



# SAW Components

Data Sheet B7756





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**B7756**

**Low-Loss Filter for Mobile Communication**

**1950,0 MHz**

**Data Sheet**



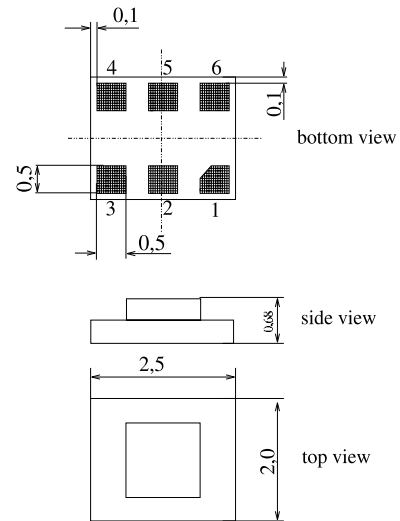
Chip sized SAW package **DCS6K**

**Features**

- Low-loss RF filter for W-CDMA mobile telephone system, transmit path
- Usable passband 60 MHz
- Excellent symmetry
- Balanced to unbalanced operation
- Impedance transformation from 200Ω to 50 Ω
- Package for **Surface Mounted Technology**
- **Chip Sized SAW Package**

**Terminals**

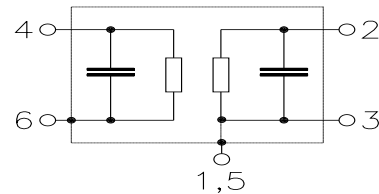
- Gold-plated Ni



Dimensions in mm, approx. weight 0,012 g

**Pin configuration**

- 4, 6            Input, balanced
- 2                Output
- 1, 3, 5        To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B7756	B39202-B7756-C910	C61157-A7-A122	F61074-V8153-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30 / + 85	°C	Machine Model, 10 pulses <sup>1)</sup>
Storage temperature range	$T_{stg}$	- 40 / +100	°C	
DC voltage	$V_{DC}$	5	V	
ESD voltage	$V_{ESD}$	50	V	
Source power	$P_S$	10	dBm	

1) acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses



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**Characteristics**

Operating temperature range:  $T = + 25 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 200\Omega \parallel 6,8\text{nH}$   
 Terminating load impedance:  $Z_L = 50\Omega$

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	1950,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2,6	3,0	dB
1920,0 ... 1980,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta$	—	0,6	0,9	dB
1920,0 ... 1980,0 MHz					
<b>Amplitude ripple per 5MHz channel (p-p)</b>	$\Delta\alpha_{5\text{MHz}}$	—	0,3	0,5	dB
1920,0 ... 1980,0 MHz					
<b>Input VSWR</b>		—	1,8	2,1	1)
1920,0 ... 1980,0 MHz		—	1,6	1,8	
<b>Output VSWR</b>		—	1,9	2,2	1)
1920,0 ... 1980,0 MHz		—	1,6	1,8	
<b>Input amplitude balance (<math> S_{31}/S_{21} </math>)</b>		-0,8	0	0,8	dB
1920,0 ... 1980,0 MHz					
<b>Input phase balance (<math>\phi(S_{31})-\phi(S_{21})+180^\circ</math>)</b>		-10,0	0	10,0	degree
1920,0 ... 1980,0 MHz					
<b>Attenuation</b>	$\alpha$				dB
50,0 ... 1000,0 MHz		60	65	—	
1000,0 ... 1410,0 MHz		45	49	—	
1410,0 ... 1580,0 MHz		35	41	—	
1580,0 ... 1880,0 MHz		25	27	—	
2110,0 ... 2170,0 MHz		35	37	—	
2170,0 ... 2500,0 MHz		32	36	—	
2500,0 ... 3500,0 MHz		32	36	—	
3500,0 ... 6000,0 MHz		40	44	—	

1) with add. parallel inductance of 12nH at single ended output



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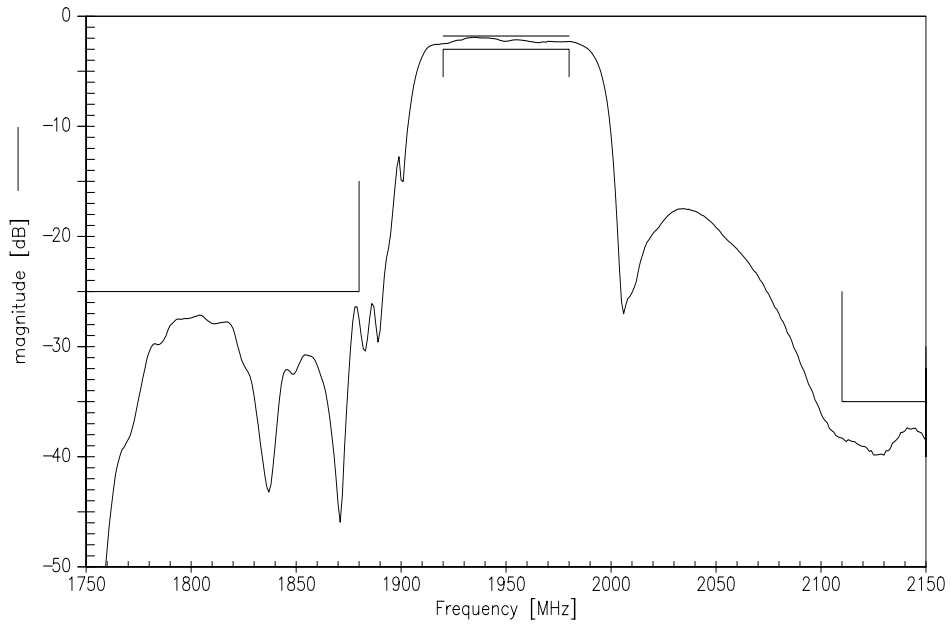
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 Terminating source impedance:  $Z_S = 200\Omega \parallel 6,8nH$   
 Terminating load impedance:  $Z_L = 50\Omega$

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1920,0 ... 1980,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta$	—	0,6	1,0	dB
1920,0 ... 1980,0 MHz					
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1920,0 ... 1980,0 MHz					
<b>Input VSWR</b>		—	1,8	2,1	1)
1920,0 ... 1980,0 MHz		—	1,6	1,8	
<b>Output VSWR</b>		—	1,9	2,2	1)
1920,0 ... 1980,0 MHz		—	1,6	1,8	
<b>Input amplitude balance (<math> S_{31}/S_{21} </math>)</b>		-0,8	0	0,8	dB
1920,0 ... 1980,0 MHz					
<b>Input phase balance (<math>\phi(S_{31})-\phi(S_{21})+180^\circ</math>)</b>		-10,0	0	10,0	degree
1920,0 ... 1980,0 MHz					
<b>Attenuation</b>	$\alpha$				
50,0 ... 1000,0 MHz		60	65	—	dB
1000,0 ... 1410,0 MHz		45	49	—	dB
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2110,0 ... 2170,0 MHz		35	37	—	dB
2170,0 ... 2500,0 MHz		32	36	—	dB
2500,0 ... 3500,0 MHz		32	36	—	dB
3500,0 ... 6000,0 MHz		40	44	—	dB

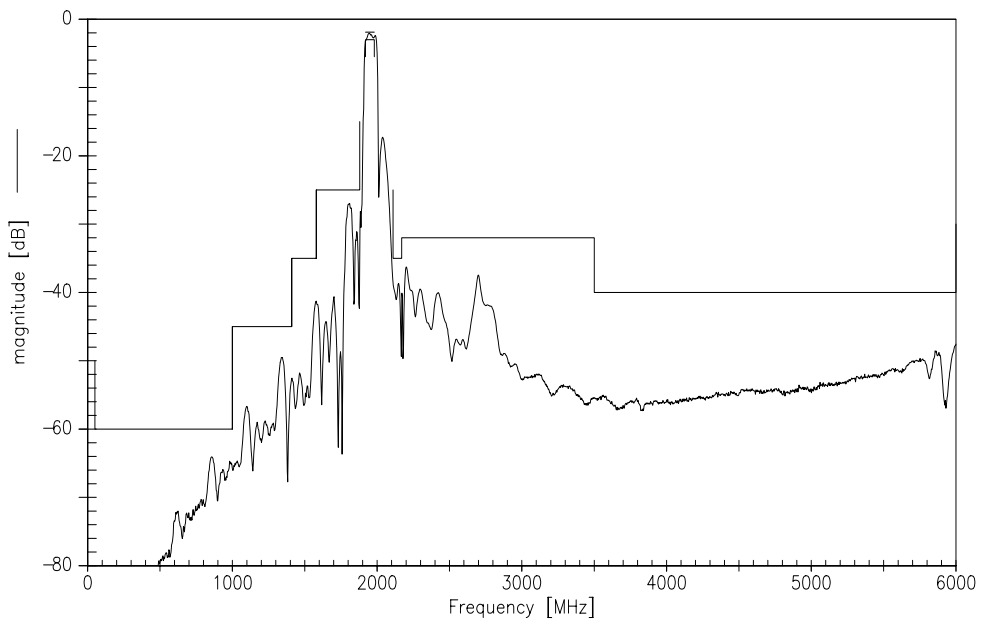
1) with add. parallel inductance of 12nH at single ended output



Transfer function

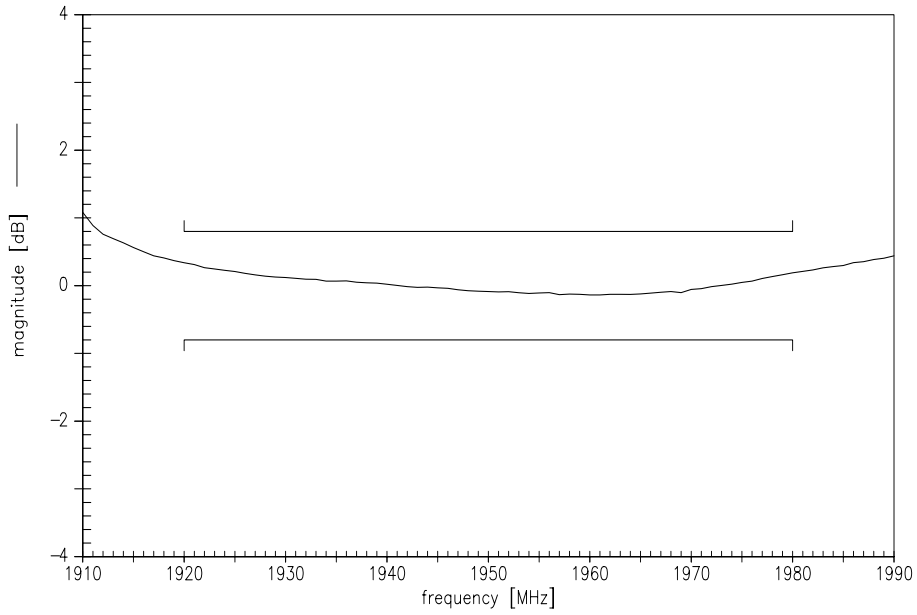


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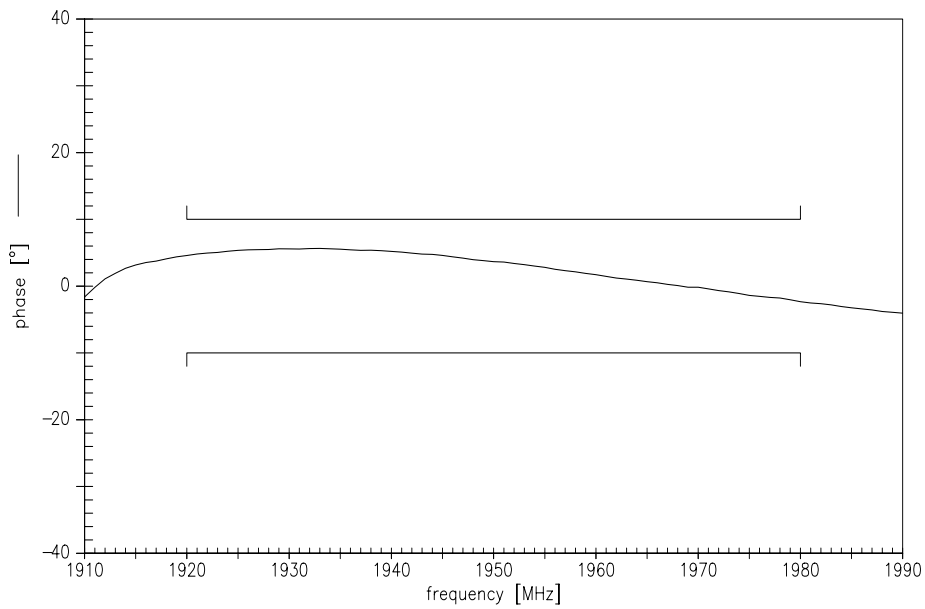




Input amplitude balance( $|S_{31}/S_{21}|$ )



Input phase balance( $\phi(S_{31})-\phi(S_{21})+180^\circ$ )





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