Siemens Matsushita Components

# SAW Components
# Low-Loss Filter

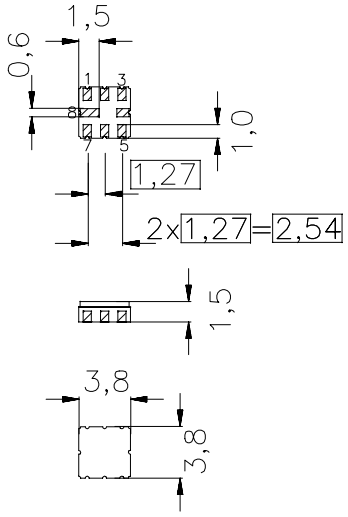
**B4687**
**902,5 MHz**

**Data Sheet**

SMD ceramic package **QCC8B**

## Features

- Low loss RF filter for GSM mobile phone TX
- Low insertion attenuation
- Usable passband 25 MHz
- No matching network required for operation at 50 Ω (input) and 200 Ω (output)
- Unbalanced input, balanced output
- Ceramic Package for **S**urface **M**ounted **T**echnology (**SMT**)



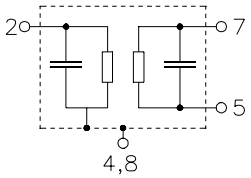

Dimensions in mm, approx. weight 0,07 g

## Terminals

- Ni, gold-plated

## Pin configuration

| | |
|---|---|
| 2 | Input (50 Ω) |
| 4 | Input ground |
| 5 | Balanced output (200 Ω) |
| 7 | Balanced output (200 Ω) |
| 1,3 | To be grounded |
| 6 | N.C. |
| 4,8 | Case - ground |
| | Filter is reciprocal |




| Type | Ordering code | Marking and Package according to | Packing according to |
|---|---|---|---|
| B4687 | B39901-B4687-Z810 | C61157-A7-A46 | F61074-V8037-Z000 |

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

## Maximum ratings

| | | | | |
|---|---|---|---|---|
| Operable temperature range | $T$ | – 20/+ 75 | ˚C | |
| Storage temperature range | $T_{stg}$ | – 40/+ 85 | ˚C | |
| DC voltage | $V_{DC}$ | 0 | V | |
| Source power | $P_s$ | 10 | dBm | source impedance 50 Ω |

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## Characteristics

Operating temperature range: $T$ = 25 +-2 ˚C
Terminating source impedance: $Z_S$ = 50 Ω unbalanced
Terminating load impedance: $Z_L$ = 200 Ω || 80nH balanced

| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Center frequency** (center frequency between 3 dB points) | $f_c$ | — | 902,5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 890,0 MHz ... 915,0 MHz | | — | 3,0 | 3,5 | dB |
| Reference level for the following data | | | | | |
| **Amplitude ripple in passband** (p-p) | $\Delta\alpha$ | | | | |
| 890,0 MHz ... 915,0 MHz | | — | 0,8 | 1,0 | dB |
| **Relative attenuation** (relative to $\alpha_{max}$) | $\alpha_{rel}$ | | | | |
| 0,0 MHz ... 600,0 MHz | | 40 | 75 | — | dB |
| 600,0 MHz ... 870,0 MHz | | 25 | 35 | — | dB |
| 925,0 MHz ... 935,0 MHz | | 7 | 15 | — | dB |
| 935,0 MHz ... 990,0 MHz | | 20 | 27 | — | dB |
| 990,0 MHz ... 1500,0 MHz | | 40 | 55 | — | dB |
| 1500,0 MHz ... 3000,0 MHz | | 20 | 39 | — | dB |

# SAW Components
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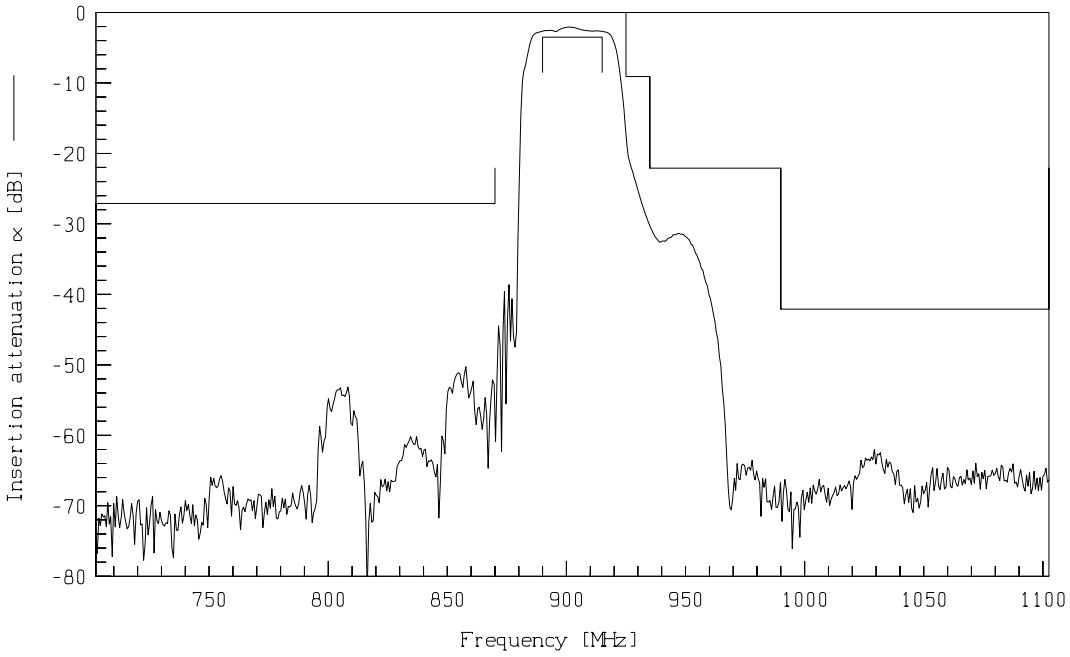
## Characteristics

Operating temperature range: $T$ = -20 ˚C ... 75 ˚C
Terminating source impedance: $Z_S$ = 50 Ω unbalanced
Terminating load impedance: $Z_L$ = 200 Ω || 80nH balanced

| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Center frequency** (center frequency between 3 dB points) | $f_c$ | — | 902,5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 890,0 MHz ... 915,0 MHz | | — | 3,5 | 4,0 | dB |
| Reference level for the following data | | | | | |
| **Amplitude ripple in passband** (p-p) | $\Delta\alpha$ | | | | |
| 890,0 MHz ... 915,0 MHz | | — | 1,0 | 1,5 | dB |
| **Relative attenuation** (relative to $\alpha_{max}$) | $\alpha_{rel}$ | | | | |
| 0,0 MHz ... 600,0 MHz | | 40 | 74 | — | dB |
| 600,0 MHz ... 870,0 MHz | | 25 | 34 | — | dB |
| 925,0 MHz ... 935,0 MHz | | 3,5 | 10 | — | dB |
| 935,0 MHz ... 990,0 MHz | | 20 | 26 | — | dB |
| 990,0 MHz ... 1500,0 MHz | | 40 | 54 | — | dB |
| 1500,0 MHz ... 3000,0 MHz | | 20 | 38 | — | dB |

**Transfer function**




**Transfer function** (wideband)