



# SAW Components

Data Sheet B4166





**SAW Components**

**B4166**

**Low-Loss Filter for Mobile Communication**

**1842,50 MHz**

**Data Sheet**



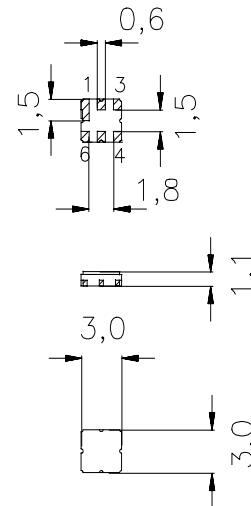
Ceramic package **DCC6C**

**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 Ω
- Suitable for GPRS class 1 to 12
- Ceramic Package for **Surface Mounted Technology (SMT)**

**Terminals**

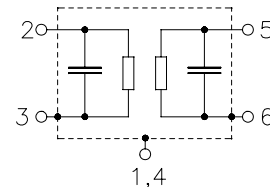
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037

**Pin configuration**

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



Type	Ordering code	Marking and Package according to	Packing according to
B4166	B39182-B4166-U410	C61157-A7-A67	F61074-V8088-Z000

**Electrostatic Sensitive Device (ESD)**

**Maximum ratings**

Operable temperature range	$T$	- 20 / + 80	°C	peak power of GSM signal duty cycle 4:8
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	5	V	
Input Power at GSM850, GSM900, GSM1800, GSM1900 Tx bands	$P_{IN}$	15	dBm	
	$P_{IN}$	12	dBm	



**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>	$\alpha_{\max}$		—	2,9	3,3	dB
		1805,0 ... 1880,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	0,9	1,3	dB
		1805,0 ... 1880,0 MHz				
<b>Input VSWR</b>			—	2,0	2,2	
		1805,0 ... 1880,0 MHz				
<b>Output VSWR</b>			—	2,2	2,4	
		1805,0 ... 1880,0 MHz				
<b>Attenuation</b>	$\alpha$					
		10,0 ... 370,0 MHz	40,0	43,5	—	dB
		370,0 ... 1300,0 MHz	37,0	38,5	—	dB
		1300,0 ... 1705,0 MHz	30,0	36,0	—	dB
		1705,0 ... 1785,0 MHz	12,0	14,0	—	dB
		1920,0 ... 1980,0 MHz	12,0	25,0	—	dB
		1980,0 ... 2530,0 MHz	23,0	28,0	—	dB
		2530,0 ... 2680,0 MHz	31,0	35,0	—	dB
		2680,0 ... 3400,0 MHz	28,0	34,0	—	dB
		3400,0 ... 3975,0 MHz	24,0	30,0	—	dB
		3975,0 ... 4200,0 MHz	23,0	27,0	—	dB
		4200,0 ... 4920,0 MHz	15,0	19,0	—	dB
		4920,0 ... 5200,0 MHz	10,0	17,0	—	dB
		5200,0 ... 6000,0 MHz	5,0	11,0	—	dB



**Characteristics**

Operating temperature range:  $T = -20$  to  $+80^{\circ}\text{C}$   
 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>	$\alpha_{\text{max}}$		—	3,2	3,9	dB
		1805,0 ... 1880,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	1,2	1,9	dB
		1805,0 ... 1880,0 MHz				
<b>Input VSWR</b>			—	2,1	2,3	
		1805,0 ... 1880,0 MHz				
<b>Output VSWR</b>			—	2,3	2,5	
		1805,0 ... 1880,0 MHz				
<b>Attenuation</b>	$\alpha$					
		10,0 ... 370,0 MHz	40,0	43,5	—	dB
		370,0 ... 1300,0 MHz	37,0	38,5	—	dB
		1300,0 ... 1705,0 MHz	30,0	36,0	—	dB
		1705,0 ... 1785,0 MHz	10,0	13,0	—	dB
		1920,0 ... 1980,0 MHz	10,0	25,0	—	dB
		1980,0 ... 2530,0 MHz	23,0	28,0	—	dB
		2530,0 ... 2680,0 MHz	31,0	35,0	—	dB
		2680,0 ... 3400,0 MHz	28,0	34,0	—	dB
		3400,0 ... 3975,0 MHz	24,0	30,0	—	dB
		3975,0 ... 4200,0 MHz	23,0	27,0	—	dB
		4200,0 ... 4920,0 MHz	15,0	19,0	—	dB
		4920,0 ... 5200,0 MHz	10,0	17,0	—	dB
		5200,0 ... 6000,0 MHz	5,0	11,0	—	dB



**Characteristics**

Operating temperature range:  $T = -40$  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 ... 1880,0 MHz	—	3,2	4,5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	1,2	2,5	dB
<b>Input VSWR</b>		1805,0 ... 1880,0 MHz	—	2,1	2,5	
<b>Output VSWR</b>		1805,0 ... 1880,0 MHz	—	2,3	2,7	
<b>Attenuation</b>	$\alpha$					
		10,0 ... 370,0 MHz	40,0	43,5	—	dB
		370,0 ... 1300,0 MHz	37,0	38,5	—	dB
		1300,0 ... 1705,0 MHz	30,0	36,0	—	dB
		1705,0 ... 1785,0 MHz	9,0	13,0	—	dB
		1920,0 ... 1980,0 MHz	10,0	25,0	—	dB
		1980,0 ... 2530,0 MHz	23,0	28,0	—	dB
		2530,0 ... 2680,0 MHz	31,0	35,0	—	dB
		2680,0 ... 3400,0 MHz	28,0	34,0	—	dB
		3400,0 ... 3975,0 MHz	24,0	30,0	—	dB
		3975,0 ... 4200,0 MHz	23,0	27,0	—	dB
		4200,0 ... 4920,0 MHz	15,0	19,0	—	dB
		4920,0 ... 5200,0 MHz	10,0	17,0	—	dB
		5200,0 ... 6000,0 MHz	5,0	11,0	—	dB



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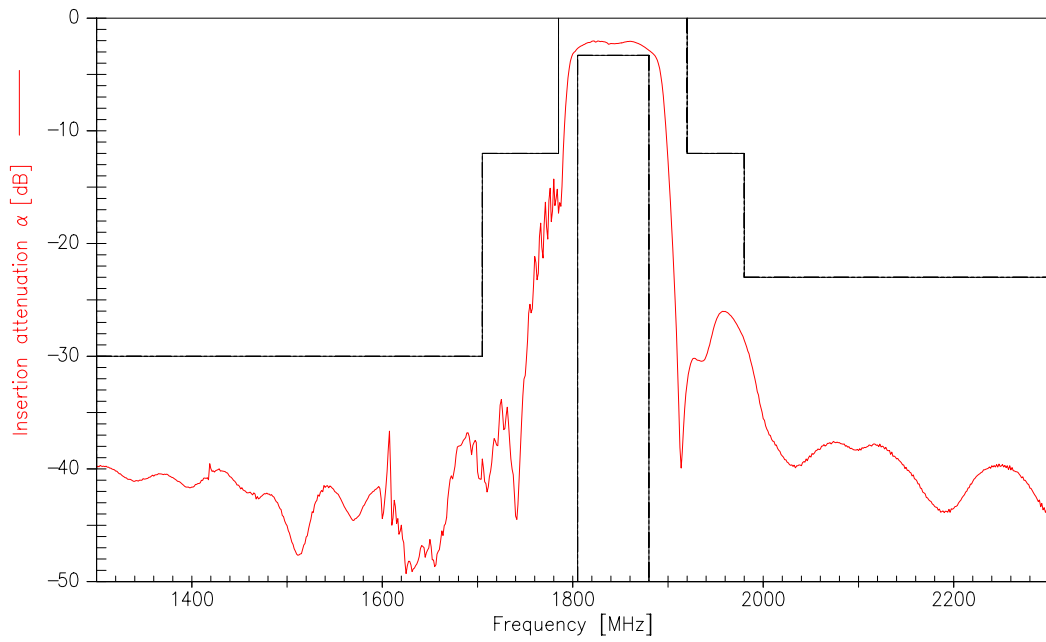
Low-Loss Filter for Mobile Communication

1842,50 MHz

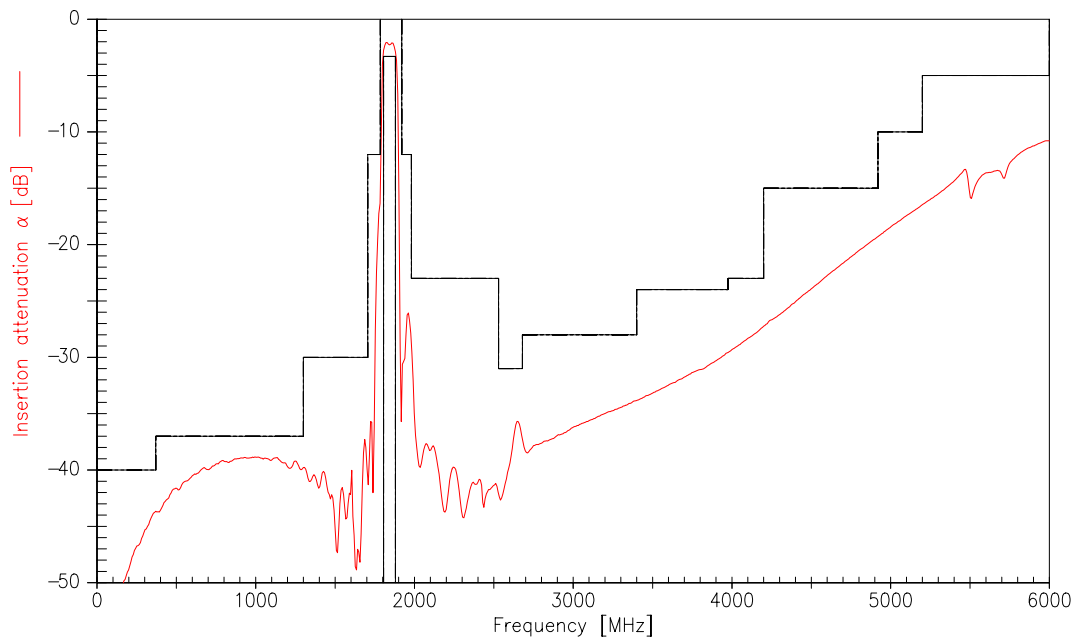
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Transfer function (spec for 25°C)



Transfer function (wideband)





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