



SAW Components

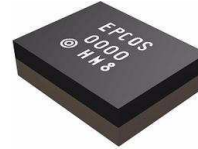
SAW Rx Filter

Cellular

Series/Type:	B9446
Ordering code:	B39881B9446K610
Date:	February 5, 2009
Version:	2.1

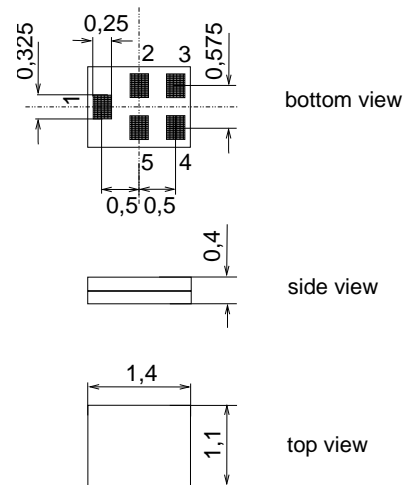
Application

- Low-loss RF filter for mobile telephone Cellular systems, receive path (Rx)
- Low insertion attenuation
- Usable passband 25.0 MHz
- Impedance 50 Ω at input and output
- Unbalanced to unbalanced operation



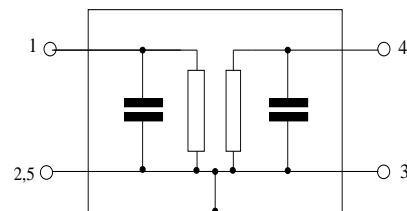
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5F
- RoHS compatible
- Approx. weight 0.003g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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





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881.5 MHz

Data sheet

SMD

Characteristics

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

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	881.5	—	MHz
Maximum insertion attenuation					
869.0 ... 894.0 MHz	α_{max}	—	1.2	1.5	dB
Amplitude ripple (p-p)					
869.0 ... 894.0 MHz	$\Delta\alpha$	—	0.6	1.0	dB
Input VSWR					
869.0 ... 894.0 MHz		—	1.7	2.0	
Output VSWR					
869.0 ... 894.0 MHz		—	1.7	2.0	
Attenuation	α_{abs}				
10.0 ... 824.0 MHz		20	24	—	dB
824.0 ... 843.0 MHz		20	29	—	dB
843.0 ... 849.0 MHz		20	24	—	dB
1710.0 ... 1788.0 MHz		20	33	—	dB
1850.0 ... 1915.0 MHz		20	35	—	dB
2400.0 ... 2682.0 MHz		20	30	—	dB
3296.0 ... 3396.0 MHz		20	31	—	dB



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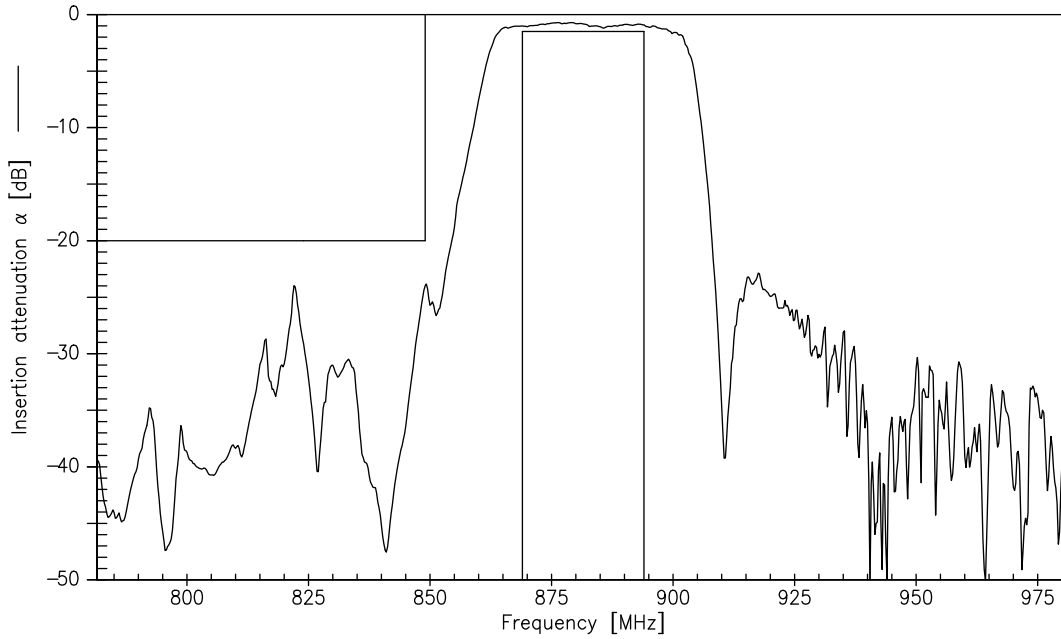
Maximum ratings

Operable temperature range	T	-40/+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, 1 pulse
Input Power at 869.0 ... 894.0 MHz	P _{IN}	15	dBm	effective power in the on-state, duty cycle 4:8
Tx band	P _{IN}	5	dBm	2000h CW at Ta = 50°C

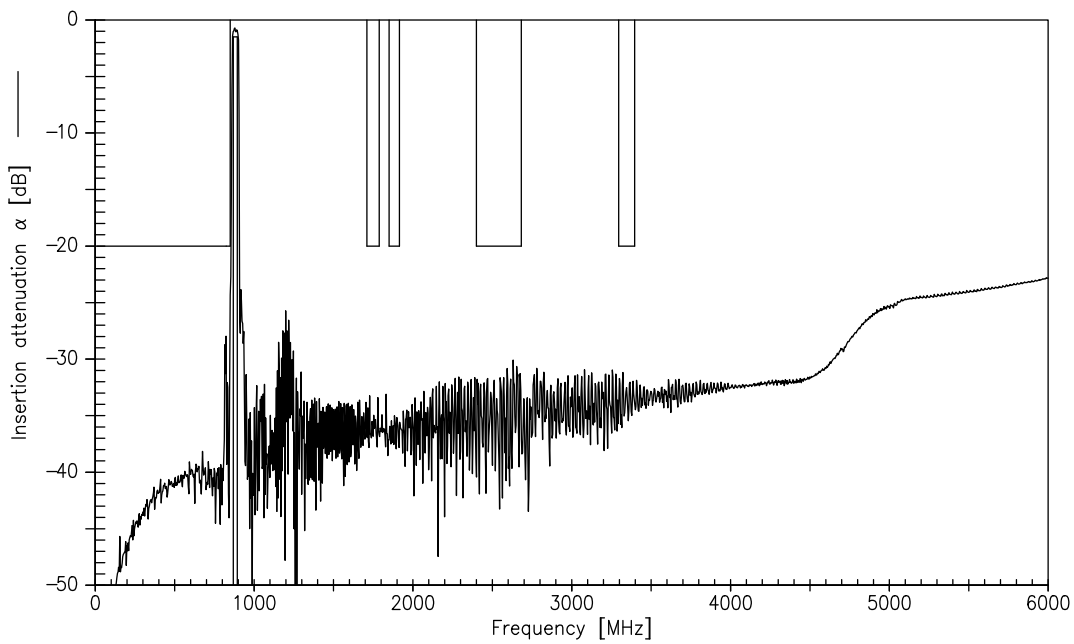
¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wideband)

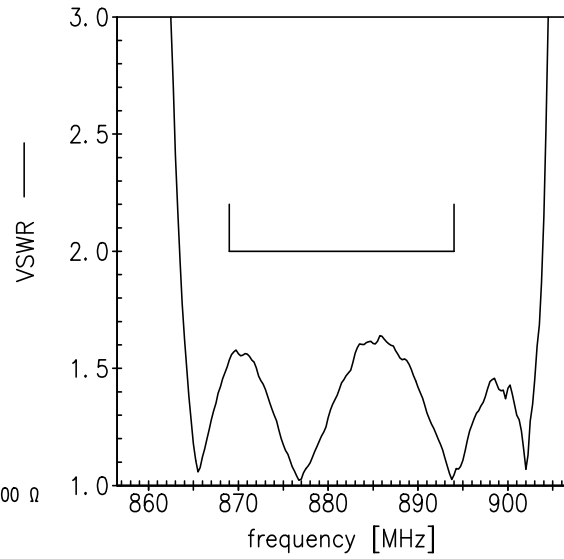
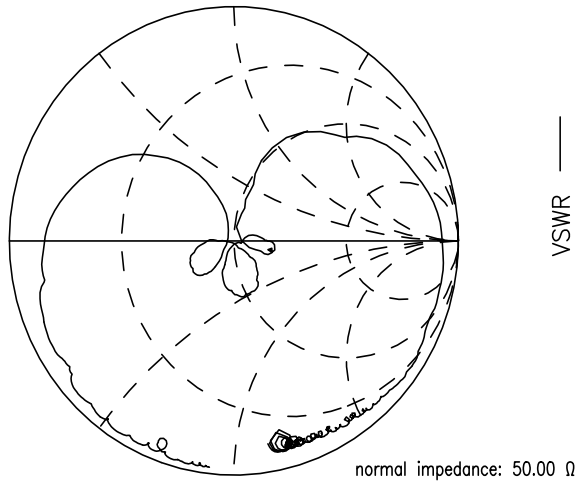


Data sheet

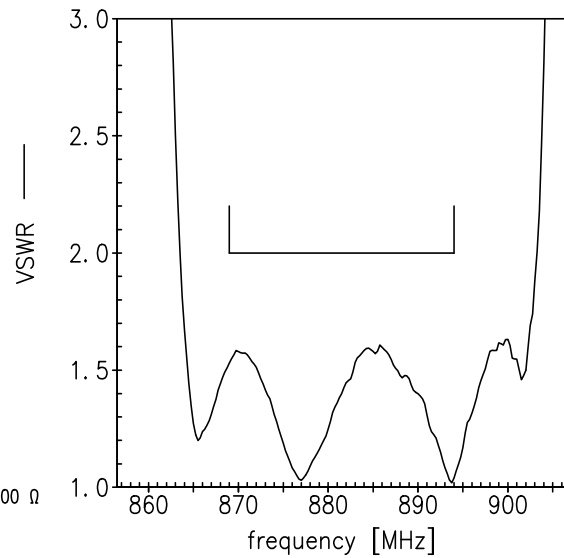
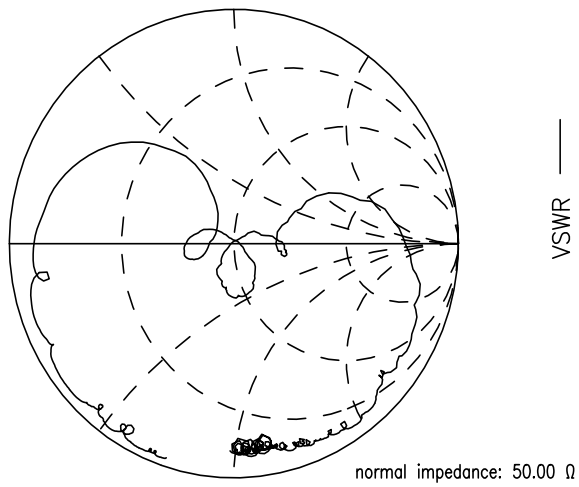
SMD

Smith charts

S_{11} function



S_{22} function





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SAW Rx Filter	881.5 MHz

Data sheet



References

Type	B9446
Ordering code	B39881B9446K610
Marking and package	C61157-A8-A1
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9446_NB.s2p B9446_WB.s2p See file header for port/pin assignment table.
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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.

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

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