EPCOS

# *SAW Components*

*Data Sheet B9007*

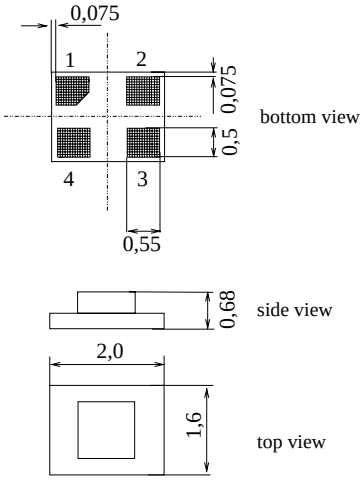


Data Sheet SMD

## Features

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Usable passband 60 MHz
- No matching network required for operation at 50 Ohms
- Suitable for GPRS class 1 to 12
- Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)

**Chip sized SAW package DCS4F**



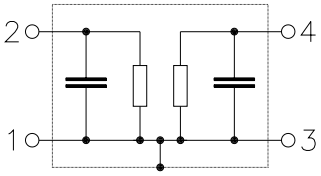

Dimensions in mm, approx. weight 0.006g

## Terminals

- Ni, gold-plated

## Pin configuration

| | |
|---|---|
| 1 | Input |
| 3 | Output |
| 2,4 | Ground |




| Type | Ordering code | Marking and Package according to | Packing according to |
|---|---|---|---|
| B9007 | B39202-B9007-E610 | C61157-A7-A113 | F61074-V8152_Z000 |

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

## Maximum ratings

| | | | | |
|---|---|---|---|---|
| Operating temperature range | $T$ | – 30/+ 85 | ˚C | |
| Storage temperature range | $T_{stg}$ | – 40/+ 85 | ˚C | |
| DC voltage | $V_{DC}$ | 5 | V | |
| ESD voltage | $V_{ESD}$ | 50 | 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 | | | | |

## Characteristics

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

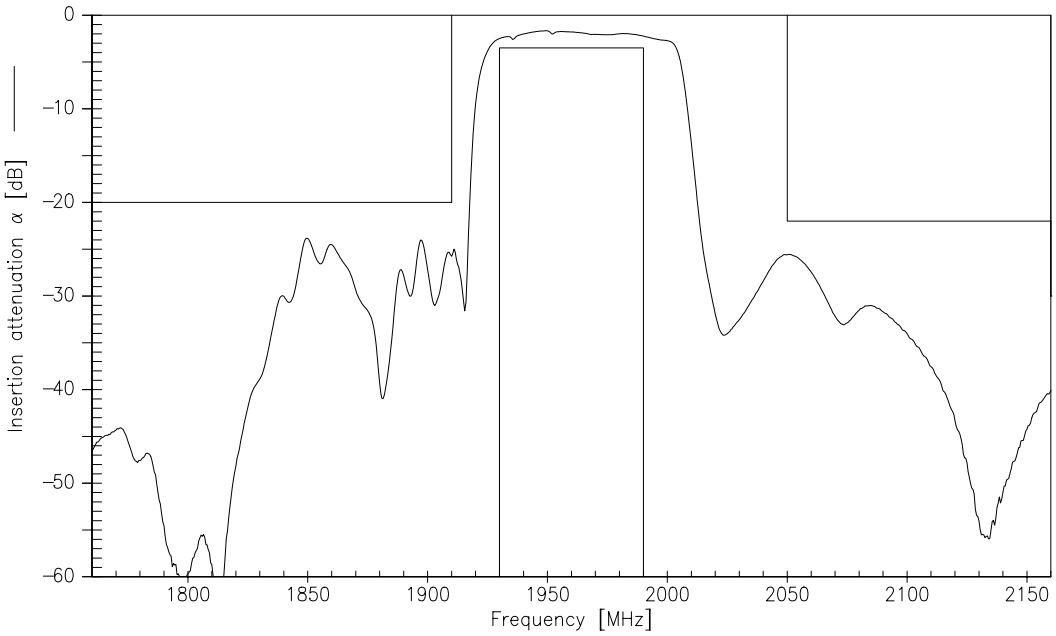
| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Center frequency** | $f_C$ | — | 1960,0 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 1930,0 ...1990,0 MHz | | — | 2,8 | 3,3 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 1930,0 ...1990,0 MHz | | — | 1,0 | 1,6 | dB |
| **Input return loss** | | | | | |
| 1930,0 ...1990,0 MHz | | — | 11 | 7 | dB |
| **Output return loss** | | | | | |
| 1930,0 ...1990,0 MHz | | — | 12 | 7 | dB |
| **Attenuation** | $\alpha$ | | | | |
| 0,0 ...1700,0 MHz | | 30 | 41 | — | dB |
| 1700,0 ...1910,0 MHz | | 20 | 24 | — | dB |
| 2050,0 ...2400,0 MHz | | 22 | 26 | — | dB |
| 2400,0 ...4000,0 MHz | | 30 | 36 | — | dB |
| 4000,0 ...6000,0 MHz | | 22 | 29 | — | dB |

## Characteristics

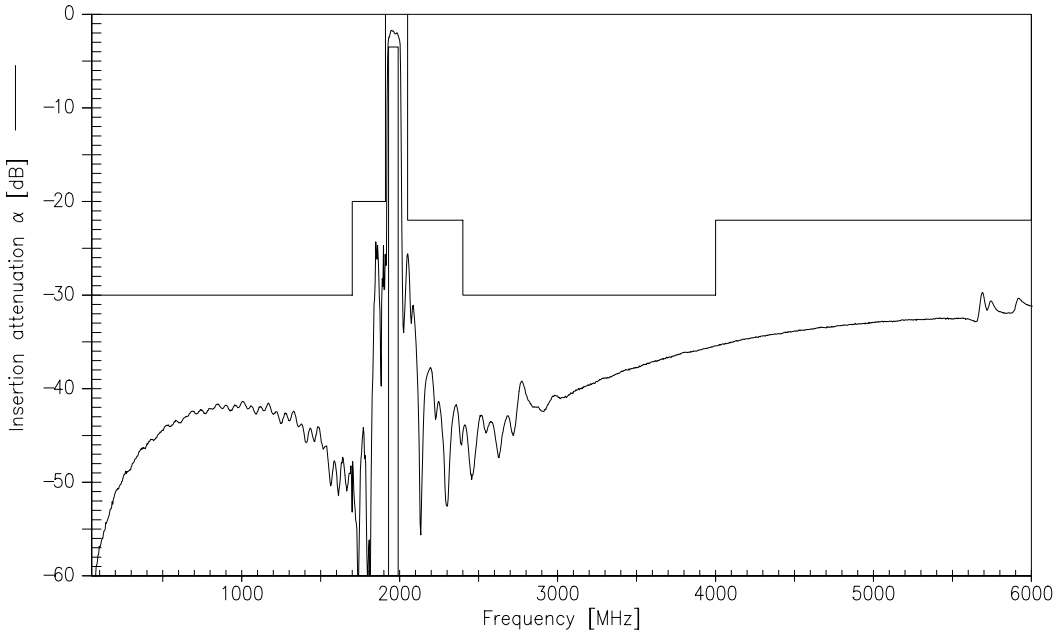
Operating temperature range: $T$ = -30 to +85 ˚C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 50 Ω

| | | | min. | typ. | max. | |
|---|---|---|---|---|---|---|
| **Center frequency** | $f_C$ | | — | 1960,0 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | | |
| 1930,0 ...1990,0 | MHz | | — | 2,9 | 3,5 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | | |
| 1930,0 ...1990,0 | MHz | | — | 1,2 | 1,8 | dB |
| **Input return loss** | | | | | | |
| 1930,0 ...1990,0 | MHz | | — | 9 | 7 | dB |
| **Output return loss** | | | | | | |
| 1930,0 ...1990,0 | MHz | | — | 10 | 7 | dB |
| **Attenuation** | $\alpha$ | | | | | |
| 0,0 ...1700,0 | MHz | | 30 | 41 | — | dB |
| 1700,0 ...1910,0 | MHz | | 20 | 24 | — | dB |
| 2050,0 ...2400,0 | MHz | | 22 | 26 | — | dB |
| 2400,0 ...4000,0 | MHz | | 30 | 36 | — | dB |
| 4000,0 ...6000,0 | MHz | | 22 | 29 | — | dB |

**Transfer function**

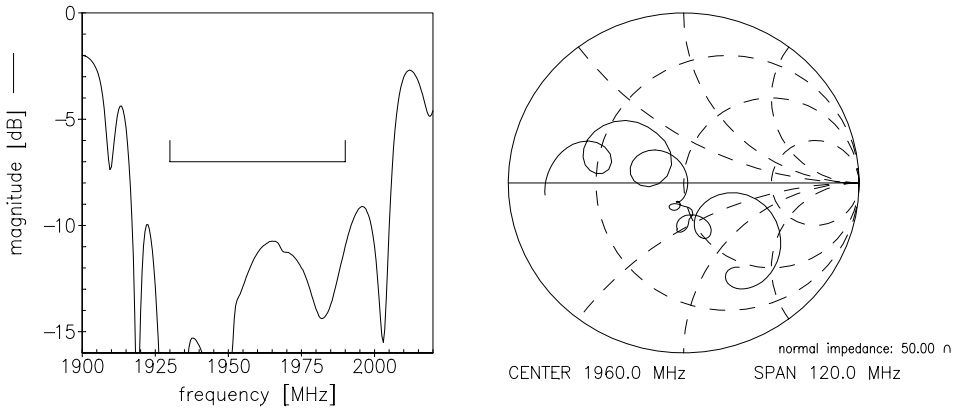



**Transfer function (wide band)**

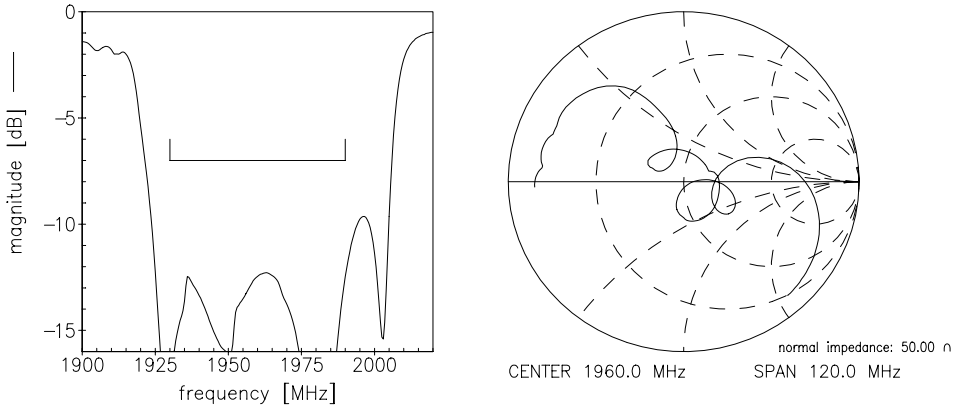


**Reflection functions**

S11




S22



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