



# SAW Components

Data Sheet B4133

Data Sheet

An abstract, grayscale graphic featuring a globe with a grid pattern, overlaid with a large, stylized, and slightly blurred "EPCOS" logo. The logo is rendered in a light gray, almost white, color, giving it a three-dimensional appearance as if it's floating or attached to the globe. The background is dark and textured, with some light streaks and a sense of motion or depth.

EPCOS



<b>SAW Components</b>	<b>B4133</b>
<b>Low-Loss Filter for Mobile Communication</b>	<b>1842,5 MHz</b>
<b>Data Sheet</b>	<b>SMD</b>

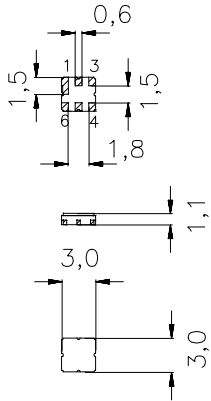
Ceramic package **DCC6D**

### Features

- Low-loss RF filter for mobile telephone PCN systems, receive path
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- Package for **Surface Mounted Technology (SMT)**
- Ceramic SMD package

### Terminals

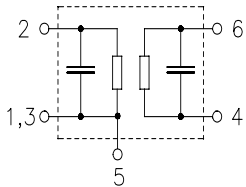
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

### Pin configuration

2	Input, unbalanced
4, 6	Output, balanced
1, 3	Input ground
1, 3, 5	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4133	B39182-B4133-U510	C61157-A7-A68	F61074-V8089-Z000

Electrostatic Sensitive Device (**ESD**)

### Maximum ratings

Operable temperature range	$T$	- 10 / + 75	°C	
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	5	V	
Input power max.	$P_{IN}$			source/load impedance 50Ω/50Ω
1710,0 ... 1785,0 MHz		5	dBm	peak power of GSM signal duty cycle 1:8
elsewhere		0	dBm	



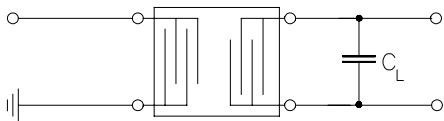
SAW Components		B4133
Low-Loss Filter for Mobile Communication		1842,5 MHz
Data Sheet		

### Characteristics

Operating Temperature Range:	$T = +25 \pm 2^\circ\text{C}$
Terminating source impedance:	$Z_S = 50\ \Omega$ (unbalanced)
Terminating load impedance:	$Z_L = 50\ \Omega \parallel 1\ \text{pF}$ (balanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	3,1	3,8	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,8	1,8	dB
<b>Attenuation</b>	$\alpha$				
0,0 ... 1160,0 MHz		37	42	—	dB
1160,0 ... 1430,0 MHz		30	45	—	dB
1430,0 ... 1705,0 MHz		20	24	—	dB
1705,0 ... 1785,0 MHz		10	12	—	dB
1920,0 ... 1980,0 MHz		10	13	—	dB
1980,0 ... 2100,0 MHz		20	23	—	dB
2100,0 ... 6000,0 MHz		20	28	—	dB

Matching network to 50  $\Omega$  load with  $C_L = 1\ \text{pF}$





<b>SAW Components</b>	<b>B4133</b>
<b>Low-Loss Filter for Mobile Communication</b>	<b>1842,5 MHz</b>

# Data Sheet

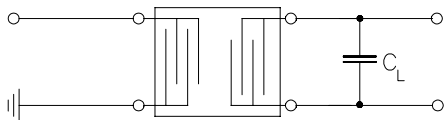


## Characteristics

Operating Temperature Range:	$T = -10$ to $+75^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50\ \Omega$ (unbalanced)
Terminating load impedance:	$Z_L = 50\ \Omega \parallel 1\ \text{pF}$ (balanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	3,2	4,3	dB
	1805,0 ... 1880,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0,9	2,3	dB
	1805,0 ... 1880,0 MHz				
<b>Attenuation</b>	$\alpha$				
	0,0 ... 1160,0 MHz	37	42	—	dB
	1160,0 ... 1430,0 MHz	30	45	—	dB
	1430,0 ... 1705,0 MHz	20	24	—	dB
	1705,0 ... 1785,0 MHz	9	12	—	dB
	1920,0 ... 1980,0 MHz	9	12	—	dB
	1980,0 ... 2100,0 MHz	20	23	—	dB
	2100,0 ... 6000,0 MHz	20	28	—	dB

Matching network to  $50\ \Omega$  load with  $C_L = 1\ \text{pF}$





SAW Components

B4133

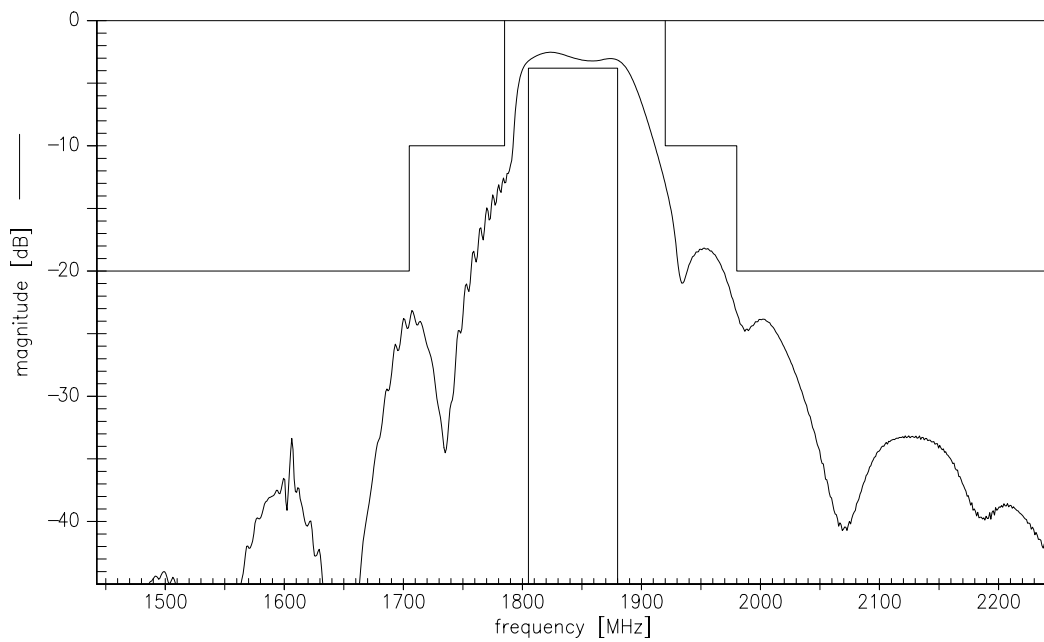
Low-Loss Filter for Mobile Communication

1842,5 MHz

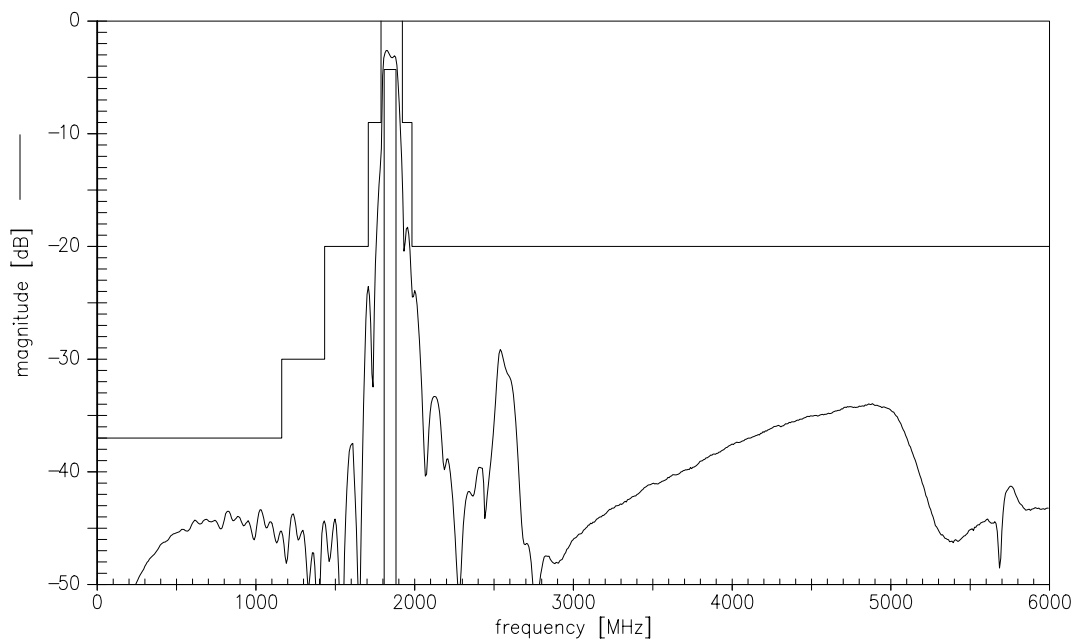
Data Sheet



### Transfer function



### Transfer function (wide band)





<b>SAW Components</b>	<b>B4133</b>
<b>Low-Loss Filter for Mobile Communication</b>	<b>1842,5 MHz</b>
<b>Data Sheet</b>	<b>SMD</b>

**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.