



# SAW Components

Data Sheet B4142

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a globe or a stylized wave. The graphic is rendered in shades of gray and white, giving it a metallic or glass-like appearance. The word "EPCOS" is positioned diagonally across the lower half of the image.



<b>SAW Components</b>	<b>B4142</b>
<b>Low-Loss Filter for Mobile Communication</b>	<b>1842,50 MHz</b>

Data Sheet



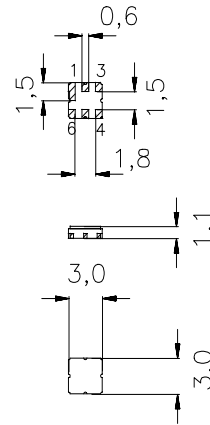
Ceramic package **DCC6C**

#### Features

- Low-loss RF filter for mobile telephone PCN system, receive path
- High selectivity
- Usable passband: 75 MHz
- No matching network required for operation at 50  $\Omega$
- Ceramic Package for **Surface Mounted Technology (SMT)**

#### Terminals

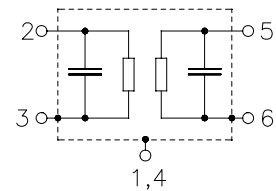
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

#### Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4142	B39182-B4142-U410	C61157-A7-A67	F61074-V8088-Z000

**Electrostatic Sensitive Device (ESD)**

#### Maximum ratings

Operable temperature range	$T$	- 35 / + 85	$^{\circ}\text{C}$	source and load impedance 50 $\Omega$ peak power of GSM signal, duty cycle 1 : 8 continuous wave
Storage temperature range	$T_{\text{stg}}$	- 40 / + 85	$^{\circ}\text{C}$	
DC voltage	$V_{\text{DC}}$	0	V	
Input power max.				
1710 ... 1785 MHz	$P_{\text{IN}}$	15	dBm	
elsewhere		0	dBm	



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## Low-Loss Filter for Mobile Communication

1842,50 MHz

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### Characteristics

Operating temperature range:  $T = 25 \pm 2^\circ \text{C}$   
Terminating source impedance:  $Z_S = 50 \Omega$   
Terminating load impedance:  $Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$					
	1805,0 ... 1815,0 MHz		—	3,0	3,3	dB
	1815,0 ... 1870,0 MHz		—	2,6	3,0	dB
	1870,0 ... 1880,0 MHz		—	2,6	3,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1805,0 ... 1815,0 MHz		—	1,2	1,5	dB
	1815,0 ... 1870,0 MHz		—	0,8	1,2	dB
	1870,0 ... 1880,0 MHz		—	0,8	1,2	dB
<b>Input VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Output VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1720,0 MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0 MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0 MHz		9,0	14,0	—	dB
	1920,0 ... 1980,0 MHz		15,0	26,0	—	dB
	1980,0 ... 3120,0 MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0 MHz		17,0	30,0	—	dB



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<b>Low-Loss Filter for Mobile Communication</b>		<b>1842,50 MHz</b>
<b>Data Sheet</b>		

### Characteristics

Operating temperature range:	$T = -35$ to $-25^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50\ \Omega$
Terminating load impedance:	$Z_L = 50\ \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$					
	1805,0 ... 1815,0 MHz		—	3,1	3,9	dB
	1815,0 ... 1870,0 MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0 MHz		—	2,6	3,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1805,0 ... 1815,0 MHz		—	1,3	2,1	dB
	1815,0 ... 1870,0 MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0 MHz		—	0,8	1,2	dB
<b>Input VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Output VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1720,0 MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0 MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0 MHz		9,0	14,0	—	dB
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<b>Low-Loss Filter for Mobile Communication</b>		<b>1842,50 MHz</b>
<b>Data Sheet</b>		<b>SMD</b>

### Characteristics

Operating temperature range:	$T = -25 \text{ to } +15^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50 \Omega$
Terminating load impedance:	$Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$					
	1805,0 ... 1815,0 MHz		—	3,1	3,8	dB
	1815,0 ... 1870,0 MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0 MHz		—	2,6	3,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1805,0 ... 1815,0 MHz		—	1,3	2,0	dB
	1815,0 ... 1870,0 MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0 MHz		—	0,8	1,2	dB
<b>Input VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Output VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1720,0 MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0 MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0 MHz		9,0	14,0	—	dB
	1920,0 ... 1980,0 MHz		15,0	26,0	—	dB
	1980,0 ... 3120,0 MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0 MHz		17,0	30,0	—	dB



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## Low-Loss Filter for Mobile Communication

1842,50 MHz

### Data Sheet



### Characteristics

Operating temperature range:  $T = +15$  to  $+75^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 50\ \Omega$   
Terminating load impedance:  $Z_L = 50\ \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$					
	1805,0 ... 1815,0 MHz		—	3,0	3,3	dB
	1815,0 ... 1870,0 MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0 MHz		—	2,9	3,6	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1805,0 ... 1815,0 MHz		—	1,2	1,5	dB
	1815,0 ... 1870,0 MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0 MHz		—	1,1	1,8	dB
<b>Input VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Output VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1720,0 MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0 MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0 MHz		7,5	9,0	—	dB
	1920,0 ... 1980,0 MHz		15,0	26,0	—	dB
	1980,0 ... 3120,0 MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0 MHz		17,0	30,0	—	dB



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<b>Low-Loss Filter for Mobile Communication</b>		<b>1842,50 MHz</b>
<b>Data Sheet</b>		

### Characteristics

Operating temperature range:	$T = +75$ to $+85^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50\ \Omega$
Terminating load impedance:	$Z_L = 50\ \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$					
	1805,0 ... 1815,0 MHz		—	3,0	3,3	dB
	1815,0 ... 1870,0 MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0 MHz		—	2,9	3,6	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1805,0 ... 1815,0 MHz		—	1,2	1,5	dB
	1815,0 ... 1870,0 MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0 MHz		—	1,1	1,8	dB
<b>Input VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Output VSWR</b>						
	1805,0 ... 1880,0 MHz		—	2,3	3,0	
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1720,0 MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0 MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0 MHz		7,0	9,0	—	dB
	1920,0 ... 1980,0 MHz		15,0	26,0	—	dB
	1980,0 ... 3120,0 MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0 MHz		17,0	30,0	—	dB



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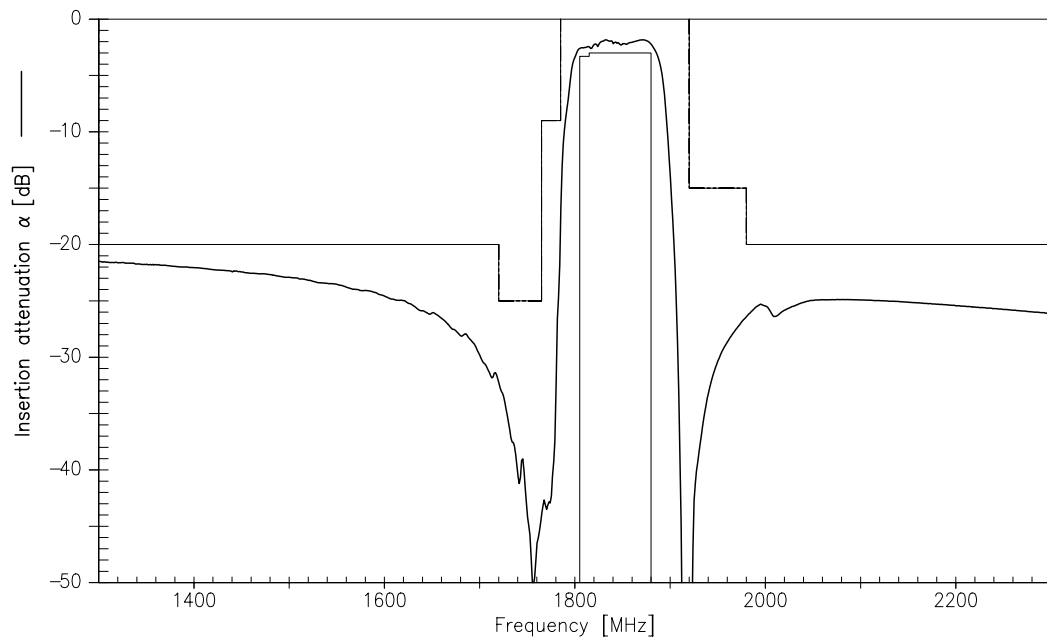
Low-Loss Filter for Mobile Communication

1842,50 MHz

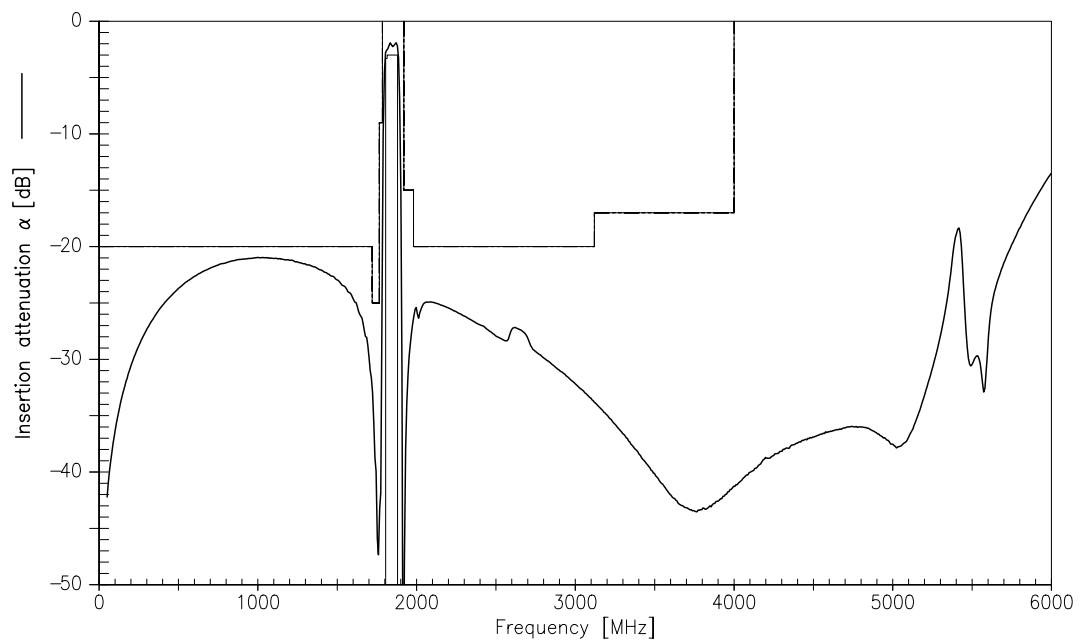
Data Sheet



Transfer function (spec for 25°C)



Transfer function (wideband)





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<b>Data Sheet</b>	<b>SMD</b>

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