



SAW Components

Data Sheet B7721

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow and are positioned diagonally across the frame. In the background, there is a faint, stylized globe and some circuitry patterns, all in a dark, monochromatic color scheme.



SAW Components

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Low-Loss Filter for Mobile Communication

942,5 MHz

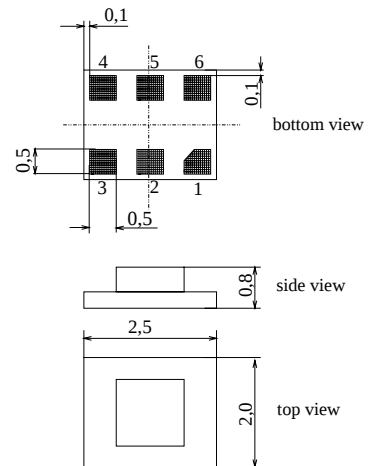
Data Sheet



Features

- Low-loss RF filter for mobile telephone EGSM system, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Excellent symmetry
- Impedance transformation from 50 Ω to 200 Ω
- Suitable for GPRS class 1 to 12
- Ceramic package for Surface Mounted Technology (SMT)
- Pb-free

Chip sized SAW package DCS6K



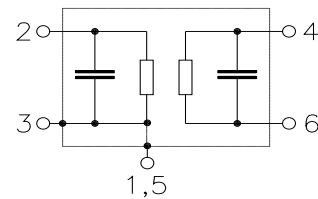
Terminals

- Ni, gold-plated

Dimensions in mm

Pin configuration

2	Input, unbalanced
4, 6	Balanced outputs
1, 3, 5	To be grounded
1, 5	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B7721	B39941-B7721-C910	C61157-A7-A97	F61074-V8153-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 25 / + 85	$^{\circ}\text{C}$	peak power of GSM signal, duty cycle 4:8
Storage temperature range	T_{stg}	- 40 / + 85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100	V	
Input power at GSM850, GSM900	P_{IN}	15	dBm	
GSM1800 and GSM1900 Tx bands				



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Characteristics

Operating temperature range: $T = 25 \pm 2 \text{ }^{\circ}\text{C}$
Terminating source impedance: $Z_S = 50 \text{ } \Omega$
Terminating load impedance: $Z_L = 200 \text{ } \Omega \parallel 68 \text{ nH}$

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$					
	925,0 ... 960,0 MHz		—	2,4	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	925,0 ... 960,0 MHz		—	1,1	1,5	dB
Input VSWR						
	925,0 ... 960,0 MHz		—	2,2	2,4	
Output VSWR						
	925,0 ... 960,0 MHz		—	2,0	2,4	
Output phase balance $\phi(S_{31}) - \phi(S_{21})$						
	925,0 ... 960,0 MHz		-5	—	5	degree
Output amplitude balance (S_{31}/S_{21})						
	925,0 ... 960,0 MHz		-0,5	—	0,5	dB
Diff. to common mode suppression	S_{sc12}					
	925,0 ... 960,0 MHz		20	38	—	dB
	824,0 ... 995,0 MHz		20	29	—	dB
	1648,0 ... 1990,0 MHz		20	50	—	dB
	3296,0 ... 3980,0 MHz		20	31	—	dB
Attenuation	α					
	0,0 ... 880,0 MHz		50	64	—	dB
	880,0 ... 905,0 MHz		30	39	—	dB
	905,0 ... 915,0 MHz		20	26	—	dB
	980,0 ... 1050,0 MHz		23	30	—	dB
	1050,0 ... 1850,0 MHz		50	70	—	dB
	1850,0 ... 1920,0 MHz		50	72	—	dB
	1920,0 ... 2880,0 MHz		50	64	—	dB
	2880,0 ... 4000,0 MHz		40	66	—	dB
	4000,0 ... 6000,0 MHz		40	66	—	dB



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Characteristics

Operating temperature range: $T = -10$ to $+80$ °C
Terminating source impedance: $Z_S = 50 \Omega$
Terminating load impedance: $Z_L = 200 \Omega \parallel 68 \text{ nH}$

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$					
	925,0 ... 960,0 MHz		—	2,4	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	925,0 ... 960,0 MHz		—	1,1	1,7	dB
Input VSWR						
	925,0 ... 960,0 MHz		—	2,2	2,4	
Output VSWR						
	925,0 ... 960,0 MHz		—	2,0	2,4	
Output phase balance $\phi(S_{31}) - \phi(S_{21})$						
	925,0 ... 960,0 MHz		-5	—	5	degree
Output amplitude balance (S_{31}/S_{21})						
	925,0 ... 960,0 MHz		-0,5	—	0,5	dB
Diff. to common mode suppression	S_{sc12}					
	925,0 ... 960,0 MHz		20	38	—	dB
	824,0 ... 995,0 MHz		20	29	—	dB
	1648,0 ... 1990,0 MHz		20	50	—	dB
	3296,0 ... 3980,0 MHz		20	31	—	dB
Attenuation	α					
	0,0 ... 880,0 MHz		50	64	—	dB
	880,0 ... 905,0 MHz		30	37	—	dB
	905,0 ... 915,0 MHz		20	26	—	dB
	980,0 ... 1050,0 MHz		23	29	—	dB
	1050,0 ... 1850,0 MHz		50	70	—	dB
	1850,0 ... 1920,0 MHz		50	72	—	dB
	1920,0 ... 2880,0 MHz		50	64	—	dB
	2880,0 ... 4000,0 MHz		40	66	—	dB
	4000,0 ... 6000,0 MHz		40	66	—	dB



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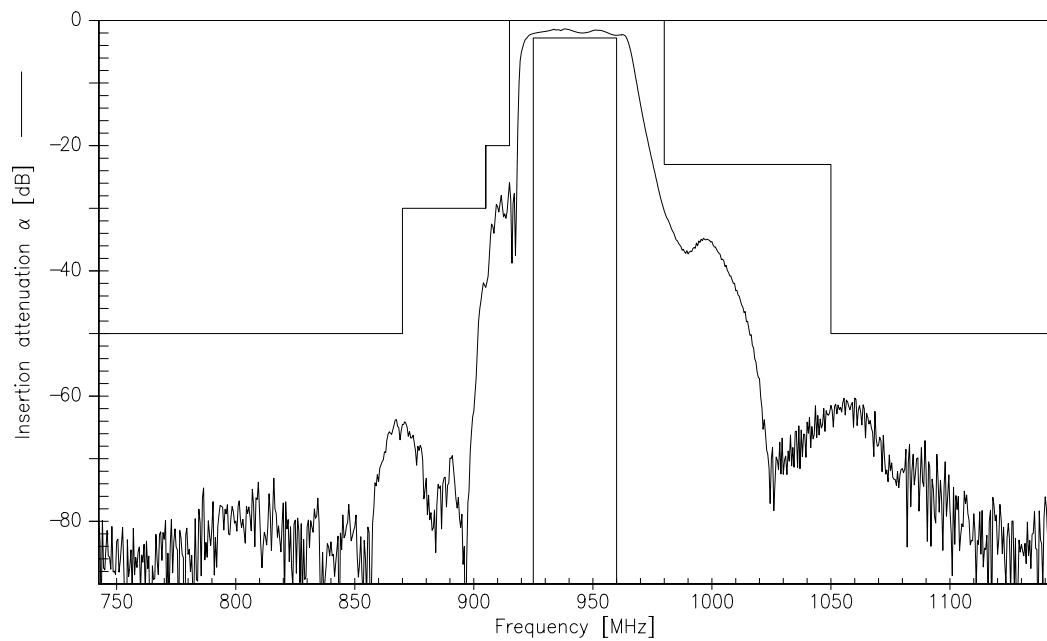
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942,5 MHz

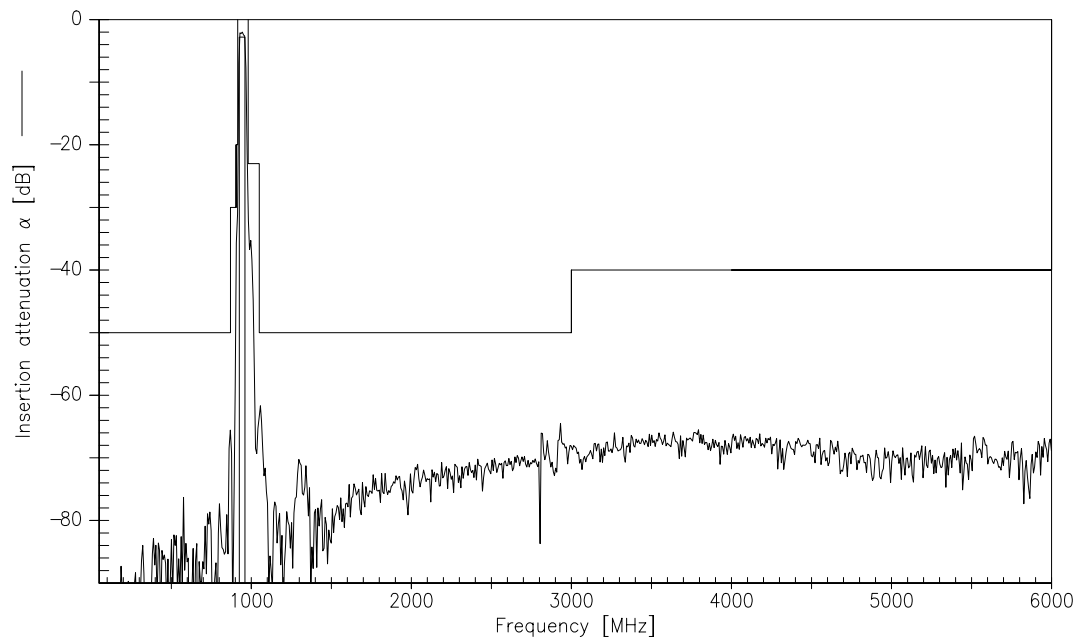
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Transfer function (measurement)



Transfer function (wideband measurement)





SAW Components	B7721
Low-Loss Filter for Mobile Communication	942,5 MHz
Data Sheet	SMD

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