EPCOS

SAW Components

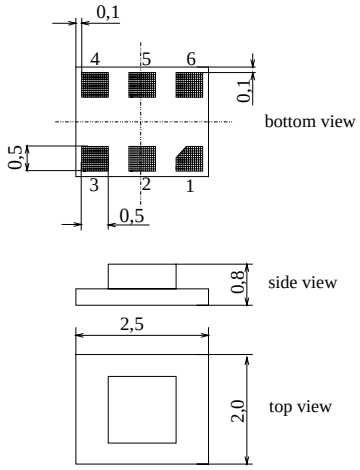
Data Sheet B7721

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 **S**urface **M**ounted **T**echnology (**SMT**)
- Pb-free

Chip sized SAW package DCS6K



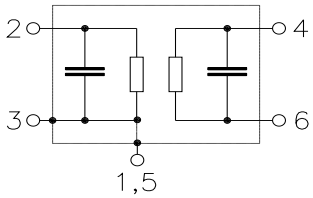
Dimensions in mm

Terminals

- Ni, gold-plated

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

Maximum ratings

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

Characteristics

Operating temperature range: T = 25 ± 2 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 68 nH

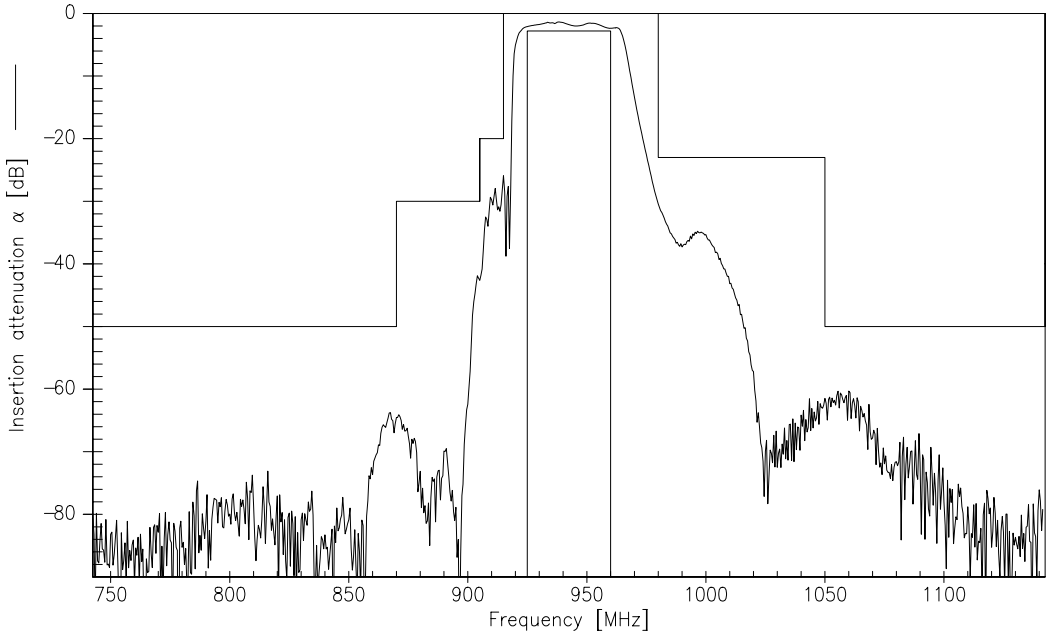
		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	2,4	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,1	1,5	dB
Input VSWR					
925,0 ... 960,0 MHz		—	2,2	2,4	
Output VSWR					
925,0 ... 960,0 MHz		—	2,0	2,4	
Output phase balance $\phi(S_{31})-\phi(S_{21})$					
925,0 ... 960,0 MHz		-5	—	5	degree
Output amplitude balance $(\lvert S_{31}/S_{21}\rvert)$					
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

Characteristics

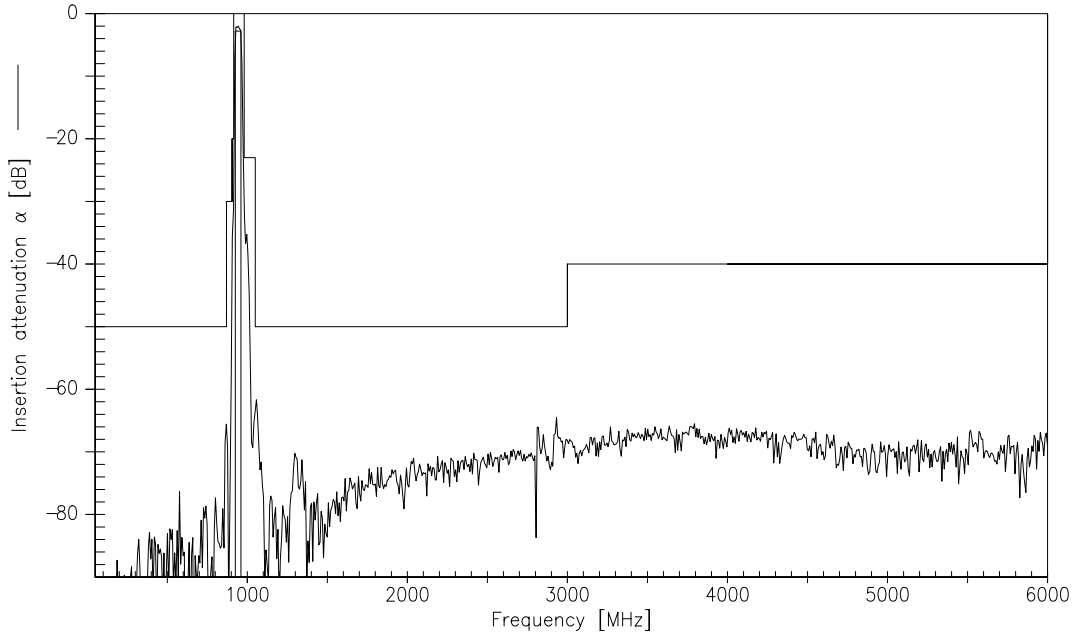
Operating temperature range: T = -10 to +80 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 68 nH

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{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 $(\lvert S_{31}/S_{21}\rvert)$					
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

Transfer function (measurement)



Transfer function (wideband measurement)



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