EPCOS

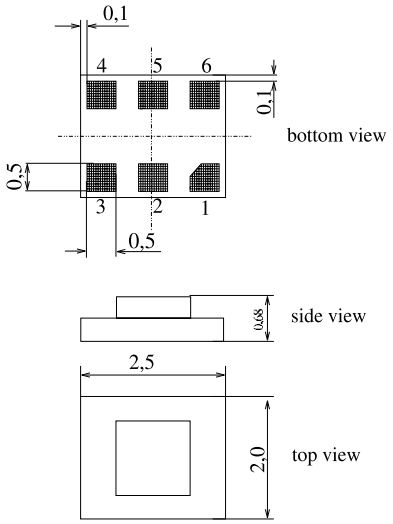
SAW Components

Data Sheet B7756

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 **S**urface **M**ounted **T**echnology
- **C**hip **S**ized **S**AW **P**ackage



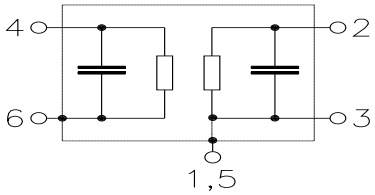
Dimensions in mm, approx. weight 0,012 g

Terminals

- Gold-plated Ni

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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 30 / + 85	˚C	
Storage temperature range	T_{stg}	– 40 / +100	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50	V	Machine Model, 10 pulses[1)]
Source power	P_S	10	dBm	

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

Characteristics

Operating temperature range: T = + 25 °C
Terminating source impedance: Z_S = 200Ω || 6,8nH
Terminating load impedance: Z_L = 50Ω

		min.	typ.	max.	
Center frequency	f_C	—	1950,0	—	MHz
Maximum insertion attenuation	α_{max}				
1920,0 ... 1980,0 MHz		—	2,6	3,0	dB
Amplitude ripple (p-p)	Δ				
1920,0 ... 1980,0 MHz		—	0,6	0,9	dB
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5MHz}$				
1920,0 ... 1980,0 MHz		—	0,3	0,5	dB
Input VSWR					
1920,0 ... 1980,0 MHz		—	1,8	2,1	
1920,0 ... 1980,0 MHz		—	1,6	1,8	1)
Output VSWR					
1920,0 ... 1980,0 MHz		—	1,9	2,2	
1920,0 ... 1980,0 MHz		—	1,6	1,8	1)
Input amplitude balance($\lvert S_{31}/S_{21}\rvert$)					
1920,0 ... 1980,0 MHz		-0,8	0	0,8	dB
Input phase balance($\phi(S_{31})-\phi(S_{21})+180°$)					
1920,0 ... 1980,0 MHz		-10,0	0	10,0	degree
Attenuation	α				
50,0 ... 1000,0 MHz		60	65	—	dB
1000,0 ... 1410,0 MHz		45	49	—	dB
1410,0 ... 1580,0 MHz		35	41	—	dB
1580,0 ... 1880,0 MHz		25	27	—	dB
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

Characteristics

Operating temperature range: T = - 25 to +85 °C
Terminating source impedance: Z_S = 200Ω || 6,8nH
Terminating load impedance: Z_L = 50Ω

		min.	typ.	max.	
Center frequency	f_C	—	1950,0	—	MHz
Maximum insertion attenuation	α_{max}				
1920,0 ... 1980,0 MHz		—	2,6	3,0	dB
Amplitude ripple (p-p)	Δ				
1920,0 ... 1980,0 MHz		—	0,6	1,0	dB
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5MHz}$				
1920,0 ... 1980,0 MHz		—	0,3	0,5	dB
Input VSWR					
1920,0 ... 1980,0 MHz		—	1,8	2,1	
1920,0 ... 1980,0 MHz		—	1,6	1,8	1)
Output VSWR					
1920,0 ... 1980,0 MHz		—	1,9	2,2	
1920,0 ... 1980,0 MHz		—	1,6	1,8	1)
Input amplitude balance($\lvert S_{31}/S_{21}\rvert$)					
1920,0 ... 1980,0 MHz		-0,8	0	0,8	dB
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1920,0 ... 1980,0 MHz		-10,0	0	10,0	degree
Attenuation	α				
50,0 ... 1000,0 MHz		60	65	—	dB
1000,0 ... 1410,0 MHz		45	49	—	dB
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1580,0 ... 1880,0 MHz		25	27	—	dB
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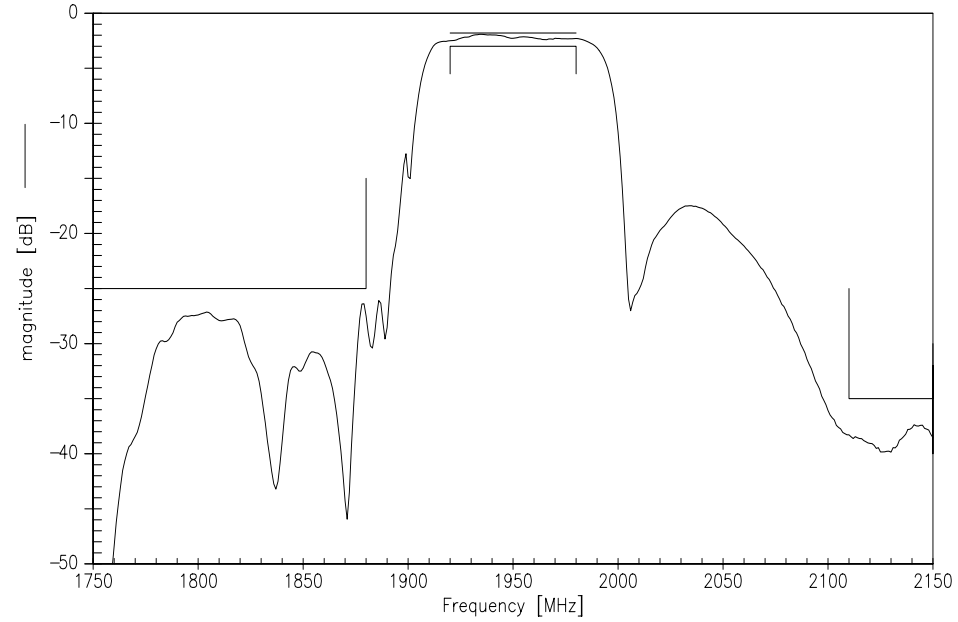
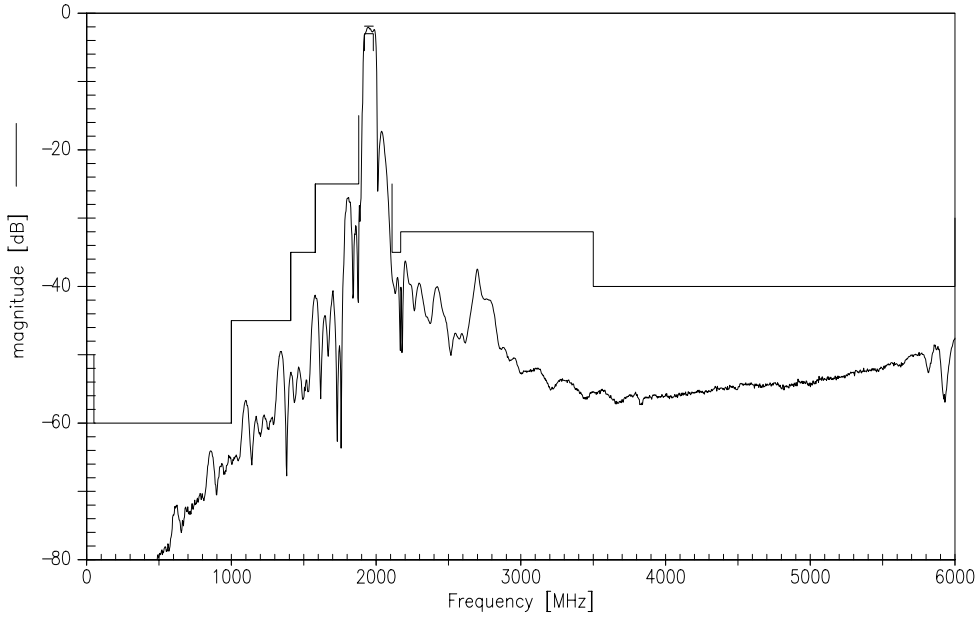
2500,0 ... 3500,0 MHz		32	36	—	dB
3500,0 ... 6000,0 MHz		40	44	—	dB

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

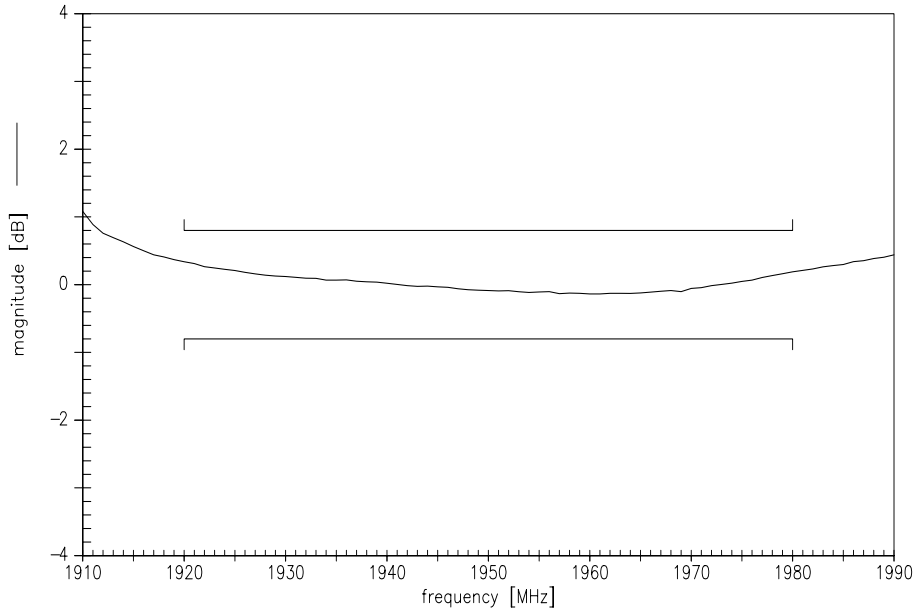
Transfer function



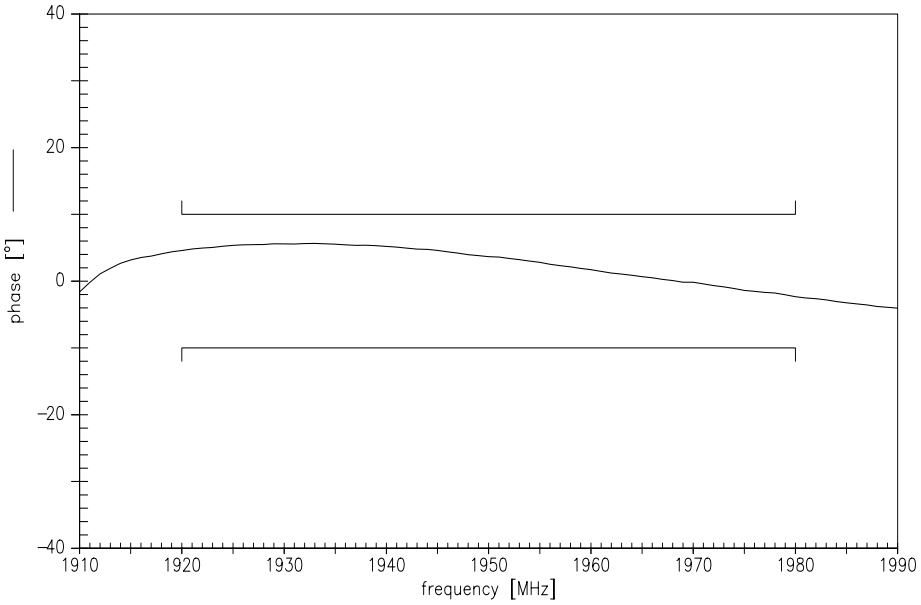
Transfer function



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



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



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC WT
P.O. Box 80 17 09, 81617 Munich, GERMANY

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This brochure replaces the previous edition.

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