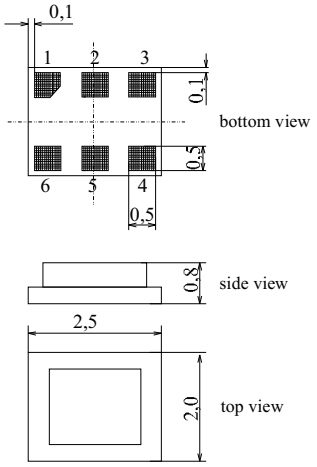
SAW Components

Data Sheet B7709

Chip **S**ized **S**AW **P**ackage **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 **S**urface **M**ounted **T**echnology (**SMT**)



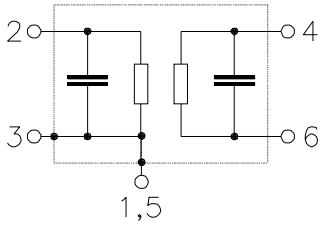
Dimensions in mm, approx. weight 0,014 g

Terminals

- Gold-plated Ni

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 **S**ensitive **D**evice (**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		13	dBm	source and load impedance 50 Ω
1710 ... 1785 MHz	P_{IN}	13	dBm	peak power of GSM signal,
1850 ... 1910 MHz		13	dBm	duty cycle 2 : 8
elsewhere		0	dBm	continuous wave

Characteristics

Operating Temperature Range: T = +25 +- 2˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	3,5	3,9	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,1	1,5	dB
Input VSWR					
1930,0 ... 1990,0 MHz		—	2,0	2,2	
Output VSWR					
1930,0 ... 1990,0 MHz		—	2,0	2,2	
Differential to common mode suppression	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
Attenuation	α				
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

Characteristics

Operating Temperature Range: T = -10 to +80˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

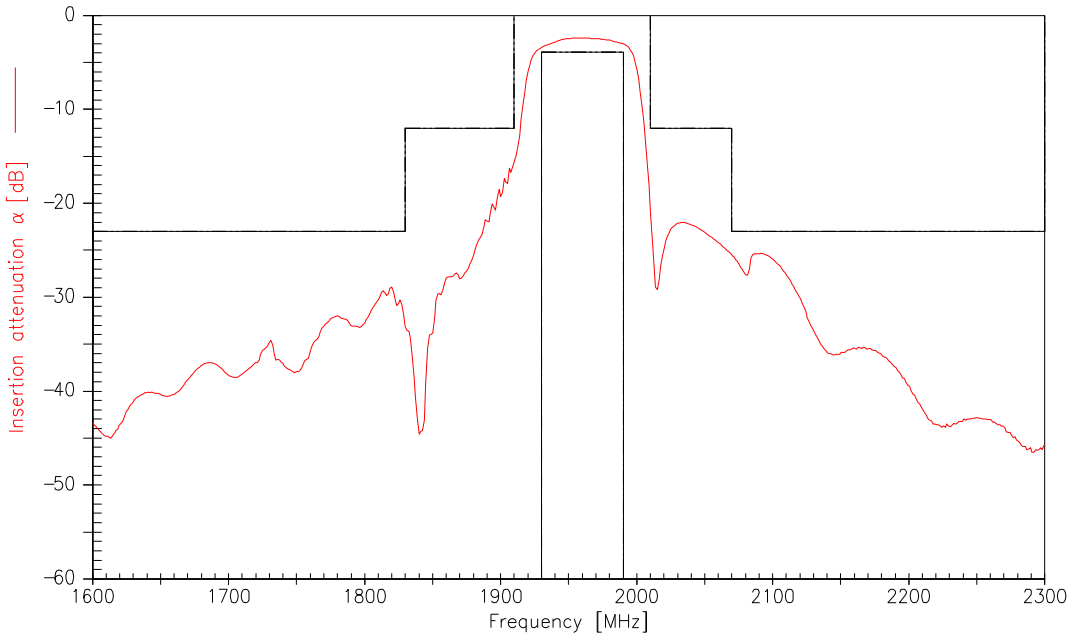
		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	3,7	4,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,3	2,0	dB
Input VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Output VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Differential to common mode suppression	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
Attenuation	α				
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

Characteristics

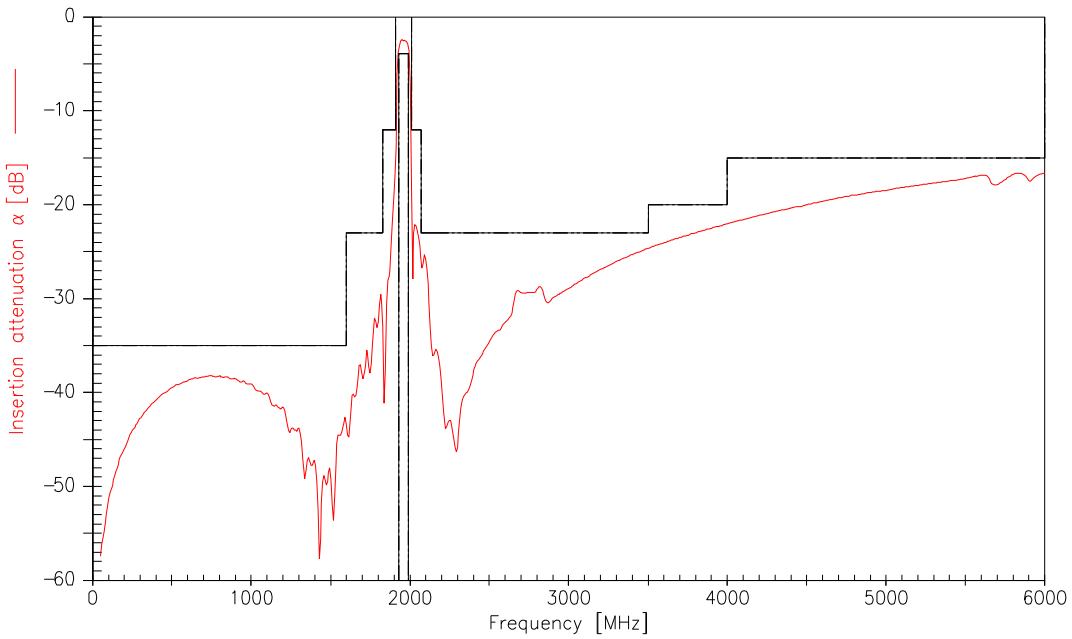
Operating Temperature Range: T = -30 to +85˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	3,8	4,6	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,3	2,2	dB
Input VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Output VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Differential to common mode suppression	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
Attenuation	α				
0,0 ... 1600,0 MHz		35	38	—	dB
1600,0 ... 1830,0 MHz		23	28	—	dB
1830,0 ... 1910,0 MHz		7	12	—	dB
2010,0 ... 2070,0 MHz		7	14	—	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

Transfer function



Transfer function (wide band)



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