



# SAW Components

Data Sheet B9008





**SAW Components**

**B9008**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

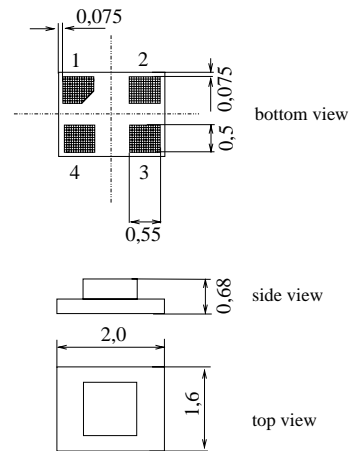
**Data Sheet**



**Features**

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Usable passband 60 MHz
- No matching network required for operation at 50 Ohms
- Suitable for GPRS class 1 to 12
- Ceramic package for **Surface Mounted Technology (SMT)**

**Chip sized SAW package DCS4F**



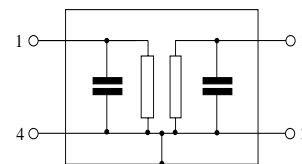
**Terminals**

- Ni, gold-plated

Dimensions in mm, approx. weight 0.006g

**Pin configuration**

- 1 Input
- 3 Output
- 2,4 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B9008	B39202-B9008-E610	C61157-A7-A113	F61074-V8152-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operating 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	V	machine model
ESD voltage	$V_{ESD}$	250	V	human body model
Input Power at				peak power of GSM signal,
GSM850, GSM900		15	dBm	duty cycle 4:8
GSM1800, GSM1900	$P_{IN}$	12	dBm	duty cycle 4:8
GSM1800, GSM1900		15	dBm	duty cycle 3:8
Tx bands				



**SAW Components**

**B9008**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

**Data Sheet**



**Characteristics**

Operating temperature range:  $T = +25^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$					
		1930,0 ... 1990,0 MHz	—	2,0	2,3	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
		1930,0 ... 1990,0 MHz	—	0,7	1,1	dB
<b>Input VSWR</b>						
		1930,0 ... 1990,0 MHz	—	1,8	2,1	dB
<b>Output VSWR</b>						
		1930,0 ... 1990,0 MHz	—	1,7	2,0	dB
<b>Attenuation</b>	$\alpha$					
		0,0 ... 1493,0 MHz	32	34	—	dB
		1493,0 ... 1830,0 MHz	30	35	—	dB
		1830,0 ... 1850,0 MHz	27	35	—	dB
		1850,0 ... 1910,0 MHz	14	17	—	dB
		2010,0 ... 2070,0 MHz	14	16	—	dB
		2070,0 ... 2412,0 MHz	24	27	—	dB
		2412,0 ... 2488,0 MHz	31	38	—	dB
		2488,0 ... 6000,0 MHz	24	32	—	dB
		6000,0 ... 10000,0 MHz	12	16	—	dB
		10000,0 ... 12750,0 MHz	3	7	—	dB



**SAW Components**

**B9008**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

Data Sheet



**Characteristics**

Operating temperature range:  $T = -20$  to  $+75$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$					
	1930,0 ... 1990,0	MHz	—	2,2	3,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1930,0 ... 1990,0	MHz	—	0,8	1,8	dB
<b>Input VSWR</b>						
	1930,0 ... 1990,0	MHz	—	1,8	2,1	dB
<b>Output VSWR</b>						
	1930,0 ... 1990,0	MHz	—	1,7	2,0	dB
<b>Attenuation</b>	$\alpha$					
	0,0 ... 1493,0	MHz	32	34	—	dB
	1493,0 ... 1830,0	MHz	30	35	—	dB
	1830,0 ... 1850,0	MHz	27	35	—	dB
	1850,0 ... 1910,0	MHz	12	17	—	dB
	2010,0 ... 2070,0	MHz	10	16	—	dB
	2070,0 ... 2412,0	MHz	24	27	—	dB
	2412,0 ... 2488,0	MHz	31	38	—	dB
	2488,0 ... 6000,0	MHz	24	32	—	dB
	6000,0 ... 10000,0	MHz	12	16	—	dB
	10000,0 ... 12750,0	MHz	3	7	—	dB



SAW Components

B9008

Low-Loss Filter for Mobile Communication

1960,0 MHz

Data Sheet



**Characteristics**

Operating temperature range:  $T = -10$  to  $+80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$		—	2,1	3,0	dB
		1930,0 ... 1990,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	0,8	1,8	dB
		1930,0 ... 1990,0 MHz				
<b>Input VSWR</b>			—	1,8	2,1	dB
		1930,0 ... 1990,0 MHz				
<b>Output VSWR</b>			—	1,7	2,0	dB
		1930,0 ... 1990,0 MHz				
<b>Attenuation</b>	$\alpha$					
		0,0 ... 1493,0 MHz	32	34	—	dB
		1493,0 ... 1830,0 MHz	30	35	—	dB
		1830,0 ... 1850,0 MHz	27	35	—	dB
		1850,0 ... 1910,0 MHz	12	17	—	dB
		2010,0 ... 2070,0 MHz	12	16	—	dB
		2070,0 ... 2412,0 MHz	24	27	—	dB
		2412,0 ... 2488,0 MHz	31	38	—	dB
		2488,0 ... 6000,0 MHz	24	32	—	dB
		6000,0 ... 10000,0 MHz	12	16	—	dB
		10000,0 ... 12750,0 MHz	3	7	—	dB



**SAW Components**

**B9008**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

Data Sheet



**Characteristics**

Operating temperature range:  $T = -30$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$					
		1930,0 ... 1990,0 MHz	—	2,4	3,5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
		1930,0 ... 1990,0 MHz	—	0,9	2,3	dB
<b>Input VSWR</b>						
		1930,0 ... 1990,0 MHz	—	1,8	2,1	dB
<b>Output VSWR</b>						
		1930,0 ... 1990,0 MHz	—	1,7	2,0	dB
<b>Attenuation</b>	$\alpha$					
		0,0 ... 1493,0 MHz	32	34	—	dB
		1493,0 ... 1830,0 MHz	30	35	—	dB
		1830,0 ... 1850,0 MHz	27	35	—	dB
		1850,0 ... 1910,0 MHz	11	17	—	dB
		2010,0 ... 2070,0 MHz	9	16	—	dB
		2070,0 ... 2412,0 MHz	24	27	—	dB
		2412,0 ... 2488,0 MHz	31	38	—	dB
		2488,0 ... 6000,0 MHz	24	32	—	dB
		6000,0 ... 10000,0 MHz	12	16	—	dB
		10000,0 ... 12750,0 MHz	3	7	—	dB



SAW Components

B9008

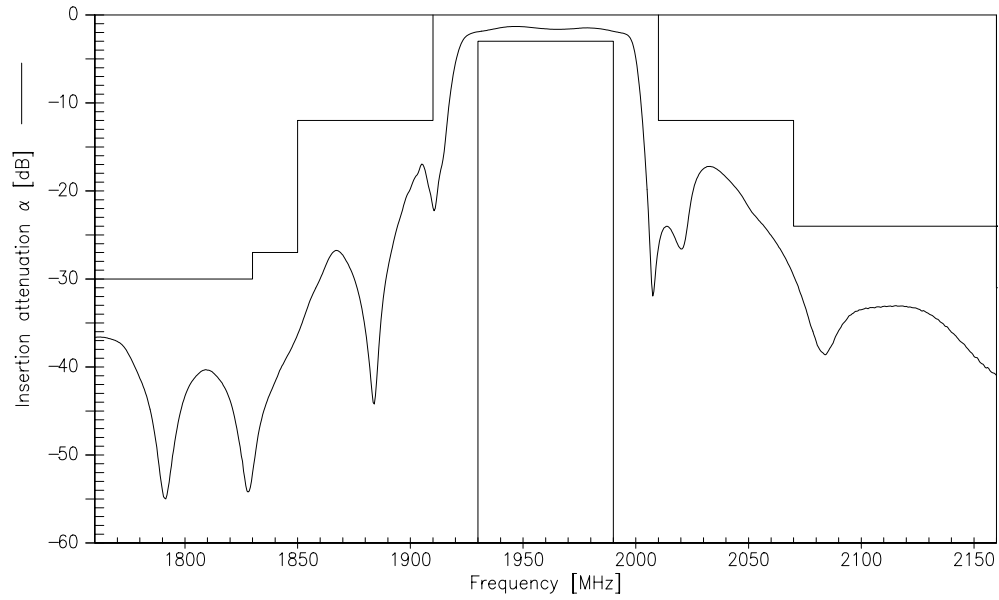
Low-Loss Filter for Mobile Communication

1960,0 MHz

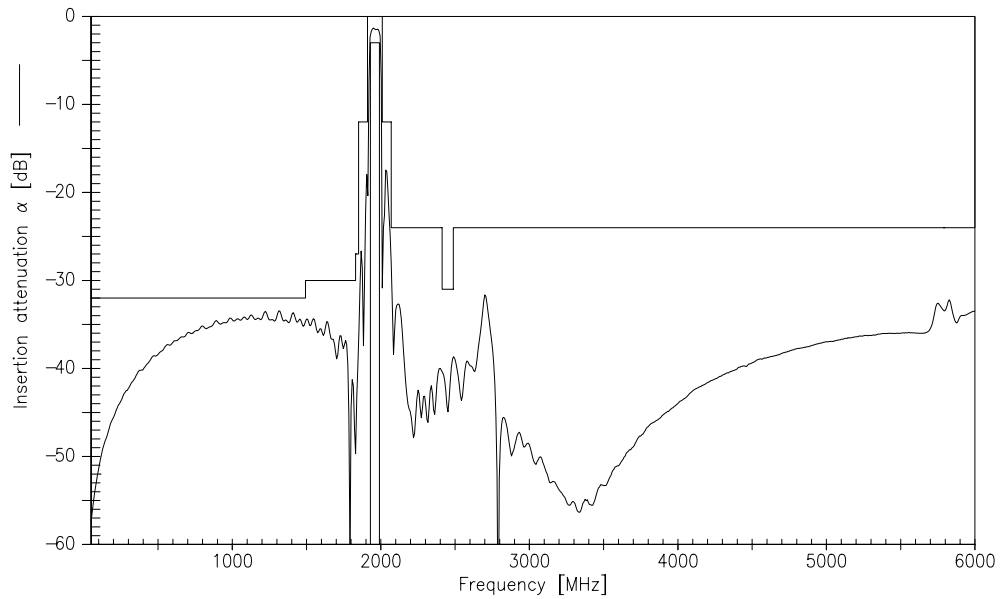
Data Sheet



### Transfer function



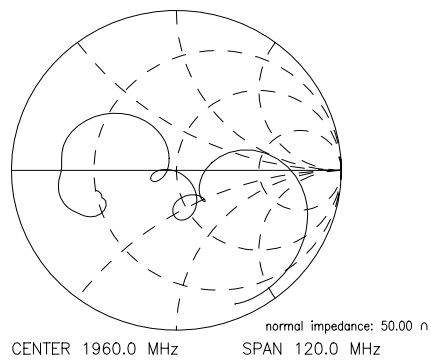
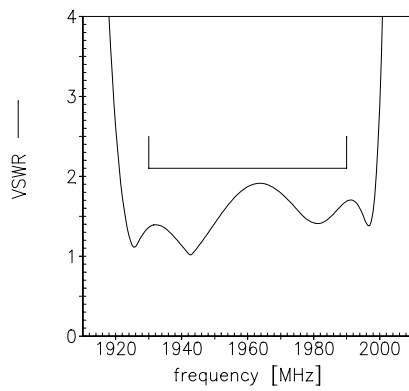
### Transfer function (wide band)



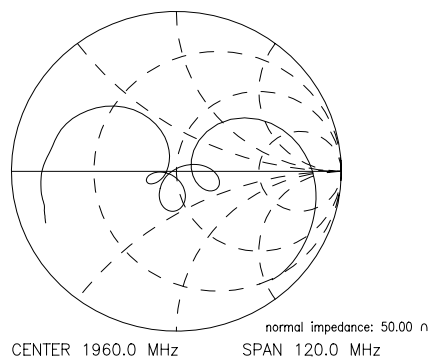
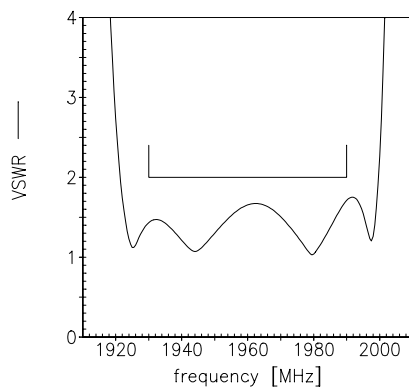


Reflection functions

### S11



### S22







**SAW Components**

**B9008**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

Data Sheet



**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW MC WT**

**P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.