



SAW Components

Data Sheet B7822

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow and are positioned diagonally across the frame. In the background, there is a faint, stylized globe and some circuitry patterns, all in a dark, monochromatic color scheme.



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Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



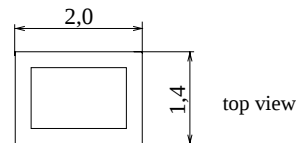
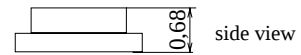
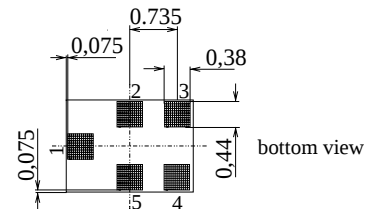
Chip sized SAW package

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

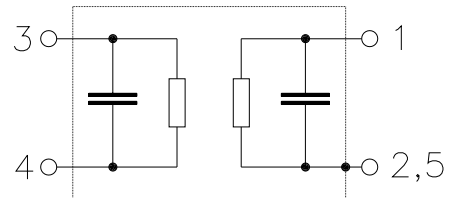
- Gold-plated Ni



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.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	2,3	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,8	1,5	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
Output VSWR					
1805,0 ... 1880,0 MHz		—	2,0	2,2	
Attenuation	α				
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.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	2,4	3,1	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,9	1,8	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
Output VSWR					
1805,0 ... 1880,0 MHz		—	2,0	2,2	
Attenuation	α				
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

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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.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
1805,0 ... 1880,0 MHz		—	2,7	3,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	1,2	2,1	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
Output VSWR					
1805,0 ... 1880,0 MHz		—	2,1	2,4	
Attenuation	α				
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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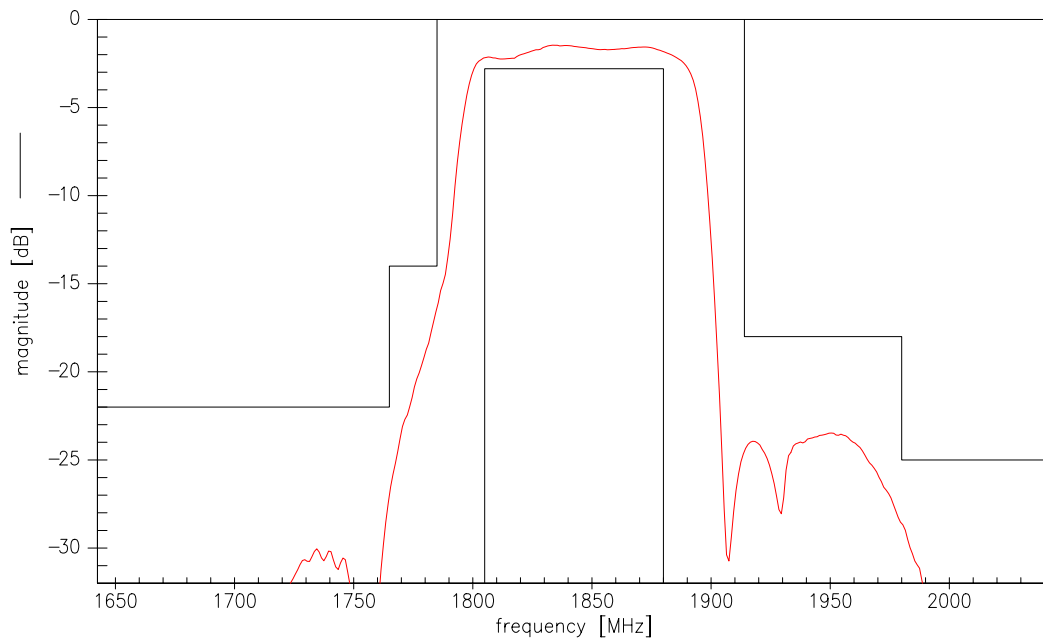
Low-Loss Filter for Mobile Communication

1842,5 MHz

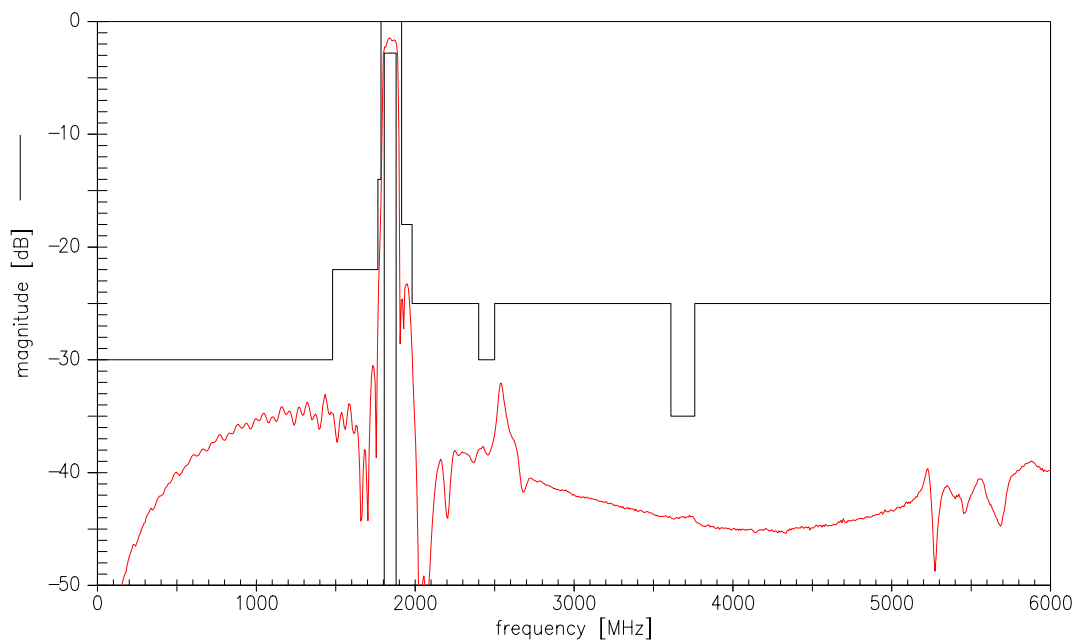
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Transfer function (spec for 25°C)



Transfer function (wideband)





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

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