RF Filters for Cellular Phones

Series/Type: B7721

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39941B7721C910	B39941B9401K610	2007-09-21	2007-12-31	2008-03-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

⌁TDK

Data Sheet   SMD

Features

Chip sized SAW package DCS6K

- 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
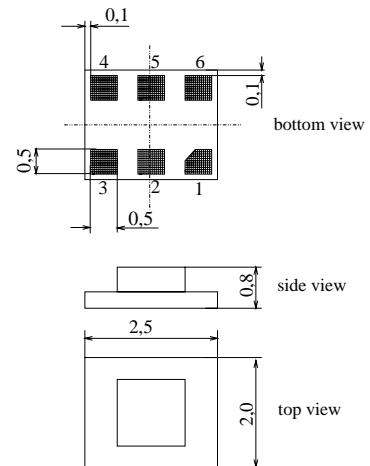
Dimensions in mm

Terminals

- Ni, gold-plated

Pin configuration

2	Input, unbalanced
4, 6	Balanced outputs
1, 3, 5	To be grounded
1, 5	Case ground
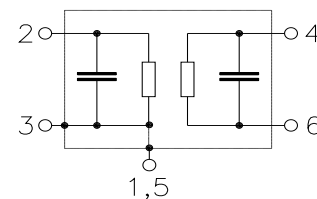
Type	Ordering code	Marking and Package according to	Packing according to
B7721	B39941–B7721–C910	C61157-A7-A97	F61074-V8153-Z000

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

SAW Components	B7721
Low-Loss Filter for Mobile Communication	**942,5 MHz**

Data Sheet　　　　　SMD

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

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| SAW Components	B7721
Low-Loss Filter for Mobile Communication	**942,5 MHz**

Data Sheet   SMD

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

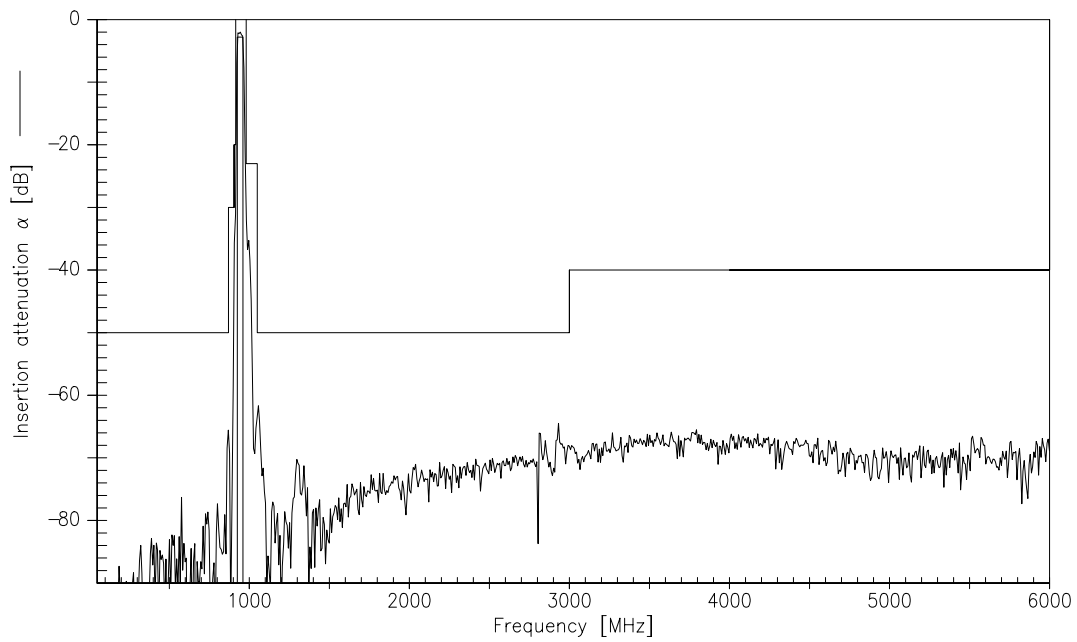|		**min.**	**typ.**	**max.**	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	2,4	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,1	1,7	dB
Input VSWR					
925,0 ... 960,0 MHz		—	2,2	2,4	
Output VSWR					
925,0 ... 960,0 MHz		—	2,0	2,4	
Output phase balance $\phi(S_{31})-\phi(S_{21})$					
925,0 ... 960,0 MHz		-5	—	5	degree
Output amplitude balance ($|S_{31}/S_{21}|$)					
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

Transfer function (measurement)
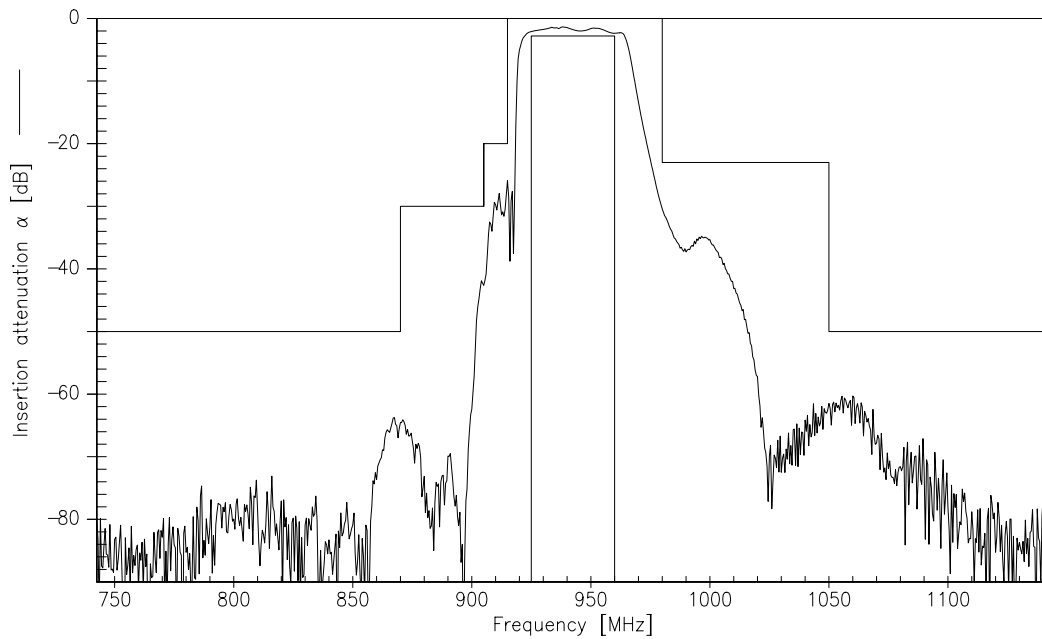
Transfer function (wideband measurement)