EPCOS

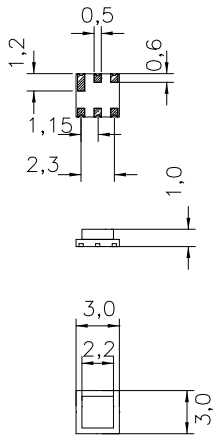
# *SAW Components*

*Data Sheet B7604*

**Chip sized SAW package**

## Features

- Low-loss RF filter for mobile telephone GSM system, transmit path
- Low amplitude ripple
- Usable passband 25 MHz
- No matching network required for operation at 50 Ω
- Ceramic package for Surface Mounted Technology (SMT)



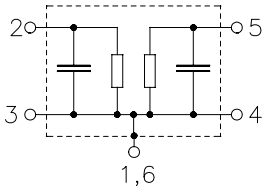

## Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,027g

## Pin configuration

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




| Type | Ordering code | Marking and Package according to | Packing according to |
|---|---|---|---|
| B7604 | B39901-B7604-A110 | C61157-A7-A57 | F61074-V8079-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 max. | | | | source and load impedance 50 Ω |
| 880...915 MHz | $P_{IN}$ | 10 | dBm | peak power of GSM signal, duty cycle 1 : 8 |
| elsewhere | | 0 | dBm | continuous wave |

## 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** | $f_C$ | — | 902,5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 890,0 ... 915,0 MHz | | — | 2,4 | 3,2 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 890,0 ... 915,0 MHz | | — | 0,6 | 1,4 | dB |
| **Input and Output VSWR** | | | | | |
| 890,0 ... 915,0 MHz | | — | 1,8 | 2,0 | |
| **Attenuation** | $\alpha$ | | | | |
| 0,0 ... 845,0 MHz | | 45 | 52 | — | dB |
| 845,0 ... 870,0 MHz | | 30 | 40 | — | dB |
| 870,0 ... 880,0 MHz | | 6 | 12 | — | dB |
| 925,0 ... 935,0 MHz | | 8 | 13 | — | dB |
| 935,0 ... 980,0 MHz | | 23 | 27 | — | dB |
| 980,0 ... 990,0 MHz | | 40 | 50 | — | dB |
| 990,0 ...1200,0 MHz | | 45 | 50 | — | dB |
| 1200,0 ...3000,0 MHz | | 30 | 45 | — | dB |

## Characteristics

Operating temperature range: $T$ = -20 to +75 °C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 50 Ω

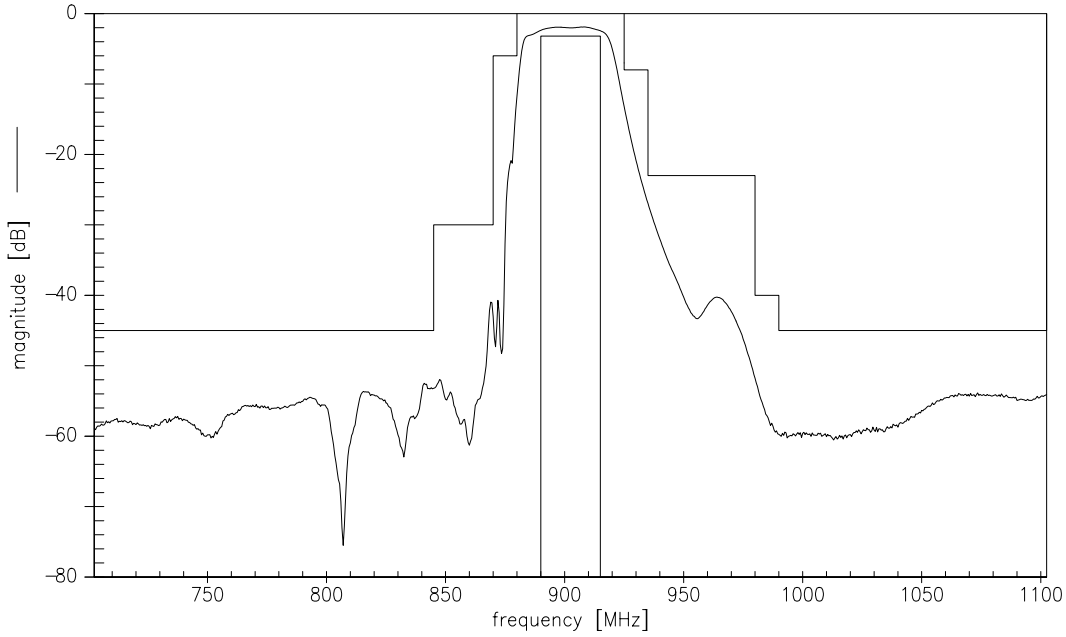
| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Center frequency** | $f_C$ | — | 902,5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 890,0 ... 915,0 MHz | | — | 2,8 | 3,2 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 890,0 ... 915,0 MHz | | — | 1,0 | 1,4 | dB |
| **Input and Output VSWR** | | | | | |
| 890,0 ... 915,0 MHz | | — | 1,8 | 2,0 | |
| **Attenuation** | $\alpha$ | | | | |
| 0,0 ... 845,0 MHz | | 45 | 52 | — | dB |
| 845,0 ... 870,0 MHz | | 30 | 40 | — | dB |
| 925,0 ... 935,0 MHz | | 7 | 11 | — | dB |
| 935,0 ... 980,0 MHz | | 23 | 26 | — | dB |
| 980,0 ... 990,0 MHz | | 40 | 50 | — | dB |
| 990,0 ...1200,0 MHz | | 45 | 50 | — | dB |
| 1200,0 ...3000,0 MHz | | 30 | 45 | — | dB |

## Characteristics

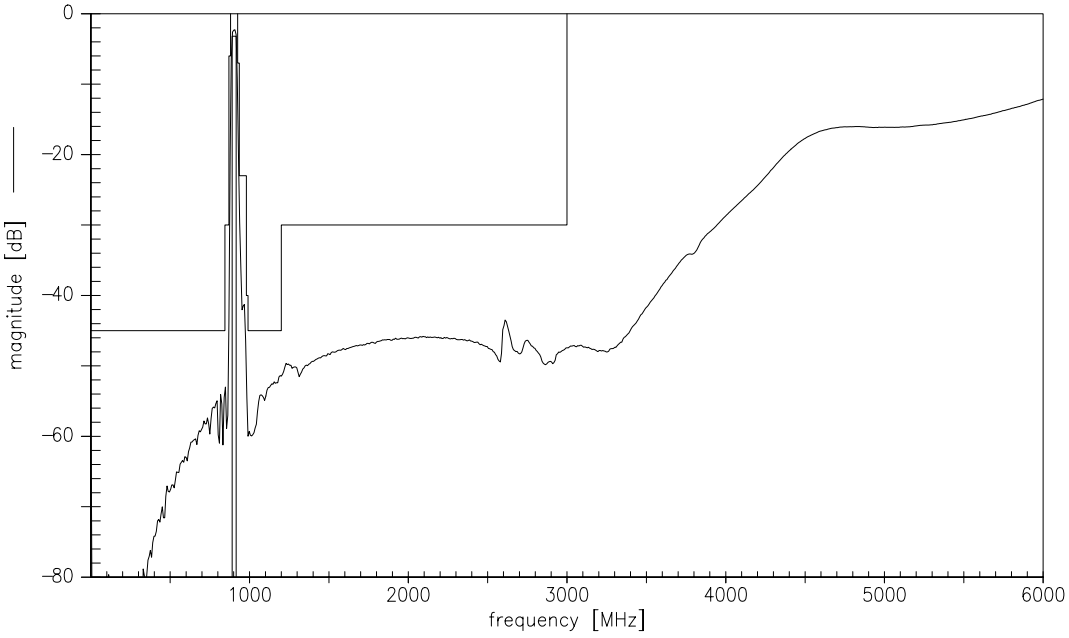
Operating temperature range: $T$ = -30 to +70 °C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 50 Ω

| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Center frequency** | $f_C$ | — | 902,5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 890,0 ... 915,0 MHz | | — | 2,8 | 3,2 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 890,0 ... 915,0 MHz | | — | 1,0 | 1,4 | dB |
| **Input and Output VSWR** | | | | | |
| 890,0 ... 915,0 MHz | | — | 1,8 | 2,0 | |
| **Attenuation** | $\alpha$ | | | | |
| 0,0 ... 845,0 MHz | | 45 | 52 | — | dB |
| 845,0 ... 870,0 MHz | | 30 | 40 | — | dB |
| 925,0 ... 935,0 MHz | | 6 | 10 | — | dB |
| 935,0 ... 980,0 MHz | | 23 | 26 | — | dB |
| 980,0 ... 990,0 MHz | | 40 | 50 | — | dB |
| 990,0 ...1200,0 MHz | | 45 | 50 | — | dB |
| 1200,0 ...3000,0 MHz | | 30 | 45 | — | dB |

**Transfer function** (specification drawn for +25C)




**Transfer function** (wideband)



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