



RF Filters for Cellular Phones

Series/Type: B4167

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39182B4167U510	B39182B4142U410	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.



SAW Components	B4167
Low-Loss Filter for Mobile Communication	1842,5 MHz
Data Sheet	SMD

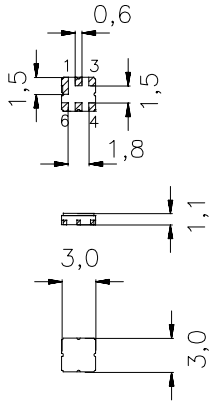
Ceramic package **DCC6D**

Features

- Low-loss RF filter for mobile telephone PCN systems, receive path
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 200Ω
- Package for **Surface Mounted Technology (SMT)**
- Ceramic SMD package

Terminals

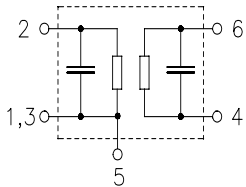
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4167	B39182-B4167-U510	C61157-A7-A68	F61074-V8089-Z000

Electrostatic Sensitive Device (**ESD**)

Maximum ratings

Operable temperature range	T	- 20 / + 75	°C	source/load impedance 50/200 Ω peak power of GSM signal, duty cycle 2 : 8
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	5	V	
Input power max.				
1710 ... 1785 MHz	P_{IN}	11	dBm	
1805 ... 1880 MHz	P_{IN}	11	dBm	
elsewhere	P_{IN}	0	dBm	



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Characteristics

Operating Temperature Range:	$T = +25 \pm 2 \text{ }^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50\Omega$ (unbalanced)
Terminating load impedance:	$Z_L = 200\Omega \parallel 22 \text{ nH}$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,0	3,5	dB
1805,0 ... 1880,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,9	2,0	dB
1805,0 ... 1880,0 MHz					
Input VSWR		—	1,8	2,3	
1805,0 ... 1880,0 MHz					
Output VSWR		—	1,8	2,3	
1805,0 ... 1880,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,5	-1,1 / +0,6	1,5	dB
1805,0 ... 1880,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-12	+/- 6	12	°
1805,0 ... 1880,0 MHz					
Attenuation	α				
0,0 ... 1000,0 MHz		40	50	—	dB
1000,0 ... 1550,0 MHz		30	40	—	dB
1550,0 ... 1705,0 MHz		25	28	—	dB
1705,0 ... 1785,0 MHz		12	18	—	dB
1920,0 ... 1980,0 MHz		12	17	—	dB
1980,0 ... 2010,0 MHz		18	22	—	dB
2010,0 ... 2500,0 MHz		20	26	—	dB
2500,0 ... 3840,0 MHz		25	35	—	dB
3840,0 ... 6000,0 MHz		20	32	—	dB



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Terminating source impedance:	$Z_S = 50\Omega$ (unbalanced)
Terminating load impedance:	$Z_L = 200\Omega$ (balanced) 22 nH

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,5	4,0	dB
1805,0 ... 1880,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,4	2,5	dB
1805,0 ... 1880,0 MHz					
Input VSWR		—	1,8	2,4	
1805,0 ... 1880,0 MHz					
Output VSWR		—	1,8	2,4	
1805,0 ... 1880,0 MHz					
Output amplitude balance (S_{31} / S_{21})		-1,5	-1,1 / +0,6	1,5	dB
1805,0 ... 1880,0 MHz					
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^{\circ}$)		-15	+/- 6	15	°
1805,0 ... 1880,0 MHz					
Attenuation	α				
0,0 ... 1000,0 MHz		40	50	—	dB
1000,0 ... 1550,0 MHz		30	40	—	dB
1550,0 ... 1705,0 MHz		25	28	—	dB
1705,0 ... 1785,0 MHz		10	15	—	dB
1920,0 ... 1980,0 MHz		10	17	—	dB
1980,0 ... 2010,0 MHz		18	22	—	dB
2010,0 ... 2500,0 MHz		20	26	—	dB
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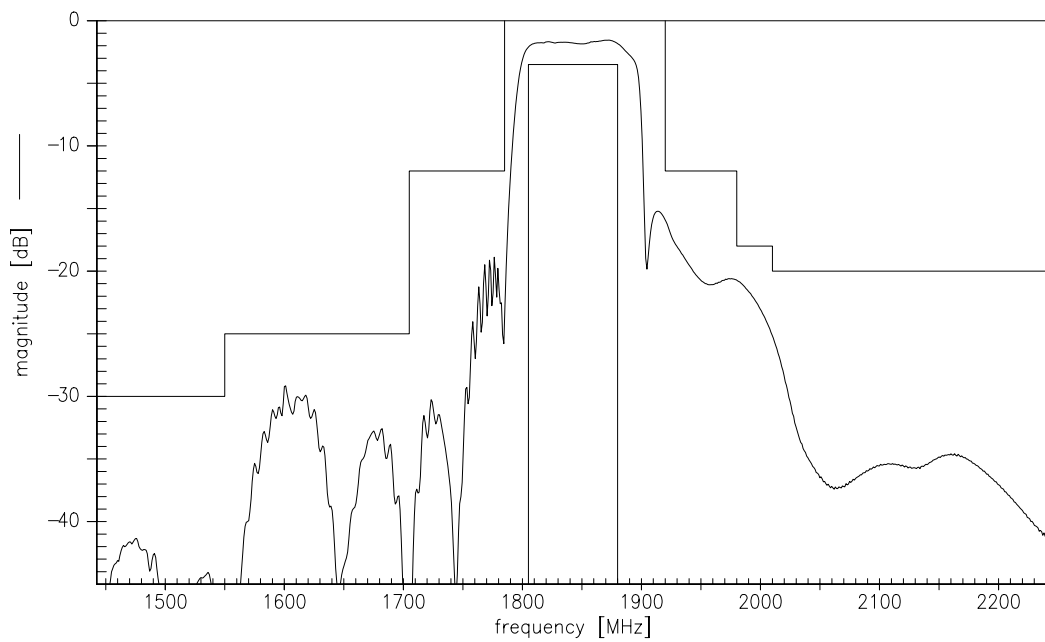
Low-Loss Filter for Mobile Communication

1842,5 MHz

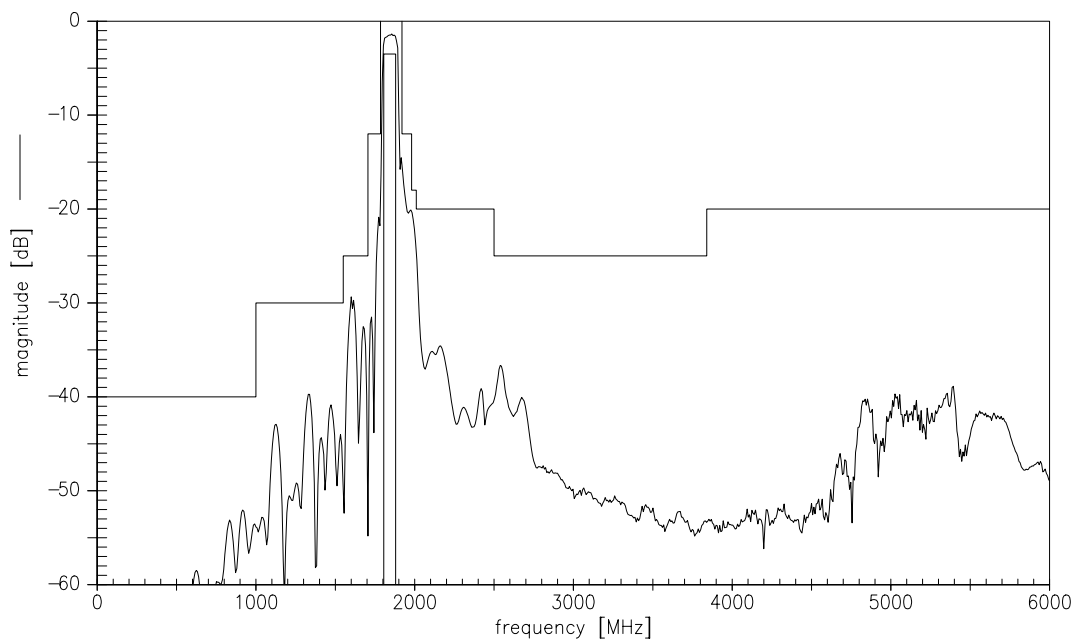
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Transfer function



Transfer function (wide band)





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