EPCOS

# SAW Components

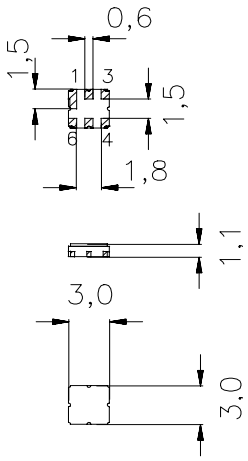
## Data Sheet B4168

Data Sheet SMD

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 **S**urface **M**ounted **T**echnology (**SMT**)



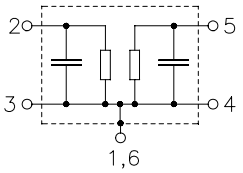

## Terminals

- 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 |

**E**lectrostatic **S**ensitive **D**evice (**ESD**)

## Maximum ratings

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

Data Sheet SMD

## Characteristics

Operating temperature range: $T$ = +25 +- 2˚C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 50 Ω

| | | | min. | typ. | max. | |
|---|---|---|---|---|---|---|
| **Center frequency** | | $f_c$ | — | 1960,0 | — | MHz |
| **Maximum insertion attenuation** | | $\alpha_{max}$ | | | | |
| 1930,0 ...1990,0 | MHz | | — | 2,7 | 3,5 | dB |
| **Amplitude ripple** (p-p) | | $\Delta\alpha$ | | | | |
| 1930,0 ...1990,0 | MHz | | — | 1,4 | 2,2 | dB |
| **Input VSWR** | | | | | | |
| 1930,0 ...1990,0 | MHz | | — | 1,9 | 2,1 | |
| **Output VSWR** | | | | | | |
| 1930,0 ...1990,0 | MHz | | — | 1,9 | 2,1 | |
| **Attenuation** | | $\alpha$ | | | | |
| 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 |

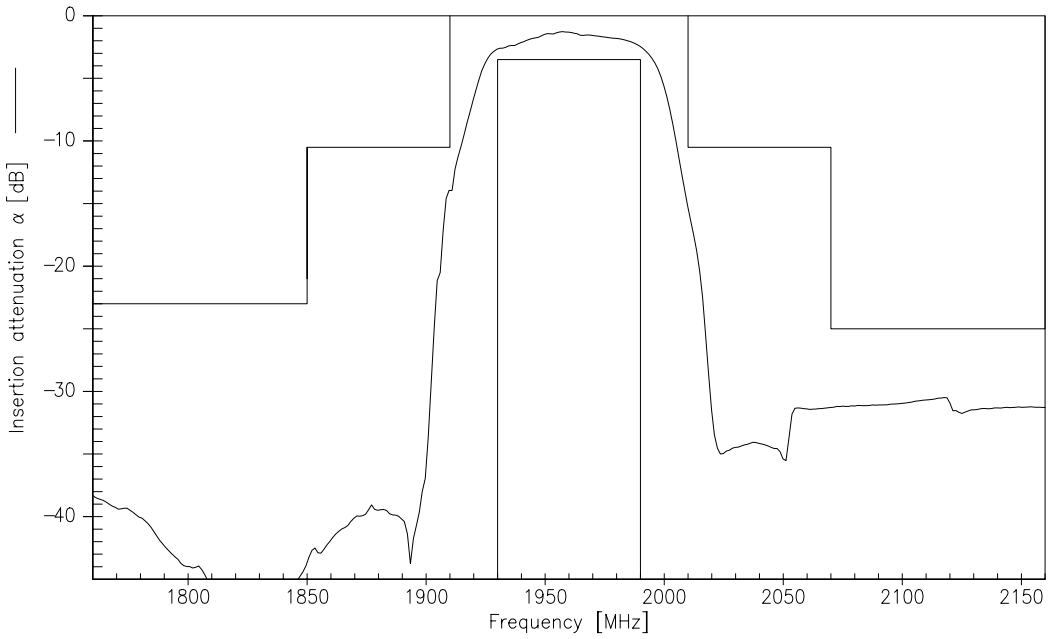
Data Sheet SMD

**Characteristics**

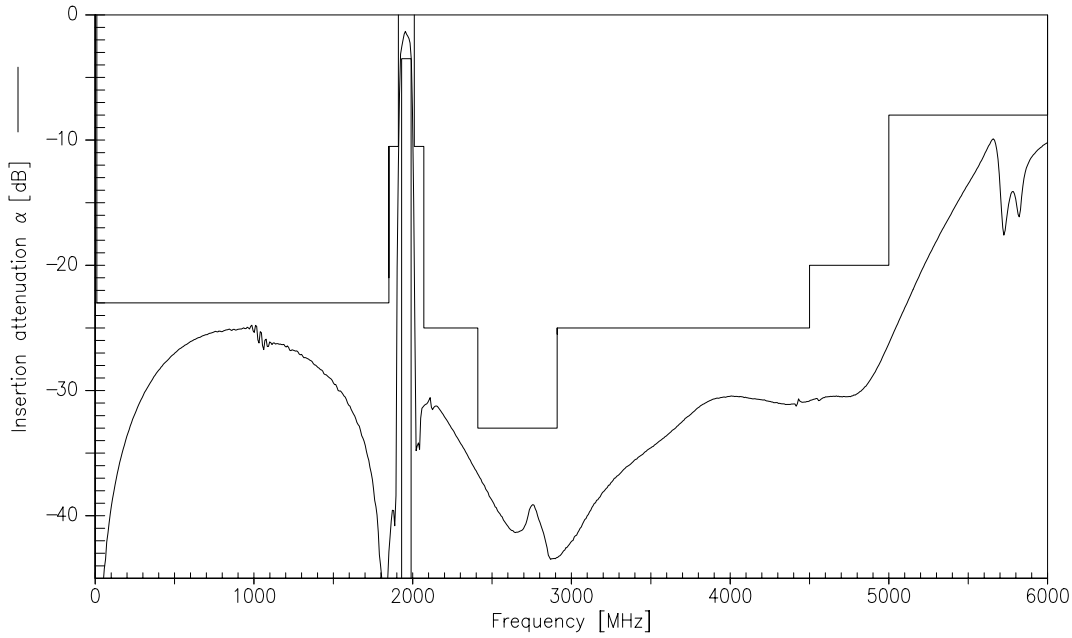
Operating temperature range: $T$ = -10 to +75˚C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 50 Ω

| | | | | min. | typ. | max. | |
|---|---|---|---|---|---|---|---|
| **Center frequency** | | | $f_c$ | — | 1960,0 | — | MHz |
| **Maximum insertion attenuation** | | | $\alpha_{max}$ | | | | |
| | 1930,0 | ...1990,0 MHz | | — | 2,7 | 4,3 | dB |
| **Amplitude ripple** (p-p) | | | $\Delta\alpha$ | | | | |
| | 1930,0 | ...1990,0 MHz | | — | 1,4 | 3,0 | dB |
| **Input VSWR** | | | | | | | |
| | 1930,0 | ...1990,0 MHz | | — | 1,9 | 2,1 | |
| **Output VSWR** | | | | | | | |
| | 1930,0 | ...1990,0 MHz | | — | 1,9 | 2,1 | |
| **Attenuation** | | | $\alpha$ | | | | |
| | 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)**:**

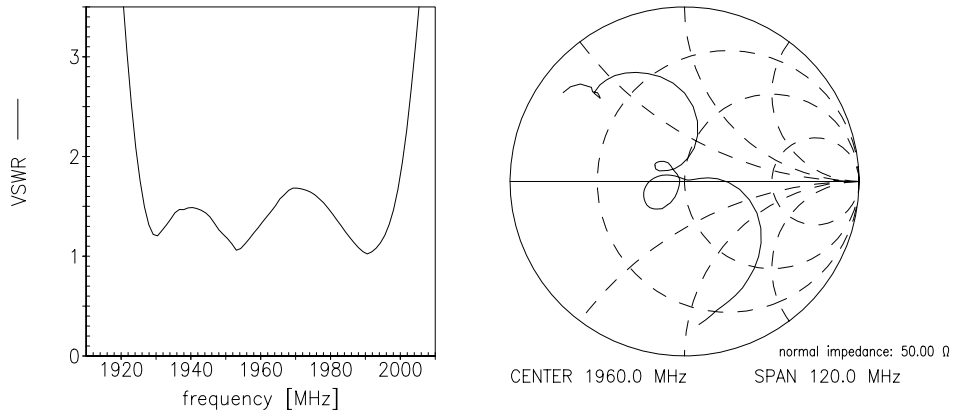



**Transfer function**(wideband)**:**

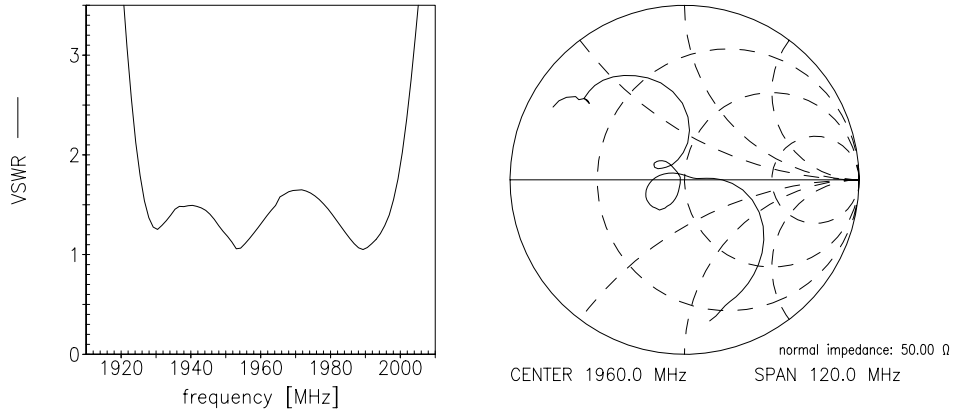


**Reflection functions:**

$S_{11}$




$S_{22}$



**ublished 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.