



# *SAW Components*

*Data Sheet B4131*

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are rendered in a white, glowing, sans-serif font, appearing to be part of a larger, curved structure that resembles the top of the EPCOS logo triangle. The background is dark and textured, with a faint map of the world visible.



SAW Components

B4131

Low-Loss Filter for Mobile Communication

942,5 MHz

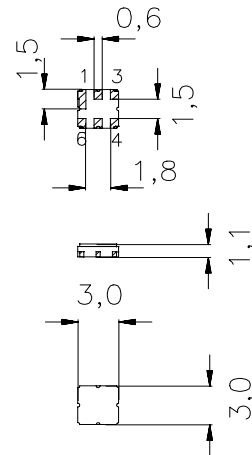
Data Sheet



Ceramic package **DCC6C**

**Features**

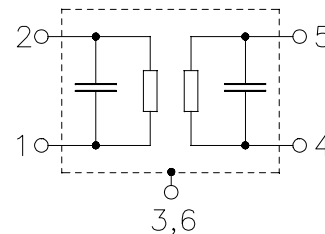
- Low-loss RF filter for EGSM mobile telephone system, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Ceramic package for **Surface Mounted Technology (SMT)**
- Terminals
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

**Pin configuration**

- 2 Input
- 1 Input ground
- 5 Output
- 4 Output ground
- 1, 3, 4, 6 To be grounded
- 1, 3, 4, 6 Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4131	B39941-B4131-U410	C61157-A7-A67	F61074-V8088-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30 / +85	°C	
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	3	V	
Input power max. 880...915 MHz	$P_{IN}$	5	dBm	source and load impedance 50 $\Omega$ peak power of GSM signal, duty cycle 1 : 8 continuous wave
1710...1785 MHz		5	dBm	
elsewhere		0	dBm	



SAW Components

B4131

Low-Loss Filter for Mobile Communication

942,5 MHz

Data Sheet



**Characteristics**

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

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$		—	3,2	4,0	dB
925,0 ... 960,0	MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	1,4	2,5	dB
925,0 ... 960,0	MHz					
<b>Attenuation</b>	$\alpha$					
0,0 ... 800,0	MHz		50	60	—	dB
800,0 ... 880,0	MHz		40	52	—	dB
880,0 ... 905,0	MHz		35	40	—	dB
905,0 ... 915,0	MHz		20	28	—	dB
980,0 ... 1005,0	MHz		23	25	—	dB
1005,0 ... 1025,0	MHz		30	42	—	dB
1025,0 ... 1760,0	MHz		40	50	—	dB
1760,0 ... 2500,0	MHz		30	40	—	dB
2500,0 ... 3120,0	MHz		20	27	—	dB
3120,0 ... 4000,0	MHz		18	25	—	dB
4000,0 ... 6000,0	MHz		—	10	—	dB
<b>Input reflection coefficient @1842,5 MHz</b>						
	Phase		-150	-140	-130	°



SAW Components

B4131

Low-Loss Filter for Mobile Communication

942,5 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>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	3,6	4,5	dB
925,0 ... 960,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1,8	2,5	dB
925,0 ... 960,0 MHz					
<b>Attenuation</b>	$\alpha$				
0,0 ... 800,0 MHz		50	60	—	dB
800,0 ... 880,0 MHz		40	52	—	dB
880,0 ... 905,0 MHz		35	40	—	dB
905,0 ... 915,0 MHz		20	28	—	dB
980,0 ... 1005,0 MHz		20	23	—	dB 1)
980,0 ... 1005,0 MHz		23	25	—	dB 2)
980,0 ... 982,0 MHz		20	23	—	dB
982,0 ... 1005,0 MHz		23	27	—	dB
1005,0 ... 1025,0 MHz		30	42	—	dB
1025,0 ... 1760,0 MHz		40	50	—	dB
1760,0 ... 2500,0 MHz		30	40	—	dB
2500,0 ... 3120,0 MHz		20	27	—	dB
3120,0 ... 4000,0 MHz		18	25	—	dB
4000,0 ... 6000,0 MHz		—	10	—	dB
<b>Input reflection coefficient @1842,5 MHz</b>					
	Phase	-150	-140	-130	°

1) specification valid for  $T < 25$  °C

2) specification valid for  $T \geq 25$  °C



SAW Components

B4131

Low-Loss Filter for Mobile Communication

942,5 MHz

Data Sheet



**Characteristics**

Operating temperature range:  $T = -30$  to  $+80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

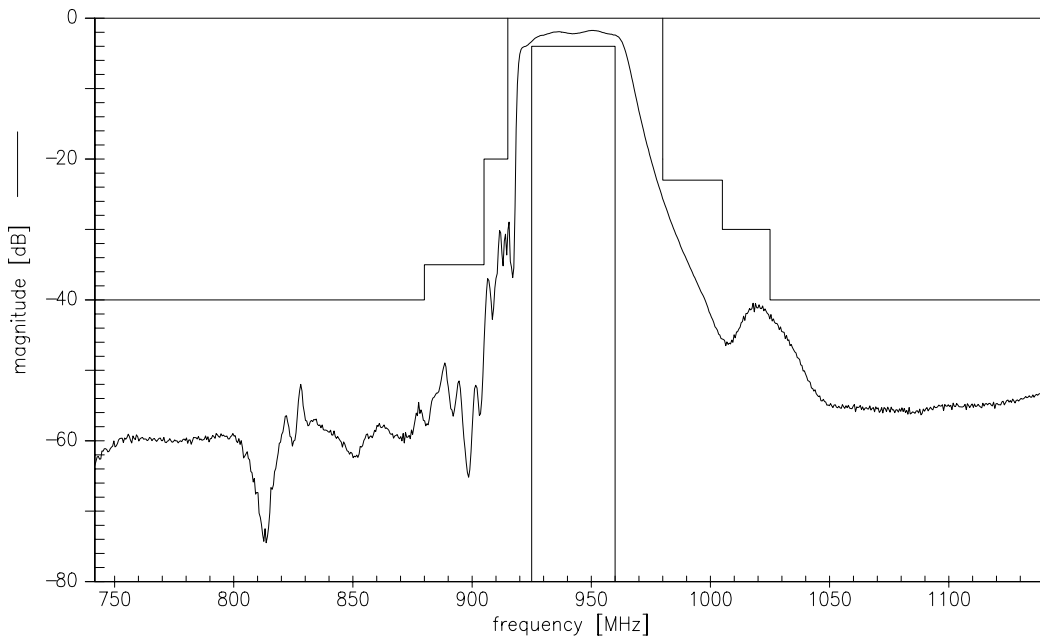
		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	3,8	4,5	dB
925,0 ... 960,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	2,1	2,8	dB
925,0 ... 960,0 MHz					
<b>Attenuation</b>	$\alpha$				
0,0 ... 800,0 MHz		50	60	—	dB
800,0 ... 880,0 MHz		40	52	—	dB
880,0 ... 905,0 MHz		35	40	—	dB
905,0 ... 915,0 MHz		15	28	—	dB
980,0 ... 1005,0 MHz		20	23	—	dB 1)
980,0 ... 1005,0 MHz		23	25	—	dB 2)
980,0 ... 982,0 MHz		20	23	—	dB
982,0 ... 1005,0 MHz		23	27	—	dB
1005,0 ... 1025,0 MHz		30	42	—	dB
1025,0 ... 1760,0 MHz		40	50	—	dB
1760,0 ... 2500,0 MHz		30	40	—	dB
2500,0 ... 3120,0 MHz		20	27	—	dB
3120,0 ... 4000,0 MHz		18	25	—	dB
4000,0 ... 6000,0 MHz		—	10	—	dB
<b>Input reflection coefficient @1842,5 MHz</b>					
	Phase	-150	-140	-130	°

1) specification valid for  $T < 25$  °C

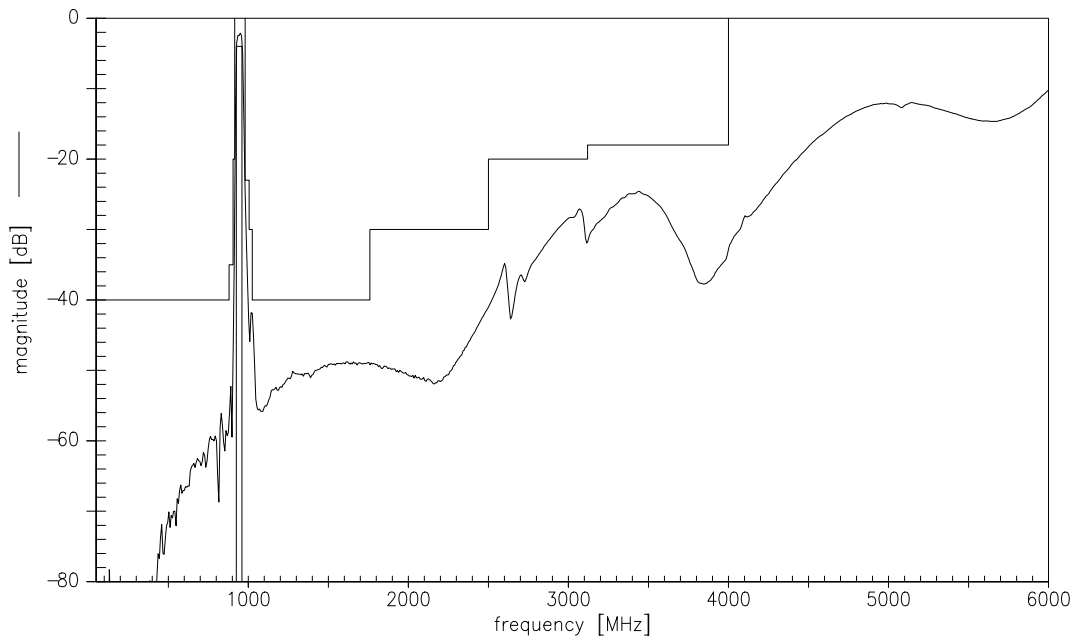
2) specification valid for  $T \geq 25$  °C



Transfer function (drawn specification for +25 C)



Transfer function (wideband)





**SAW Components**

**B4131**

**Low-Loss Filter for Mobile Communication**

**942,5 MHz**

Data Sheet



**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, OFW E MF**

**P.O. Box 80 17 09, D-81617 München**

© EPCOS AG 1999. All Rights Reserved.

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.

Terms of delivery and rights to change design reserved.

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.