



# SAW Components

Data Sheet B7749





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Low-Loss Filter for Mobile Communication

1842,5 MHz

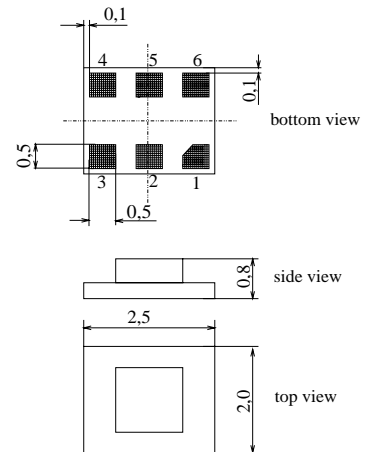
Data Sheet



Chip sized SAW package **DCS6K**

**Features**

- Low-loss RF filter for mobile telephone PCN systems, receive path
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 200Ω
- Suitable for GPRS class 1 to 12
- Package for **Surface Mounted Technology (SMT)**



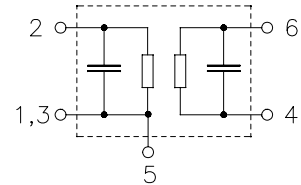
**Terminals**

- Gold-plated Ni

Dimensions in mm, approx. weight 0,012 g

**Pin configuration**

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



Type	Ordering code	Marking and Package according to	Packing according to
B7749	B39182-B7749-C910	C61157-A1-A97	F61074-V8153-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30 / + 85	°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				



Data Sheet



Characteristics

Operating temperature range:  $T = 25^{\circ}\text{C} \pm 2^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 200 \Omega$  (balanced) || 18 nH

			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	3,2	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	1,2	1,7	dB
<b>Input VSWR</b>		1805,0 ... 1880,0 MHz	—	2,3	2,5	
<b>Output VSWR</b>		1805,0 ... 1880,0 MHz	—	2,0	2,2	
<b>Diff. to common mode suppression</b>	$S_{sc12}$	1805,0 ... 1880,0 MHz	—	22	—	dB
		855,0 ... 995,0 MHz	—	28	—	dB
		1710,0 ... 1990,0 MHz	—	22	—	dB
		3420,0 ... 3980,0 MHz	—	34	—	dB
<b>Attenuation</b>	$\alpha$	0,0 ... 1205,0 MHz	40	43	—	dB
		1205,0 ... 1705,0 MHz	30	32	—	dB
		1705,0 ... 1785,0 MHz	14	16	—	dB
		1920,0 ... 1980,0 MHz	14	19	—	dB
		1980,0 ... 2100,0 MHz	20	23	—	dB
		2100,0 ... 3000,0 MHz	30	36	—	dB
		3000,0 ... 6000,0 MHz	40	44	—	dB



Data Sheet



Characteristics

Operating temperature range:  $T = -10$  to  $+80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 200 \Omega$  (balanced) || 18 nH

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	1805,0 ... 1880,0 MHz	—	3,0	3,5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	1,5	2,0	dB
<b>Input VSWR</b>		1805,0 ... 1880,0 MHz	—	2,3	2,5	
<b>Output VSWR</b>		1805,0 ... 1880,0 MHz	—	2,0	2,2	
<b>Diff. to common mode suppression</b>	$S_{sc12}$	1805,0 ... 1880,0 MHz	—	22	—	dB
		855,0 ... 995,0 MHz	—	28	—	dB
		1710,0 ... 1990,0 MHz	—	22	—	dB
		3420,0 ... 3980,0 MHz	—	34	—	dB
<b>Attenuation</b>	$\alpha$	0,0 ... 1205,0 MHz	40	43	—	dB
		1205,0 ... 1705,0 MHz	30	32	—	dB
		1705,0 ... 1785,0 MHz	10	12	—	dB
		1920,0 ... 1980,0 MHz	10	19	—	dB
		1980,0 ... 2100,0 MHz	20	23	—	dB
		2100,0 ... 3000,0 MHz	30	36	—	dB
		3000,0 ... 6000,0 MHz	40	44	—	dB



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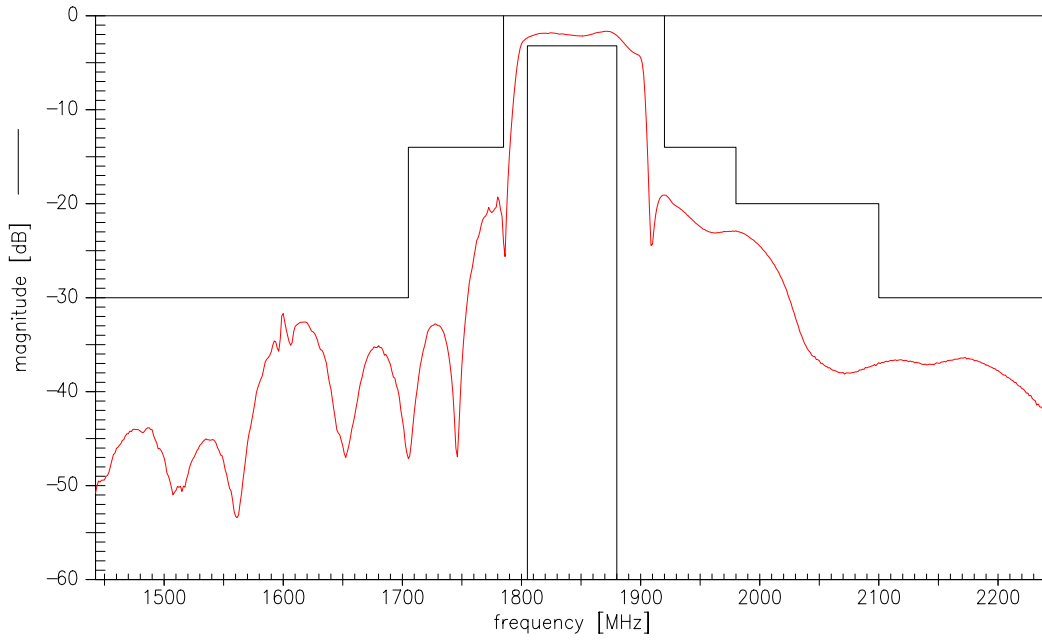
Characteristics

Operating temperature range:  $T = -30$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50$   $\Omega$   
 Terminating load impedance:  $Z_L = 200$   $\Omega$  (balanced) || 18 nH

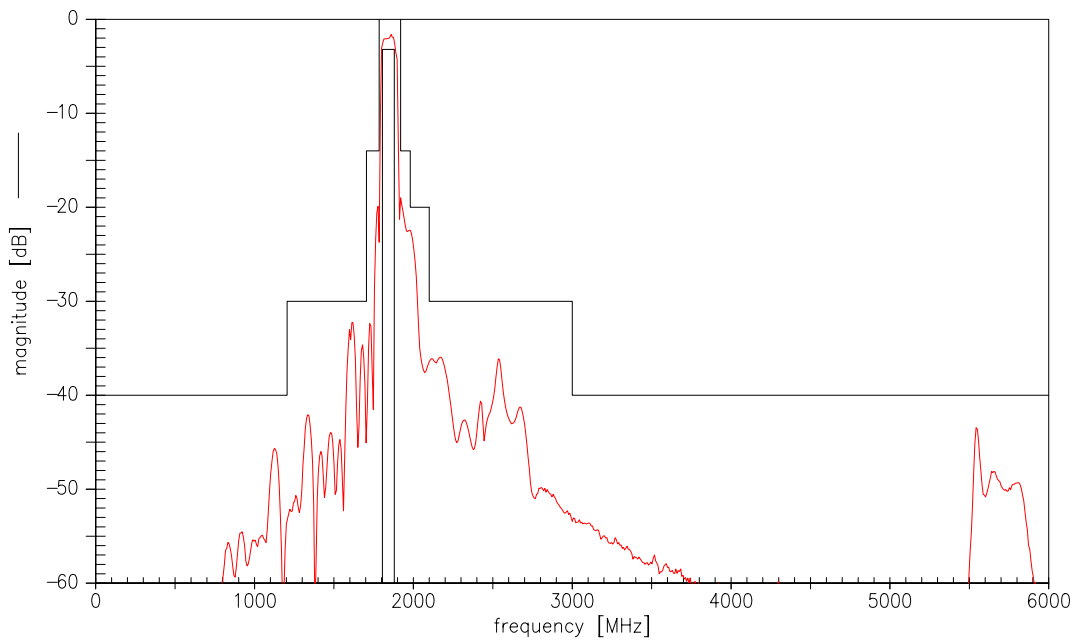
			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	1805,0 ... 1880,0 MHz	—	3,5	4,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	2,0	2,5	dB
<b>Input VSWR</b>		1805,0 ... 1880,0 MHz	—	2,4	2,6	
<b>Output VSWR</b>		1805,0 ... 1880,0 MHz	—	2,1	2,3	
<b>Diff. to common mode suppression</b>	$S_{sc12}$	1805,0 ... 1880,0 MHz	—	22	—	dB
		855,0 ... 995,0 MHz	—	28	—	dB
		1710,0 ... 1990,0 MHz	—	22	—	dB
		3420,0 ... 3980,0 MHz	—	34	—	dB
<b>Attenuation</b>	$\alpha$	0,0 ... 1205,0 MHz	40	43	—	dB
		1205,0 ... 1705,0 MHz	30	32	—	dB
		1705,0 ... 1785,0 MHz	9	11	—	dB
		1920,0 ... 1980,0 MHz	10	19	—	dB
		1980,0 ... 2100,0 MHz	20	23	—	dB
		2100,0 ... 3000,0 MHz	30	36	—	dB
		3000,0 ... 6000,0 MHz	40	44	—	dB



Transfer function



Transfer function (wide band)





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**1842,5 MHz**

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