



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The following products presented in this data sheet are being withdrawn.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

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SAW Components

B7749

Low-Loss Filter for Mobile Communication

1842,5 MHz

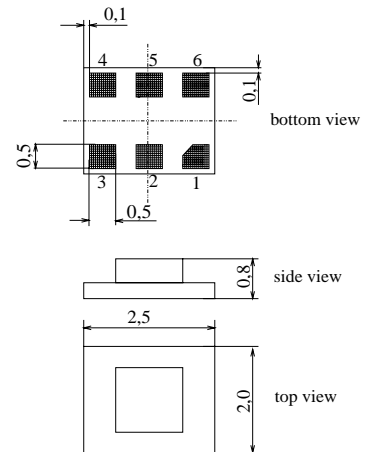
Data Sheet



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)**



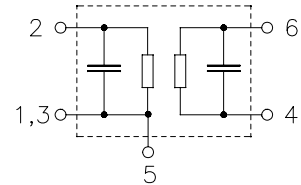
Terminals

- 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	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.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}				
	1805,0 ... 1880,0 MHz	—	2,7	3,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	1805,0 ... 1880,0 MHz	—	1,2	1,7	dB
Input VSWR					
	1805,0 ... 1880,0 MHz	—	2,3	2,5	
Output VSWR					
	1805,0 ... 1880,0 MHz	—	2,0	2,2	
Diff. to common mode suppression	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
Attenuation	α				
	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.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}	—	3,0	3,5	dB
1805,0 ... 1880,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,5	2,0	dB
1805,0 ... 1880,0 MHz					
Input VSWR		—	2,3	2,5	
1805,0 ... 1880,0 MHz					
Output VSWR		—	2,0	2,2	
1805,0 ... 1880,0 MHz					
Diff. to common mode suppression	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	—	
Attenuation	α	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



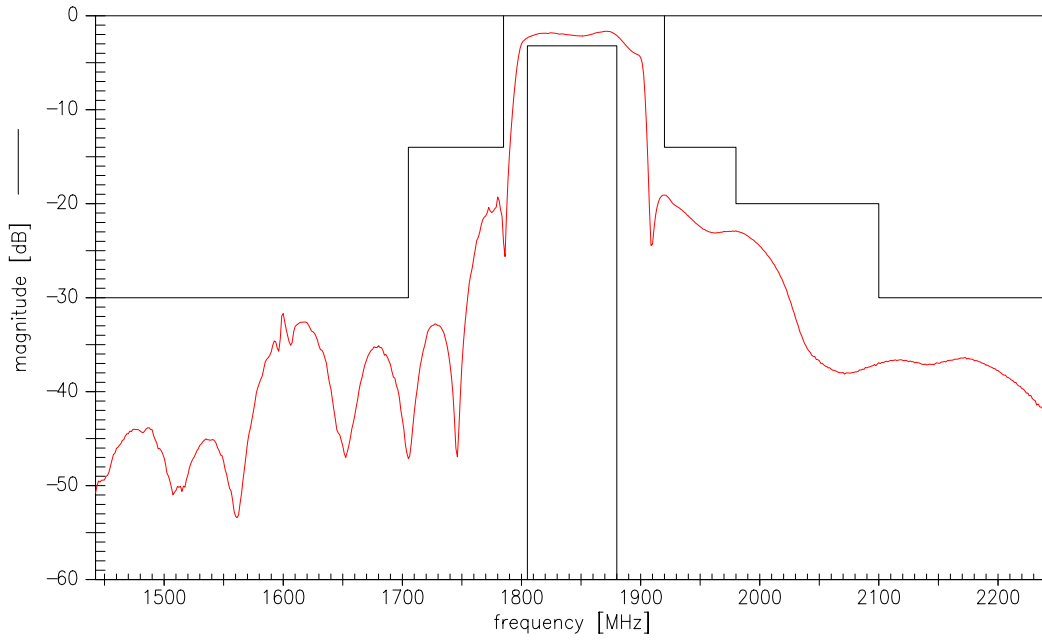
Characteristics

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

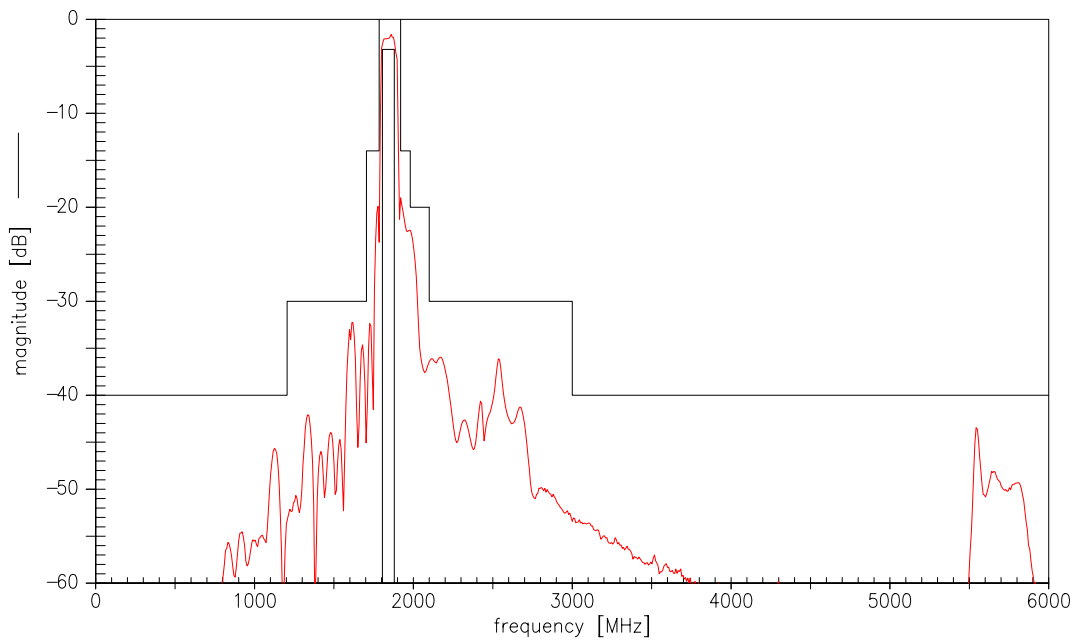
			min.	typ.	max.	
Center frequency	f_C		—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}	1805,0 ... 1880,0 MHz	—	3,5	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	2,0	2,5	dB
Input VSWR		1805,0 ... 1880,0 MHz	—	2,4	2,6	
Output VSWR		1805,0 ... 1880,0 MHz	—	2,1	2,3	
Diff. to common mode suppression	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
Attenuation	α	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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Low-Loss Filter for Mobile Communication

1842,5 MHz

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