



SAW Components

Data Sheet B7709

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or electronic theme.



SAW Components

B7709

Low-Loss Filter for Mobile Communication

1960,0 MHz

Data Sheet



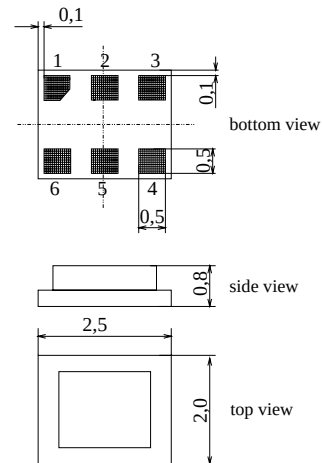
Chip Sized SAW Package DCS6I

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

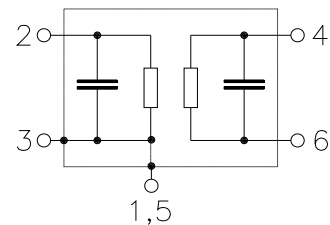
- Gold-plated Ni



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	source and load impedance 50 Ω peak power of GSM signal, duty cycle 2 : 8
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	continuous wave
1710 ... 1785 MHz		13	dBm	
1850 ... 1910 MHz		13	dBm	
elsewhere		0	dBm	



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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.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
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



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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.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	3,7	4,4	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,3	2,0	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
Output VSWR		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
Differential to common mode suppression	$S_{\text{sc}12}$	—	18	—	dB
1930,0 ... 1990,0 MHz					
855,0 ... 995,0 MHz		—	29	—	dB
1710,0 ... 1990,0 MHz		—	18	—	dB
3420,0 ... 3980,0 MHz		—	29	—	dB
Attenuation	α	35	38	—	dB
0,0 ... 1600,0 MHz					
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.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	3,8	4,6	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,3	2,2	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
Output VSWR		—	2,1	2,3	
1930,0 ... 1990,0 MHz					
Differential to common mode suppression	$S_{\text{sc}12}$	—	18	—	dB
1930,0 ... 1990,0 MHz					
855,0 ... 995,0 MHz		—	29	—	dB
1710,0 ... 1990,0 MHz		—	18	—	dB
3420,0 ... 3980,0 MHz		—	29	—	dB
Attenuation	α	35	38	—	dB
0,0 ... 1600,0 MHz					
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



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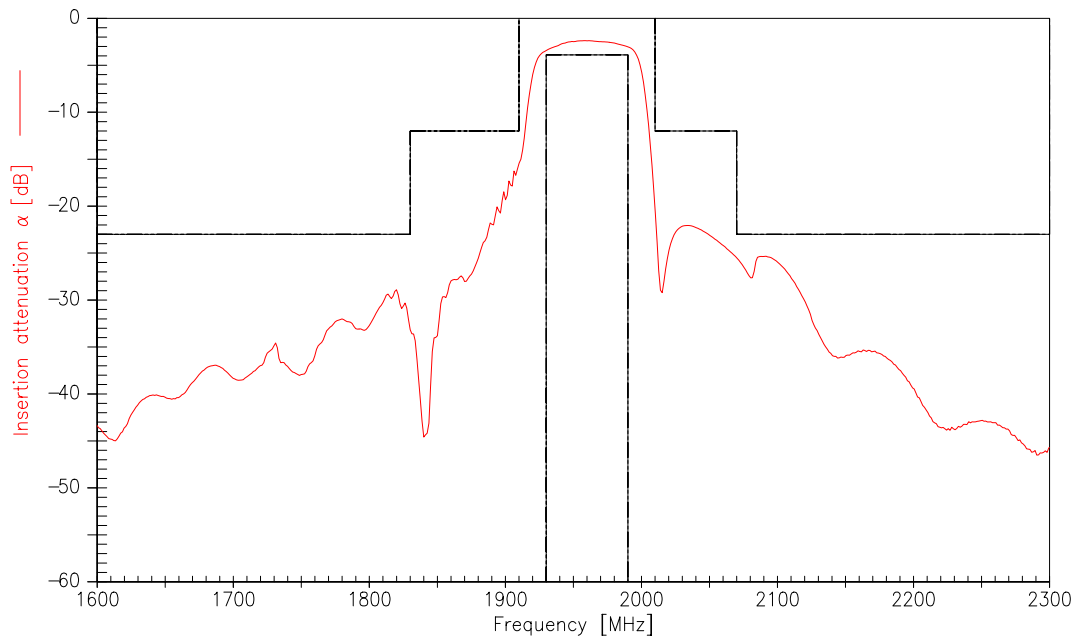
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1960,0 MHz

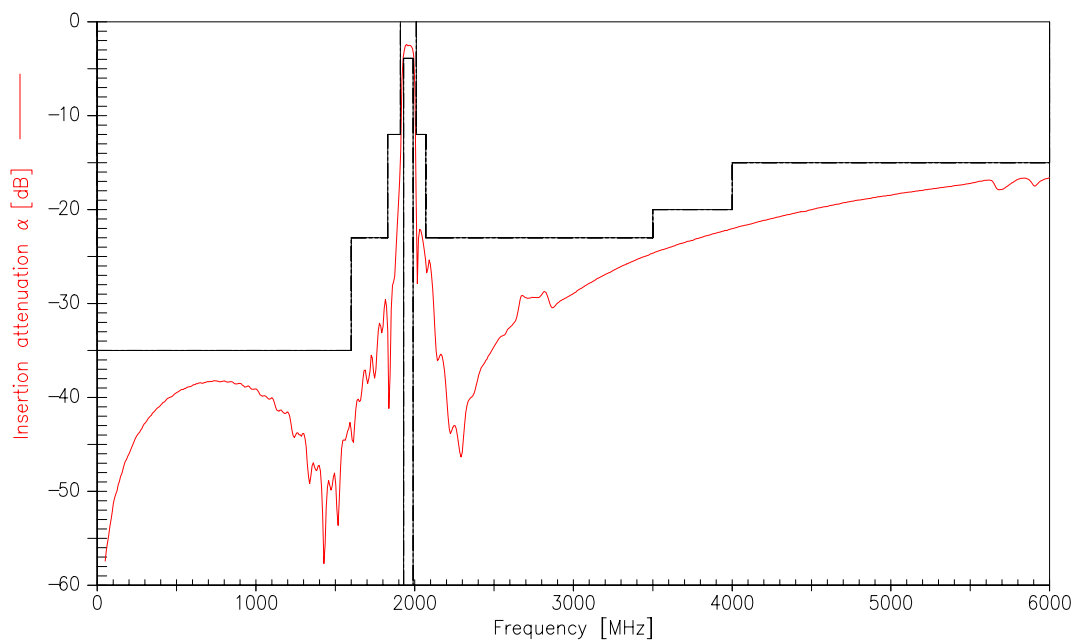
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Transfer function



Transfer function (wide band)





SAW Components	B7709
Low-Loss Filter for Mobile Communication	1960,0 MHz
Data Sheet	SMD

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