SAW Components

SAW Rx Filter

GSM 900

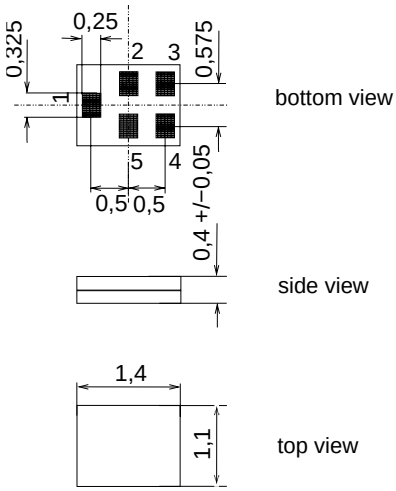
Series/Type:	**B9423**
Ordering code:	**B39941B9423K610**
Date:	March 17, 2006
Version:	2.0

Application

- Low-loss RF filter for mobile telephone GSM 900 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 35 MHz
- Suitable for GPRS class 1 to 12

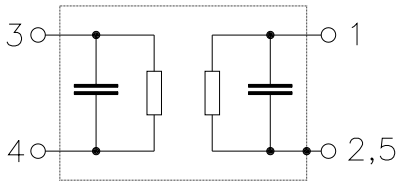
Features

- Package size 1.4 x1.1 x 0.4 mm³
- Package code QCS5F
- RoHS compatible
- Approx. weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Data sheet SMD

Characteristics

Operating temperature range: T = -10 to +85 °C
Terminating source impedance: Z_S = 50Ω
Terminating load impedance: Z_L = 100 Ω (balanced)

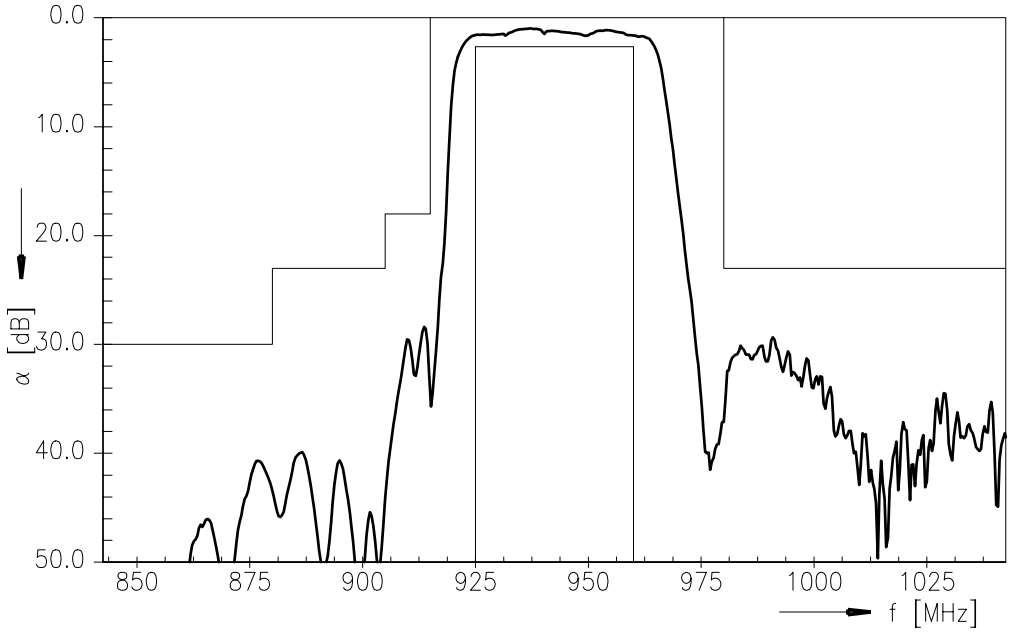
		B9423			
		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	942.5	—	MHz
Maximum insertion attenuation	α_{max}				
925.0 ... 960.0 MHz		—	1.9	2.6	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925.0 ... 960.0 MHz		—	1.0	1.6	dB
Input VSWR					
925.0 ... 960.0 MHz		—	1.9	2.2	
Output VSWR					
925.0 ... 960.0 MHz		—	1.8	2.2	
Common mode suppression	S_{cs21}				
925.0 ... 960.0 MHz		20	27	—	dB
824.0 ... 995.0 MHz		20	24	—	dB
1648.0 ... 1990.0 MHz		20	48	—	dB
3296.0 ... 3980.0 MHz		20	33	—	dB
Attenuation	α				
0.3 ... 480.0 MHz		45	56	—	dB
480.0 ... 880.0 MHz		30	33	—	dB
880.0 ... 905.0 MHz		23	35	—	dB
905.0 ... 915.0 MHz		18	29	—	dB
980.0 ... 1850.0 MHz		23	29	—	dB
1850.0 ... 1920.0 MHz		30	48	—	dB
1920.0 ... 2400.0 MHz		25	44	—	dB
2400.0 ... 2500.0 MHz		40	44	—	dB
2500.0 ... 5150.0 MHz		30	42	—	dB
5150.0 ... 5825.0 MHz		40	45	—	dB
5825.0 ... 6000.0 MHz		30	45	—	dB
6000.0 ...12750.0 MHz		—	—	—	dB

Maximum ratings

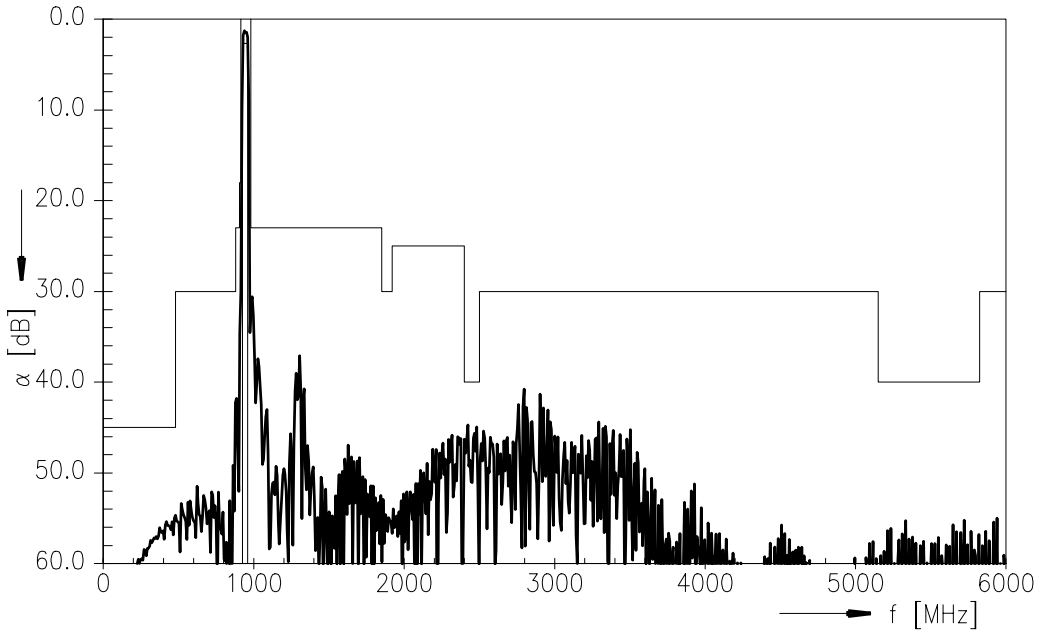
Operable temperature range	T	-30/+85	˚C	
Storage temperature range	T_{stg}	-40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100 [1)]	V	machine model, 10 pulses
Input Power at				
GSM850, GSM900	P_{IN}	15	dBm	effective power in the on-state
GSM1800, GSM1900	P_{IN}	15	dBm	duty cycle 4:8
Tx bands				

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

Transfer function (passband)

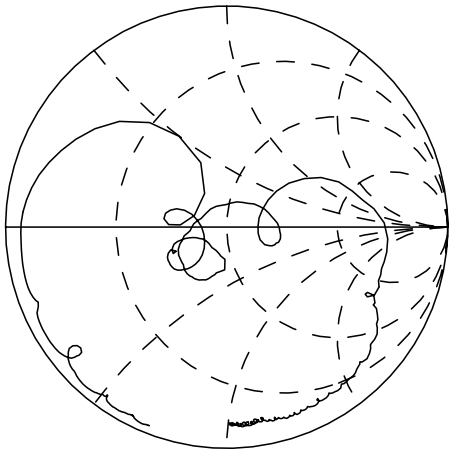


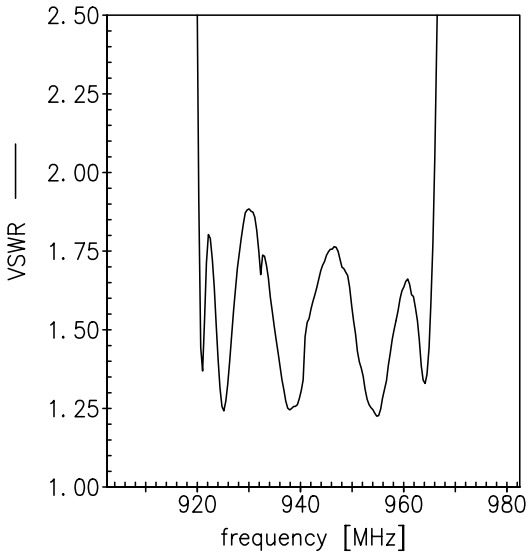
Transfer function



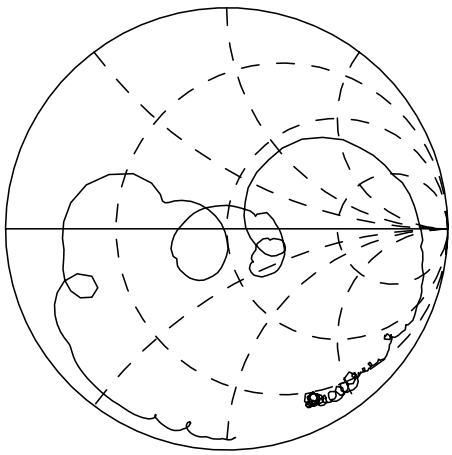
Smith chart / VSWR

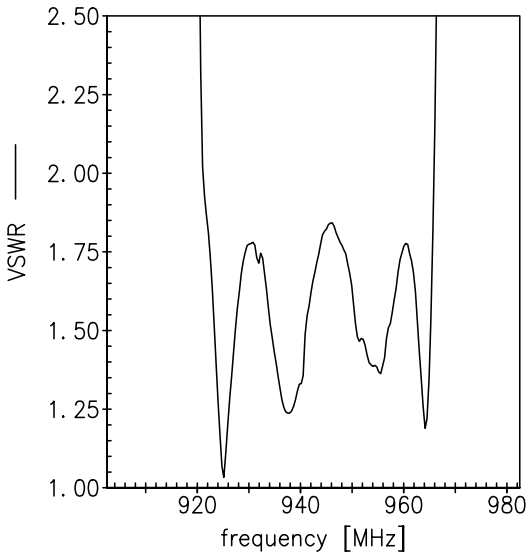
S_{11} function





S_{22} function





References

Type	B9423
Ordering code	B39941B9423K610
Marking and package	C61157-A8-A1
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9423_NB.s3p B9423_WB.s3p
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."

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