



# RF Filters for Cellular Phones

## Series/Type: **B7749**

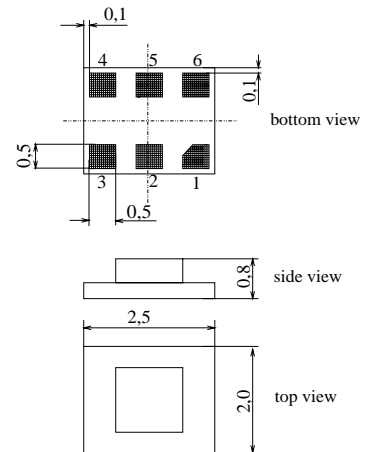
The following products presented in this data sheet are being withdrawn.

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).


 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)**

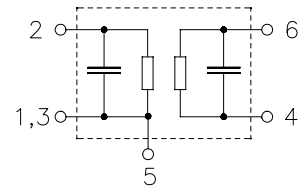

**Terminals**

- 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>	$\alpha_{\max}$	—	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>	$\alpha$	40	43	—	dB
0,0 ... 1205,0 MHz					
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	—	

**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>	$\alpha_{max}$	—	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>	$\alpha$	40	43	—	dB
0,0 ... 1205,0 MHz					
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	—	

**Data Sheet**

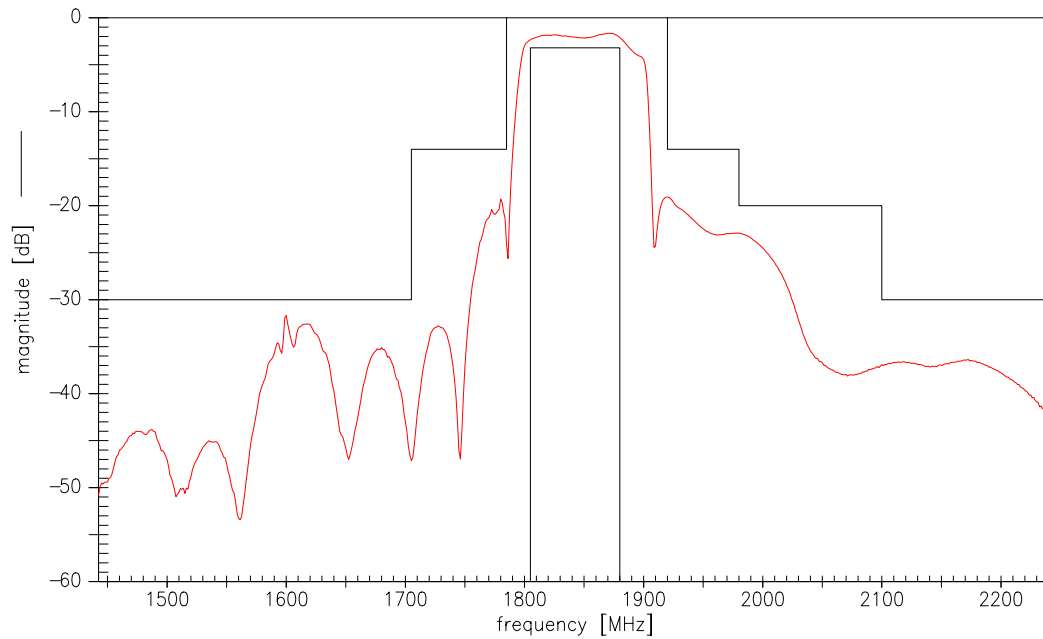
**Characteristics**

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

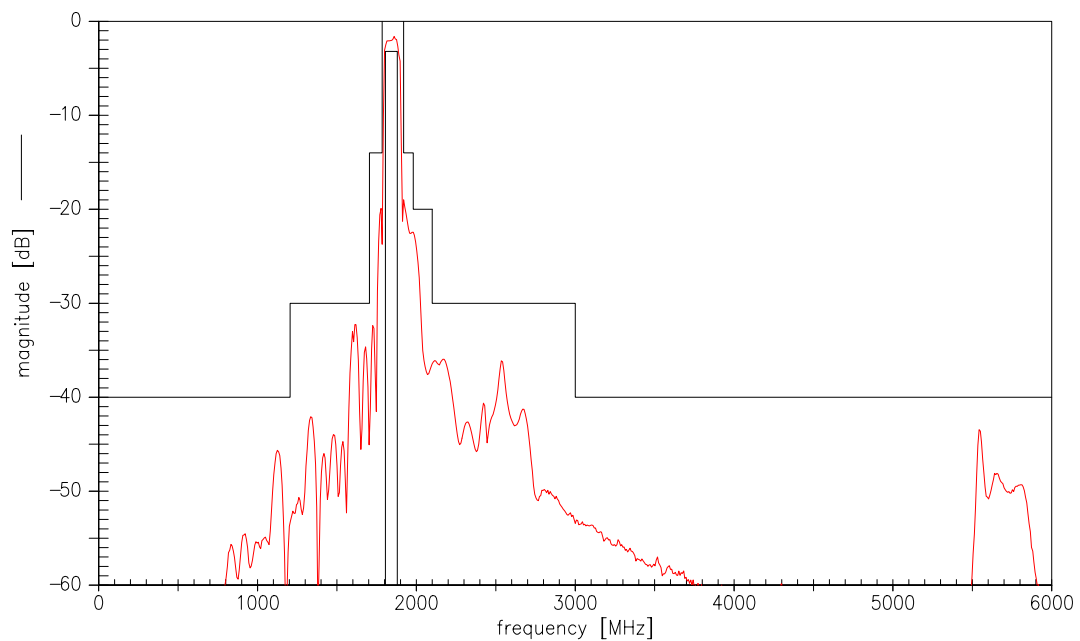
		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	3,5	4,0	dB
1805,0 ... 1880,0	MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	2,0	2,5	dB
1805,0 ... 1880,0	MHz				
<b>Input VSWR</b>		—	2,4	2,6	
1805,0 ... 1880,0	MHz				
<b>Output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



Transfer function



Transfer function (wide band)



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