



# SAW Components

Data Sheet B7709





**SAW Components**

**B7709**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

**Data Sheet**



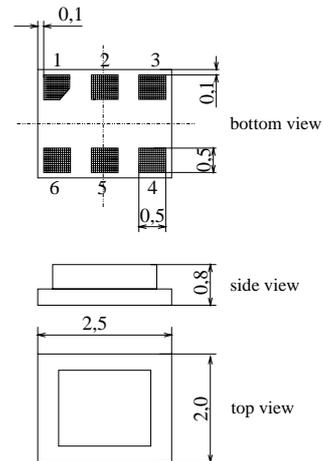
**Chip Sized SAW Package DCS6I**

**Features**

- Low-loss RF filter for mobile telephone PCS systems, receive path
- High selectivity
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to balanced operation
- No external matching required
- Package for **Surface Mounted Technology (SMT)**

**Terminals**

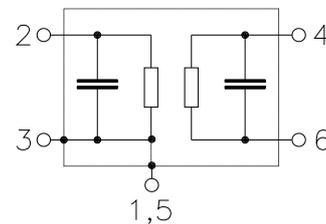
- Gold-plated Ni



Dimensions in mm, approx. weight 0,014 g

**Pin configuration**

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



Type	Ordering code	Marking and Package according to	Packing according to
B7709	B39202-B7709-C610	C61157-A7-A76	F61074-V8112-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30 / + 85	°C	
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	5	V	
ESD voltage	$V_{ESD}$	50	V	
Input power max.				
880 ... 915 MHz	$P_{IN}$	13	dBm	source and load impedance 50 $\Omega$ peak power of GSM signal, duty cycle 2 : 8
1710 ... 1785 MHz		13	dBm	
1850 ... 1910 MHz		13	dBm	
elsewhere		0	dBm	continuous wave



Data Sheet



Characteristics

Operating Temperature Range:  $T = +25 \pm 2^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$  (unbalanced)  
 Terminating load impedance:  $Z_L = 50 \Omega$  (balanced)

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	1930,0 ... 1990,0 MHz	—	3,5	3,9	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	1930,0 ... 1990,0 MHz	—	1,1	1,5	dB
<b>Input VSWR</b>		1930,0 ... 1990,0 MHz	—	2,0	2,2	
<b>Output VSWR</b>		1930,0 ... 1990,0 MHz	—	2,0	2,2	
<b>Differential to common mode suppression</b>	$S_{sc12}$	1930,0 ... 1990,0 MHz	—	18	—	dB
		855,0 ... 995,0 MHz	—	29	—	dB
		1710,0 ... 1990,0 MHz	—	18	—	dB
		3420,0 ... 3980,0 MHz	—	29	—	dB
<b>Attenuation</b>	$\alpha$	0,0 ... 1600,0 MHz	35	38	—	dB
		1600,0 ... 1830,0 MHz	23	28	—	dB
		1830,0 ... 1910,0 MHz	12	15	—	dB
		2010,0 ... 2070,0 MHz	12	20	—	dB
		2070,0 ... 3500,0 MHz	23	25	—	dB
		3500,0 ... 4000,0 MHz	20	22	—	dB
		4000,0 ... 6000,0 MHz	15	16	—	dB



Data Sheet



Characteristics

Operating Temperature Range:  $T = -10$  to  $+80^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$  (unbalanced)  
 Terminating load impedance:  $Z_L = 50 \Omega$  (balanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	3,7	4,4	dB
1930,0 ... 1990,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1,3	2,0	dB
1930,0 ... 1990,0 MHz					
<b>Input VSWR</b>		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
<b>Output VSWR</b>		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
<b>Differential to common mode suppression</b>	$S_{sc12}$	—	18	—	dB
1930,0 ... 1990,0 MHz					
855,0 ... 995,0 MHz			29	—	
1710,0 ... 1990,0 MHz			18	—	
3420,0 ... 3980,0 MHz			29	—	
<b>Attenuation</b>	$\alpha$				
0,0 ... 1600,0 MHz		35	38	—	dB
1600,0 ... 1830,0 MHz		23	28	—	dB
1830,0 ... 1910,0 MHz		8	13	—	dB
2010,0 ... 2070,0 MHz		9	15	—	dB
2070,0 ... 3500,0 MHz		23	25	—	dB
3500,0 ... 4000,0 MHz		20	22	—	dB
4000,0 ... 6000,0 MHz		15	16	—	dB



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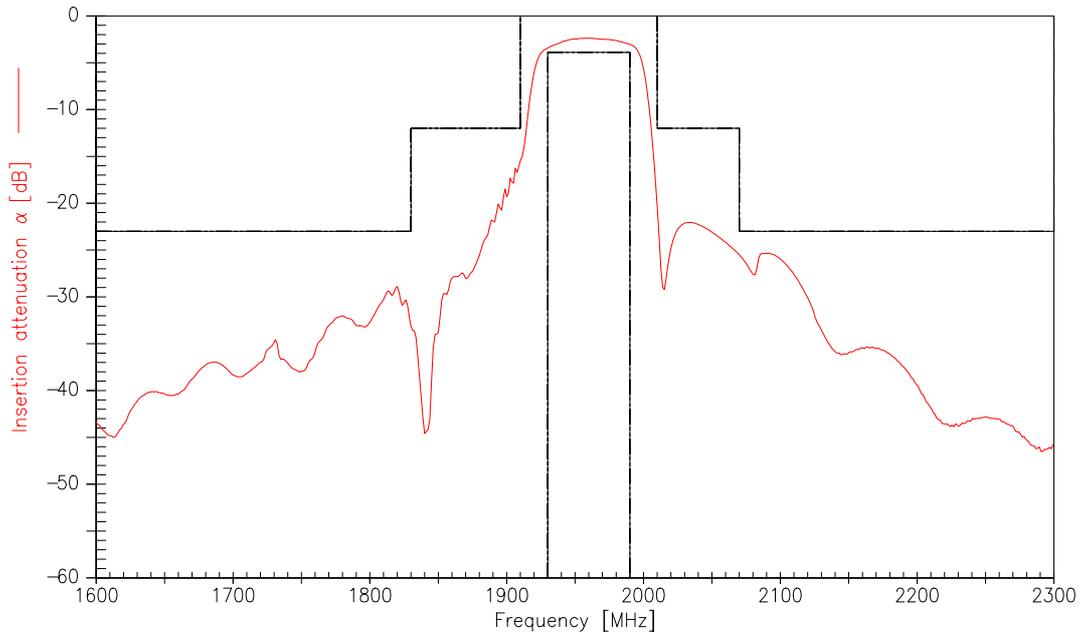
Characteristics

Operating Temperature Range:  $T = -30$  to  $+85^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$  (unbalanced)  
 Terminating load impedance:  $Z_L = 50\ \Omega$  (balanced)

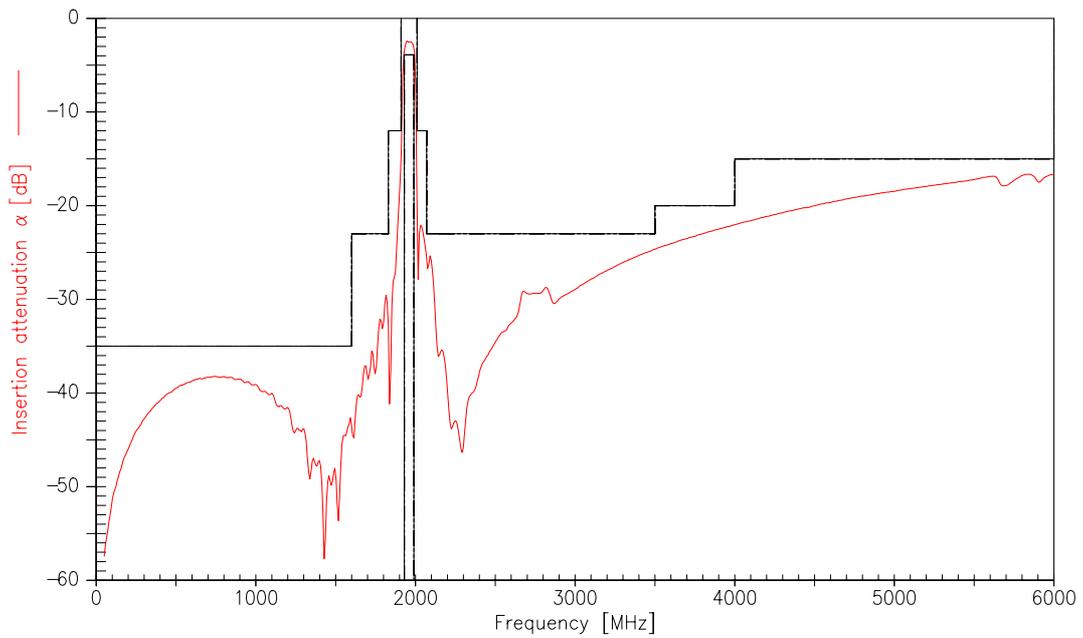
		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	3,8	4,6	dB
1930,0 ... 1990,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1,3	2,2	dB
1930,0 ... 1990,0 MHz					
<b>Input VSWR</b>		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
<b>Output VSWR</b>		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
<b>Differential to common mode suppression</b>	$S_{sc12}$	—	18	—	dB
1930,0 ... 1990,0 MHz					
855,0 ... 995,0 MHz			29	—	
1710,0 ... 1990,0 MHz			18	—	
3420,0 ... 3980,0 MHz			29	—	
<b>Attenuation</b>	$\alpha$				
0,0 ... 1600,0 MHz		35	38	—	dB
1600,0 ... 1830,0 MHz		23	28	—	
1830,0 ... 1910,0 MHz		7	12	—	
2010,0 ... 2070,0 MHz		7	14	—	
2070,0 ... 3500,0 MHz		23	25	—	
3500,0 ... 4000,0 MHz		20	22	—	
4000,0 ... 6000,0 MHz		15	16	—	



Transfer function



Transfer function (wide band)





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**1960,0 MHz**

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