



# SAW Components

Data Sheet B7822

Data Sheet

A large, stylized, 3D graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are slightly tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit pattern.



## SAW Components

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## Low-Loss Filter for Mobile Communication

1842,5 MHz

### Data Sheet



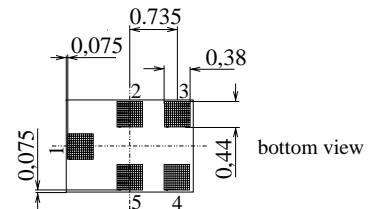
Chip sized SAW package

#### Features

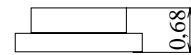
- Low-loss RF filter for mobile telephone PCN systems, receive path
- High selectivity up to 6 GHz
- Low amplitude ripple
- Usable passband 75 MHz
- Suitable for GPRS class 1 to 12
- Package for **Surface Mount Technology (SMT)**

#### Terminals

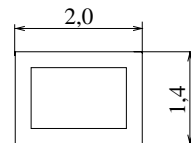
- Gold-plated Ni



bottom view



side view

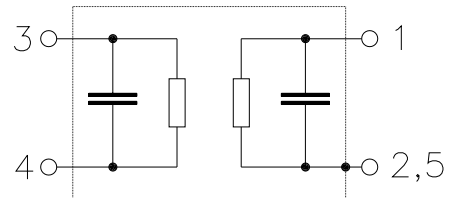


top view

Dimensions in mm, approx. weight 0,007 g

#### Pin configuration

- |     |                    |
|-----|--------------------|
| 1   | Input, unbalanced  |
| 4   | Output, unbalanced |
| 2,5 | Case ground        |
| 3   | to be grounded     |



Type	Ordering code	Marking and Package according to	Packing according to
B7822	B39182-B7822-C710	C61157-A7-A111	F61074-V8151-Z000

Electrostatic Sensitive Device (ESD)

#### Maximum ratings

Operable temperature range	$T$	- 10 / + 80	°C	peak power of GSM signal duty cycle 4:8
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	3	V	
ESD voltage	$V_{ESD}$	50	V	
Input power at GSM850, GSM900	$P_{IN}$	15	dBm	
GSM1800, GSM1900 Tx bands	$P_{IN}$	12	dBm	



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### Characteristics

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

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	2,3	2,8	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,8	1,5	dB
<b>Input VSWR</b>					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
<b>Output VSWR</b>					
1805,0 ... 1880,0 MHz		—	2,0	2,2	
<b>Attenuation</b>	$\alpha$				
0,0 ... 1480,0 MHz		30	34	—	dB
1480,0 ... 1765,0 MHz		22	27	—	dB
1765,0 ... 1785,0 MHz		14	16	—	dB
1920,0 ... 1980,0 MHz		18	23	—	dB
1980,0 ... 2400,0 MHz		25	28	—	dB
2400,0 ... 2500,0 MHz		30	37	—	dB
2500,0 ... 3610,0 MHz		25	32	—	dB
3610,0 ... 3760,0 MHz		35	44	—	dB
3760,0 ... 6000,0 MHz		25	39	—	dB



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## Low-Loss Filter for Mobile Communication

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### Characteristics

Operating Temperature Range:  $T = -10$  to  $+80^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 50\Omega$  (unbalanced)  
Terminating load impedance:  $Z_L = 50\Omega$  (unbalanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	2,4	3,1	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,9	1,8	dB
<b>Input VSWR</b>					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
<b>Output VSWR</b>					
1805,0 ... 1880,0 MHz		—	2,0	2,2	
<b>Attenuation</b>	$\alpha$				
0,0 ... 1480,0 MHz		30	34	—	dB
1480,0 ... 1765,0 MHz		21	25	—	dB
1765,0 ... 1785,0 MHz		11	14	—	dB
1920,0 ... 1980,0 MHz		18	23	—	dB
1980,0 ... 2400,0 MHz		24	27	—	dB
2400,0 ... 2500,0 MHz		30	37	—	dB
2500,0 ... 3610,0 MHz		25	32	—	dB
3610,0 ... 3760,0 MHz		35	44	—	dB
3760,0 ... 6000,0 MHz		25	39	—	dB



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## Low-Loss Filter for Mobile Communication

1842,5 MHz

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### Characteristics

Operating Temperature Range:  $T = -20$  to  $+85^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 50\Omega$  (unbalanced)  
Terminating load impedance:  $Z_L = 50\Omega$  (unbalanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	2,7	3,4	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	1,2	2,1	dB
<b>Input VSWR</b>					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
<b>Output VSWR</b>					
1805,0 ... 1880,0 MHz		—	2,1	2,4	
<b>Attenuation</b>	$\alpha$				
0,0 ... 1480,0 MHz		30	34	—	dB
1480,0 ... 1765,0 MHz		21	25	—	dB
1765,0 ... 1785,0 MHz		10	13	—	dB
1920,0 ... 1980,0 MHz		18	23	—	dB
1980,0 ... 2400,0 MHz		24	27	—	dB
2400,0 ... 2500,0 MHz		30	37	—	dB
2500,0 ... 3610,0 MHz		25	32	—	dB
3610,0 ... 3760,0 MHz		35	44	—	dB
3760,0 ... 6000,0 MHz		25	39	—	dB



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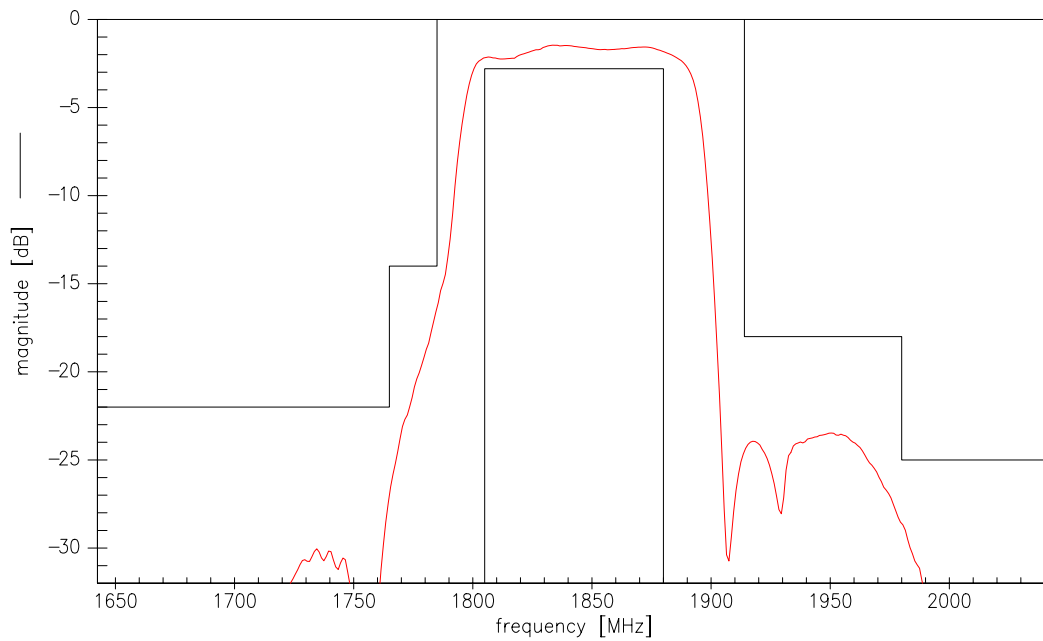
**Low-Loss Filter for Mobile Communication**

**1842,5 MHz**

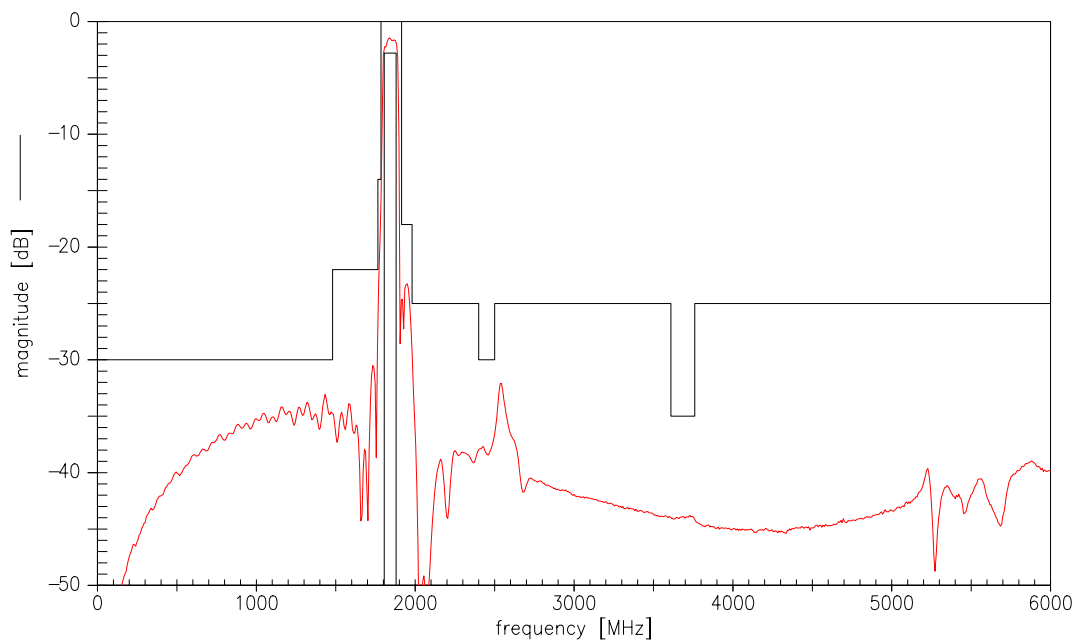
**Data Sheet**



**Transfer function (spec for 25°C)**



**Transfer function (wideband)**





<b>SAW Components</b>	<b>B7822</b>
<b>Low-Loss Filter for Mobile Communication</b>	<b>1842,5 MHz</b>
<b>Data Sheet</b>	<b>SMD</b>

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