



# RF Filters for Cellular Phones

## Series/Type: B7749

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39182B7749C910	B39182B9402K610	2007-09-21	2007-12-31	2008-03-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at [www.epcos.com/sales](http://www.epcos.com/sales).



SAW Components

B7749

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



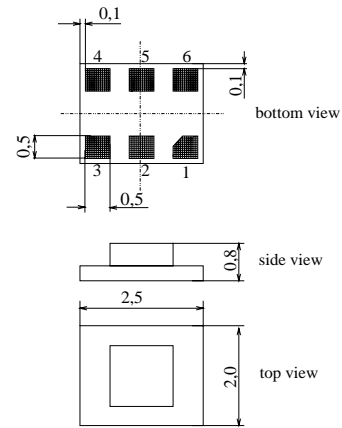
Chip sized SAW package **DCS6K**

**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**

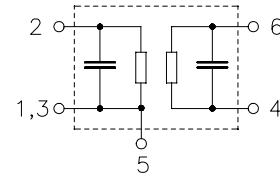
- Gold-plated Ni



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	
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	peak power of GSM signal duty cycle 4:8
GSM1800, GSM1900	$P_{IN}$	12	dBm	
Tx bands				



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



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



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



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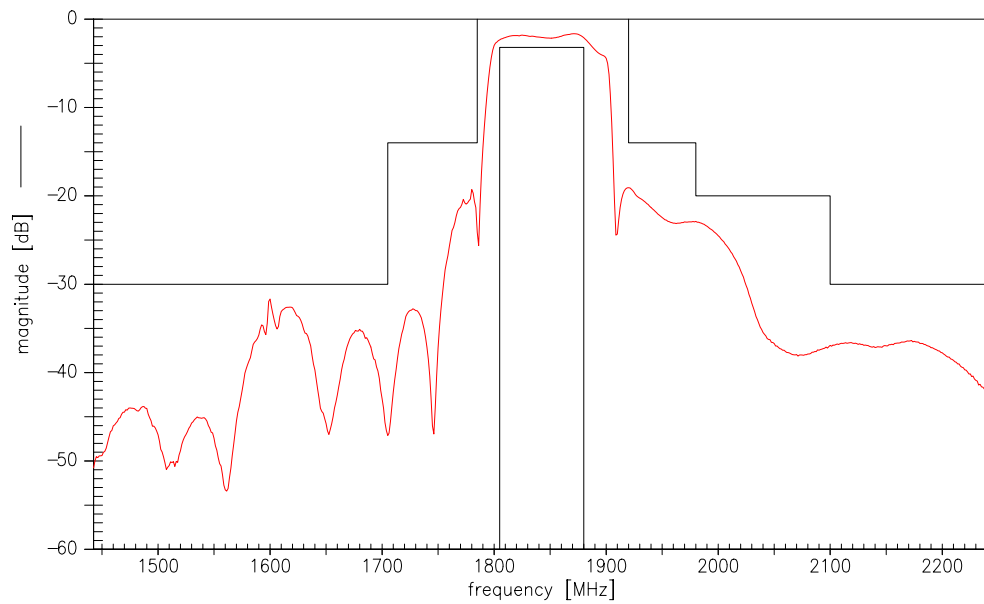
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1842,5 MHz

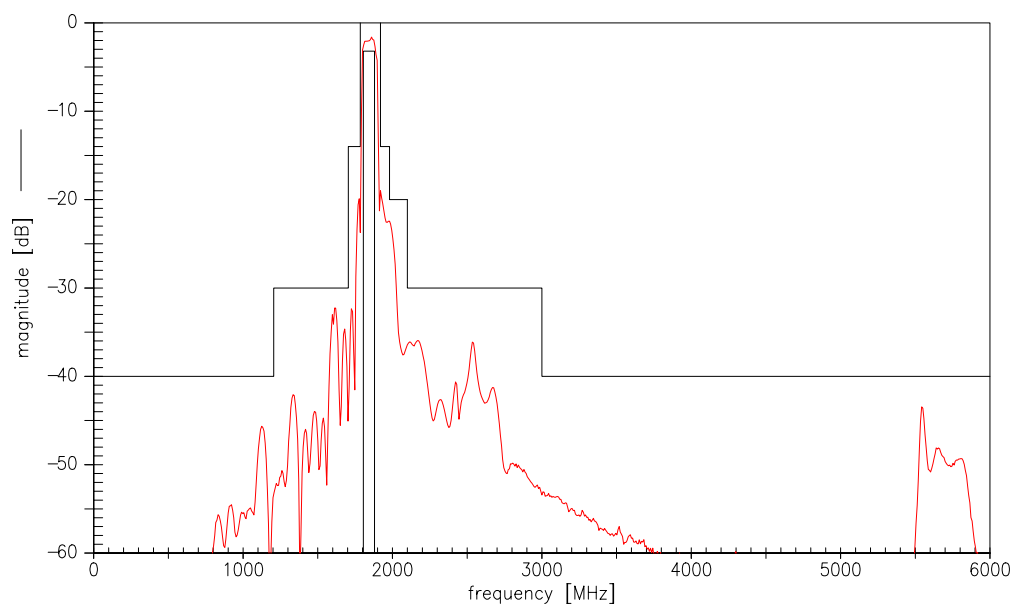
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### Transfer function



### Transfer function (wide band)





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**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW MC WT**

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