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The following products presented in this data sheet are being withdrawn.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

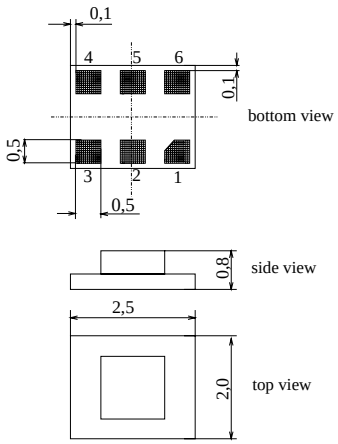
For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

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



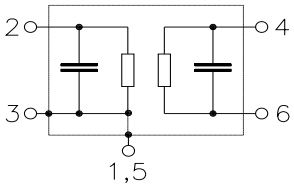
Dimensions in mm

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

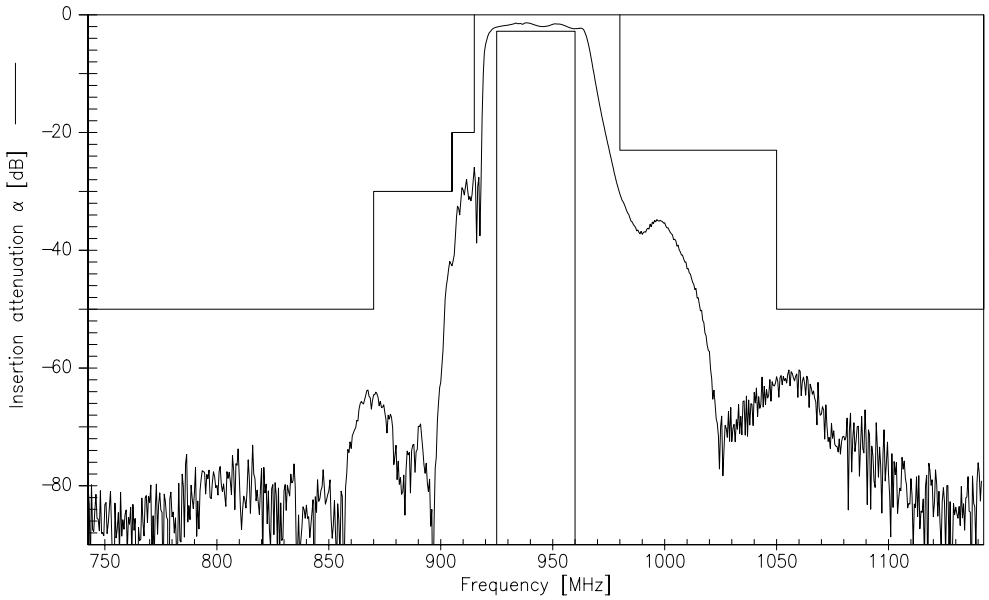
		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	2,4	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,1	1,5	dB
Input VSWR					
925,0 ... 960,0 MHz		—	2,2	2,4	
Output VSWR					
925,0 ... 960,0 MHz		—	2,0	2,4	
Output 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

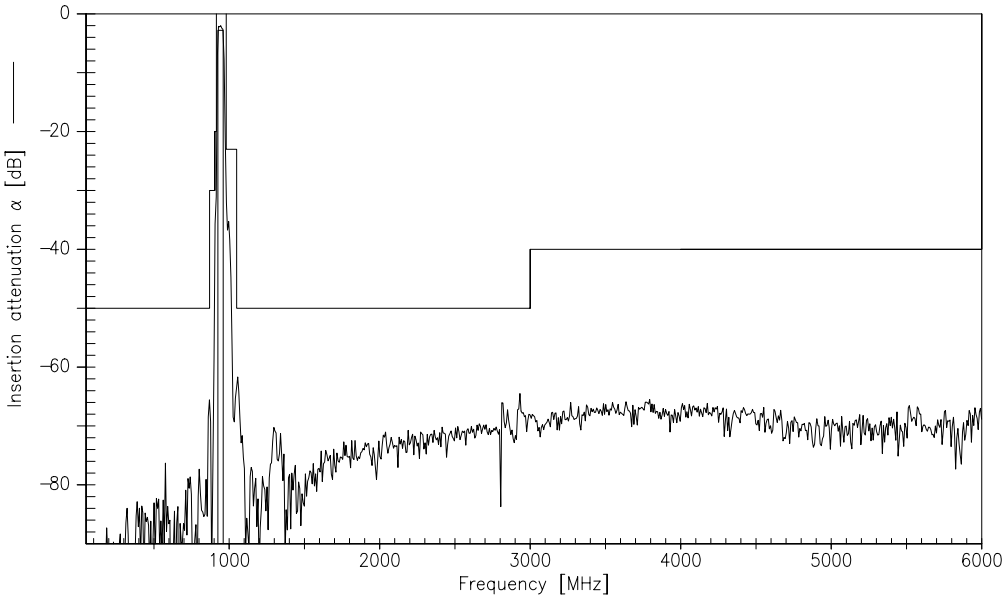
Operating temperature range: T = -10 to +80 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 68 nH

		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)



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

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.