



# RF Filters for Cellular Phones

## Series/Type: B4168

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39202B4168U410	B39202B4150U410	2009-04-03	2009-07-15	2009-10-15

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**SAW Components**

**B4168**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

**Data Sheet**



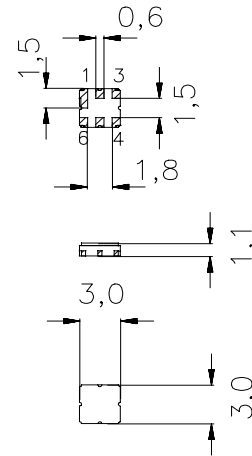
Ceramic package **DCC6C**

**Features**

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Usable passband 60 MHz
- No matching network required for operation at 50 Ω
- Suitable for GPRS class 1 to 12
- Ceramic Package for **Surface Mounted Technology (SMT)**

**Terminals**

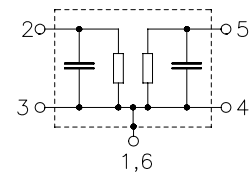
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

**Pin configuration**

- |      |                 |
|------|-----------------|
| 2    | Input           |
| 1, 3 | Input - ground  |
| 5    | Output          |
| 4, 6 | Output - ground |



Type	Ordering code	Marking and Package according to	Packing according to
B4168	B39202-B4168-U410	C61157-A7-A67	F61074-V8088-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30/+ 75	°C	peak power of GSM signal, duty cycle 4:8
Storage temperature range	$T_{stg}$	- 40/+ 85	°C	
DC voltage	$V_{DC}$	3	V	
Input power at GSM850, GSM900	$P_{IN}$	15	dBm	
GSM1800, GSM1900	$P_{IN}$	12	dBm	
Tx bands				



Data Sheet



Characteristics

Operating temperature range:  $T = +25 \pm 2^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$		—	2,7	3,5	dB
		1930,0 ... 1990,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	1,4	2,2	dB
		1930,0 ... 1990,0 MHz				
<b>Input VSWR</b>			—	1,9	2,1	
		1930,0 ... 1990,0 MHz				
<b>Output VSWR</b>			—	1,9	2,1	
		1930,0 ... 1990,0 MHz				
<b>Attenuation</b>	$\alpha$					
		10,0 ... 1850,0 MHz	23,0	25,0	—	dB
		1850,0 ... 1910,0 MHz	10,5	14,0	—	dB
		2010,0 ... 2070,0 MHz	10,5	15,0	—	dB
		2070,0 ... 2410,0 MHz	25,0	29,0	—	dB
		2410,0 ... 2910,0 MHz	33,0	37,0	—	dB
		2910,0 ... 4500,0 MHz	25,0	29,0	—	dB
		4500,0 ... 5000,0 MHz	20,0	26,0	—	dB
		5000,0 ... 6000,0 MHz	8,0	10,0	—	dB



Data Sheet



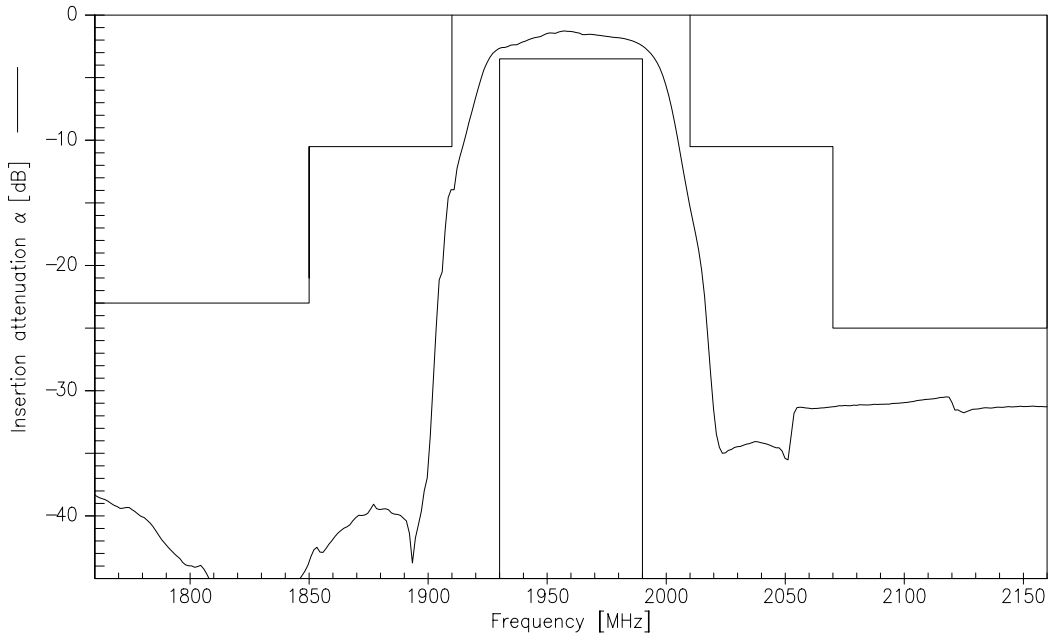
Characteristics

Operating temperature range:  $T = -10$  to  $+75^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

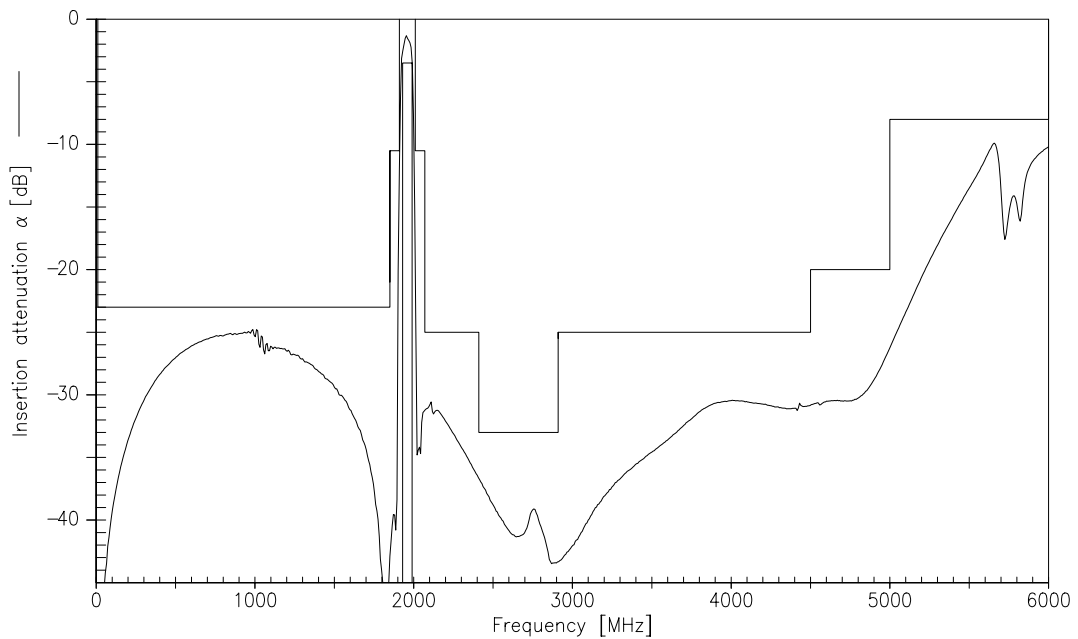
			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$		—	2,7	4,3	dB
		1930,0 ... 1990,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	1,4	3,0	dB
		1930,0 ... 1990,0 MHz				
<b>Input VSWR</b>			—	1,9	2,1	
		1930,0 ... 1990,0 MHz				
<b>Output VSWR</b>			—	1,9	2,1	
		1930,0 ... 1990,0 MHz				
<b>Attenuation</b>	$\alpha$					
		10,0 ... 1850,0 MHz	23,0	25,0	—	dB
		1850,0 ... 1910,0 MHz	8,5	14,0	—	dB
		2010,0 ... 2070,0 MHz	8,5	15,0	—	dB
		2070,0 ... 2410,0 MHz	25,0	29,0	—	dB
		2410,0 ... 2910,0 MHz	33,0	37,0	—	dB
		2910,0 ... 4500,0 MHz	25,0	29,0	—	dB
		4500,0 ... 5000,0 MHz	20,0	26,0	—	dB
		5000,0 ... 6000,0 MHz	8,0	10,0	—	dB



Transfer function(Spec for 25°C):

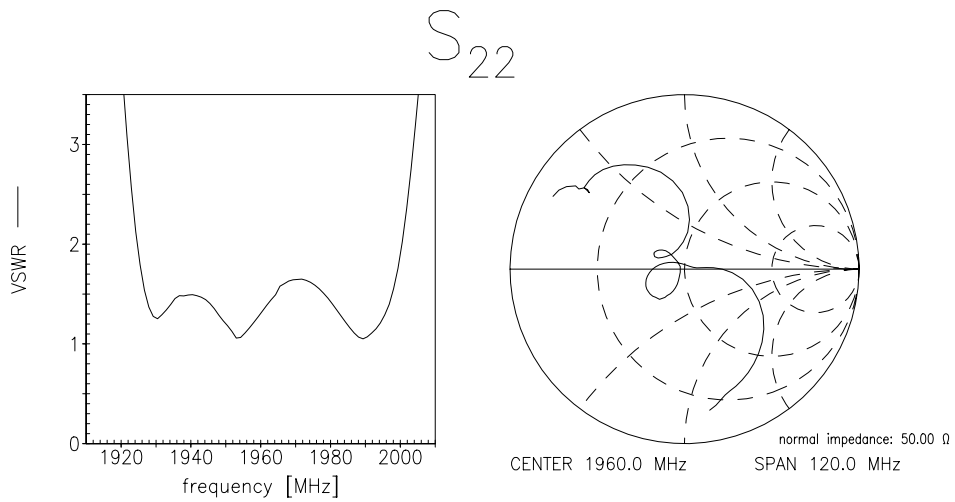
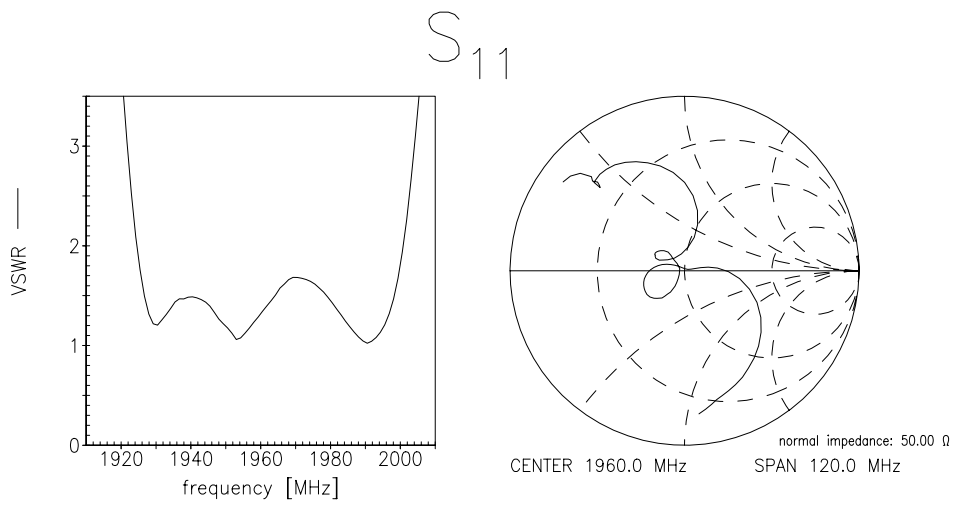


Transfer function(wideband):





Reflection functions:





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**1960,0 MHz**

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**Surface Acoustic Wave Components Division, SAW MC WT**

**P.O. Box 80 17 09, 81617 Munich, GERMANY**

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