RF Filters for Cellular Phones

Series/Type: B4121

The following products presented in this data sheet are being withdrawn.

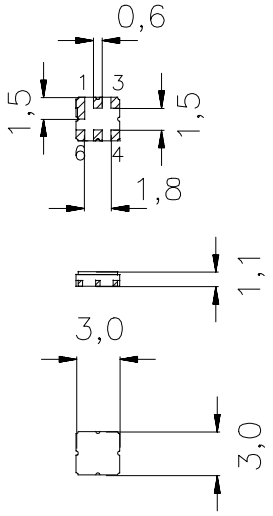
Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39941B4121U510	B39941B4124U410	2009-04-03	2009-07-15	2009-10-15

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.

Ceramic package **DCC6D**

Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)



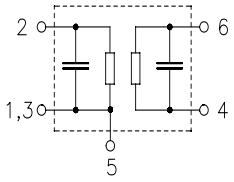
Dimensions in mm, approx. weight 0,037 g

Terminals

- Ni, gold-plated

Pin configuration

2	Input, unbalanced
1, 3	Input ground
4, 6	Output, balanced
5	To be grounded
1, 3, 5	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4121	B39941-B4121-U510	C61157-A7-A68	F61074-V8089-Z000

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

Maximum ratings

Operable temperature range	T	– 40 / + 85	°C	
Storage temperature range	T_{stg}	– 40 / + 85	°C	
DC voltage	V_{DC}	3	V	
Input power max.	P_{IN}			source impedance 50 Ω,
880 ... 915 MHz		18	dBm	load impedance 150 Ω,
1705 ...1785 MHz		18	dBm	CW input for min. 2000 h

Characteristics

Operating temperature range: T = 25+-2 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 150 Ω || 80 nH

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	2,8	3,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,0	1,4	dB
Attenuation	α				
0,0 ... 600,0 MHz		60	70	—	dB
600,0 ... 880,0 MHz		50	55	—	dB
880,0 ... 905,0 MHz		30	38	—	dB
905,0 ... 915,0 MHz		18	23	—	dB
980,0 ...1000,0 MHz		21	23	—	dB
1000,0 ...1025,0 MHz		30	37	—	dB
1025,0 ...1050,0 MHz		35	40	—	dB
1050,0 ...1500,0 MHz		50	57	—	dB
1500,0 ...2130,0 MHz		45	55	—	dB
2130,0 ...3000,0 MHz		40	48	—	dB
3000,0 ...4050,0 MHz		35	41	—	dB
4050,0 ...5700,0 MHz		23	30	—	dB
Symmetry in band (referenced to the matched operating condition)					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 925,0 ... 960,0 MHz		-1,8	0	1,2	dB
$\arg(S_{31}/S_{21})$ 925,0 ... 960,0 MHz		170	180	192	°

Characteristics

Operating temperature range: T = -10 to +75 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 150 Ω || 80 nH

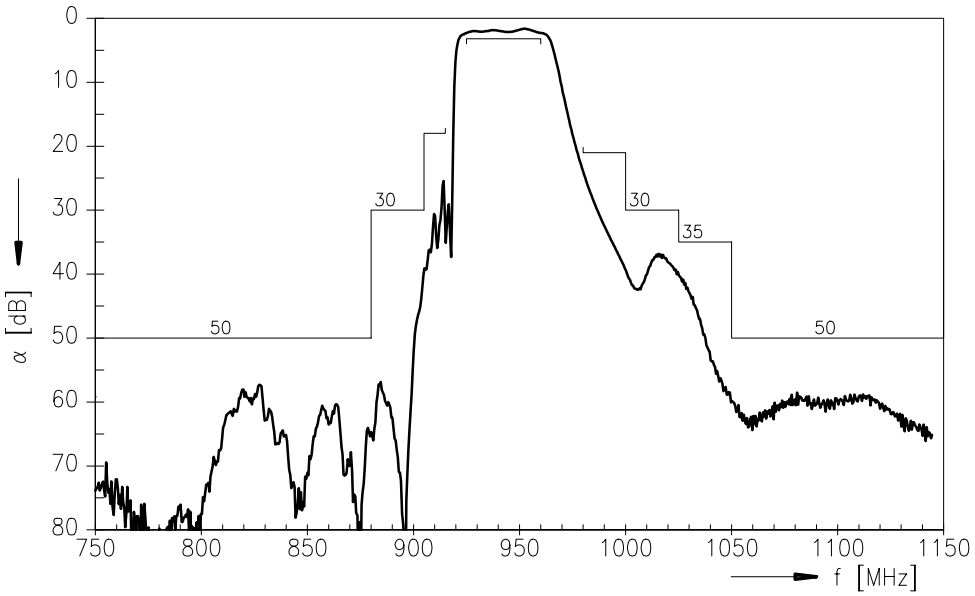
		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	3,0	3,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,2	2,0	dB
Attenuation	α				
0,0 ... 600,0 MHz		60	70	—	dB
600,0 ... 880,0 MHz		50	55	—	dB
880,0 ... 905,0 MHz		28	33	—	dB
905,0 ... 915,0 MHz		18	21	—	dB
980,0 ...1000,0 MHz		20	22	—	dB
1000,0 ...1025,0 MHz		30	37	—	dB
1025,0 ...1050,0 MHz		35	40	—	dB
1050,0 ...1500,0 MHz		50	57	—	dB
1500,0 ...2130,0 MHz		45	55	—	dB
2130,0 ...3000,0 MHz		40	48	—	dB
3000,0 ...4050,0 MHz		35	41	—	dB
4050,0 ...5700,0 MHz		23	30	—	dB
Symmetry in band (referenced to the matched operating condition)					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 925,0 ... 960,0 MHz		-2,3	0	1,2	dB
$\arg(S_{31}/S_{21})$ 925,0 ... 960,0 MHz		170	180	192	°

Characteristics

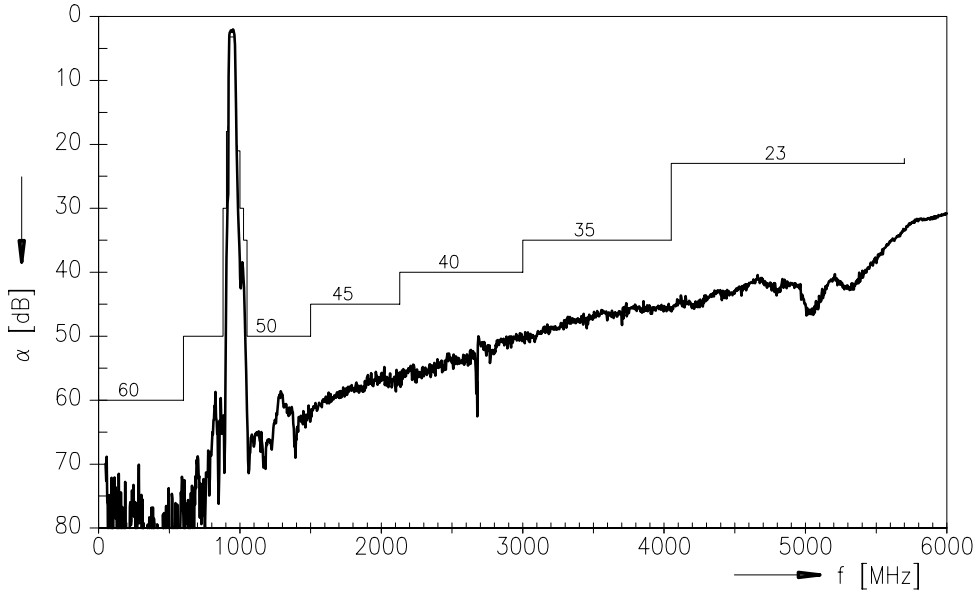
Operating temperature range: T = -40 to +85 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 150 Ω || 80 nH

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	3,4	4,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,8	2,6	dB
Attenuation	α				
0,0 ... 600,0 MHz		60	70	—	dB
600,0 ... 880,0 MHz		50	55	—	dB
880,0 ... 905,0 MHz		28	33	—	dB
905,0 ... 915,0 MHz		18	21	—	dB
980,0 ...1000,0 MHz		19	21	—	dB
1000,0 ...1025,0 MHz		30	37	—	dB
1025,0 ...1050,0 MHz		35	40	—	dB
1050,0 ...1500,0 MHz		50	57	—	dB
1500,0 ...2130,0 MHz		45	55	—	dB
2130,0 ...3000,0 MHz		40	48	—	dB
3000,0 ...4050,0 MHz		35	41	—	dB
4050,0 ...5700,0 MHz		23	30	—	dB
Symmetry in band (referenced to the matched operating condition)					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 925,0 ... 960,0 MHz		-2,6	0	1,2	dB
$\arg(S_{31}/S_{21})$ 925,0 ... 960,0 MHz		170	180	192	°

Transfer function (spec at 25 °C)



Transfer function (wideband)



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.