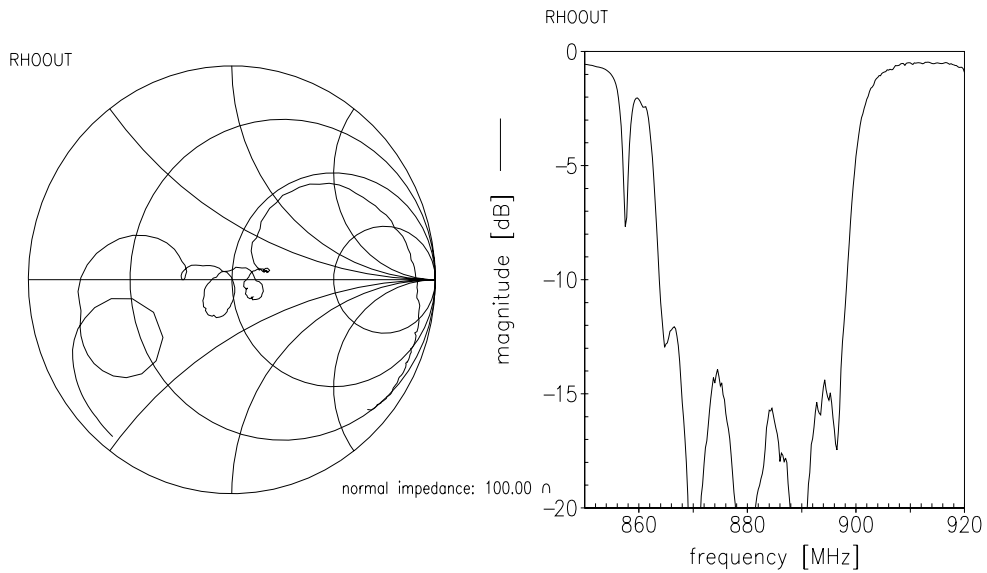
Please read *cautions and warnings* and *important notes* at the end of this document.



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## References

<b>Type</b>	B9432
<b>Ordering code</b>	B39881B9432M410
<b>Marking and package</b>	C61157-A8-A3
<b>Packaging</b>	F61074-V8212-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B9432_NB.s3p B9432_WB.s3p
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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."
<b>Moldability</b>	Before using in overmolding environment, please contact your EPCOS sales office.

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