



# SAW Components

Data Sheet B7822





**SAW Components**

**B7822**

**Low-Loss Filter for Mobile Communication**

**1842,5 MHz**

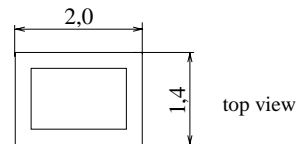
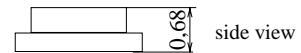
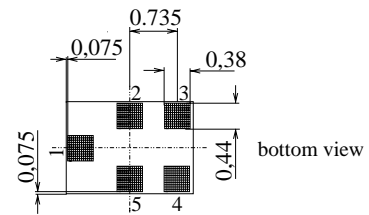
Data Sheet



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 **S**urface **M**ount **T**echnology (**SMT**)



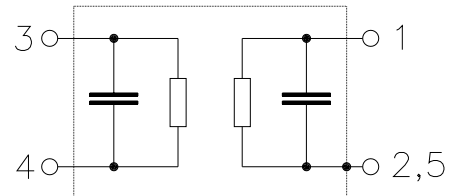
**Terminals**

- Gold-plated Ni

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	$P_{IN}$	12	dBm	
Tx bands				



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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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**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>	$\alpha_{\max}$	—	2,4	3,1	dB
1805,0 ... 1880,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0,9	1,8	dB
1805,0 ... 1880,0 MHz					
<b>Input VSWR</b>		—	2,1	2,3	
1805,0 ... 1880,0 MHz					
<b>Output VSWR</b>		—	2,0	2,2	
1805,0 ... 1880,0 MHz					
<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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**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>	$\alpha_{\max}$		—	2,7	3,4	dB
		1805,0 ... 1880,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	1,2	2,1	dB
		1805,0 ... 1880,0 MHz				
<b>Input VSWR</b>			—	2,1	2,3	
		1805,0 ... 1880,0 MHz				
<b>Output VSWR</b>			—	2,1	2,4	
		1805,0 ... 1880,0 MHz				
<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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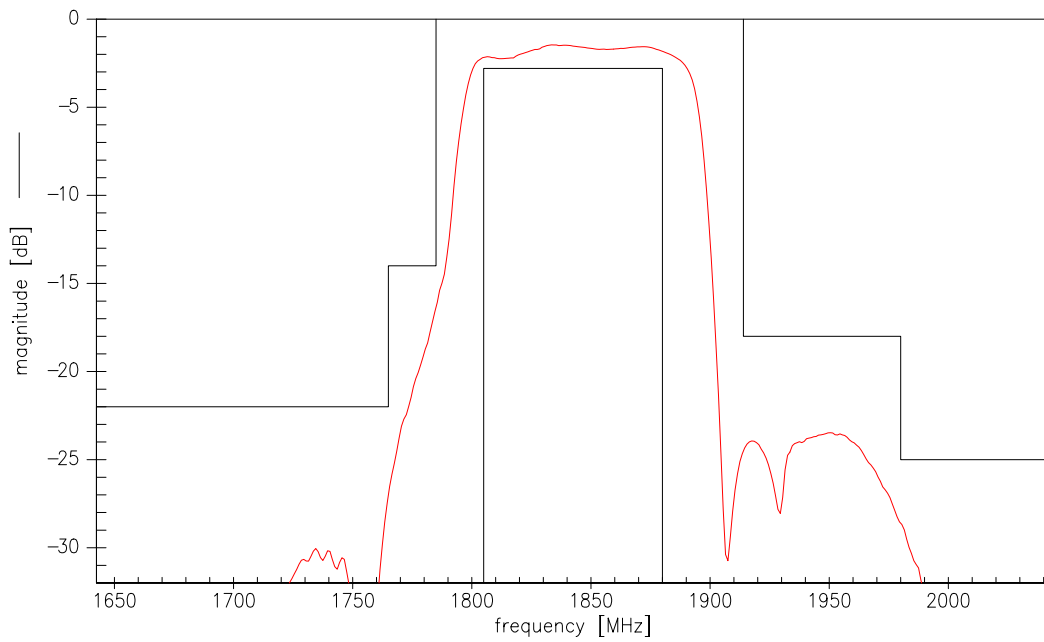
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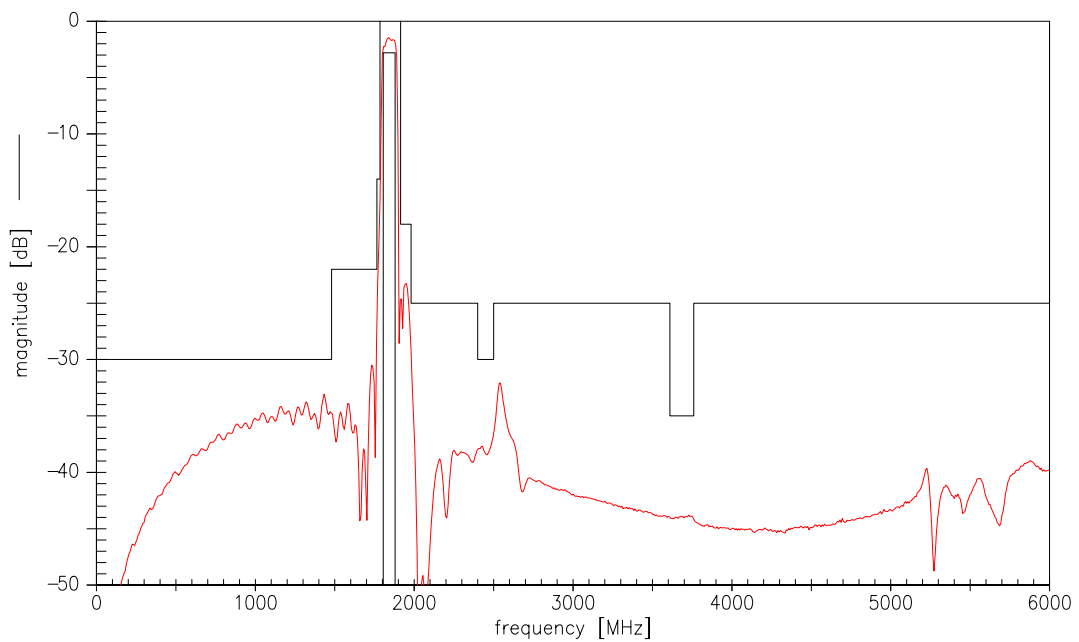
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Transfer function (spec for 25°C)



Transfer function (wideband)





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