



# SAW Components

Data Sheet B7833





**SAW Components**

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**Low-Loss Filter for Mobile Communication**

**942,5 MHz**

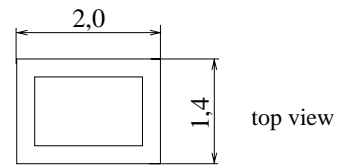
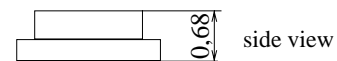
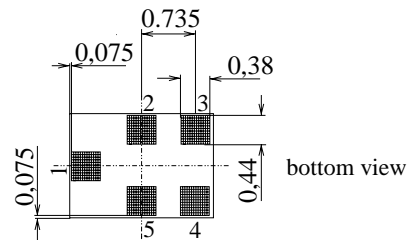
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**Features**

- Low-loss RF filter for mobile telephone EGSM system, receive path
- Usable passband 35 MHz
- Unbalanced operation
- Impedance 50 Ω input and output
- Ceramic Package for Surface Mounted Technology (SMT)

**Chip sized SAW package QCS5C**



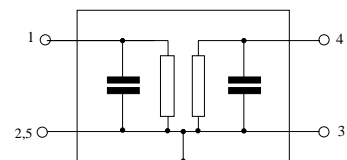
Dimensions in mm, approx. weight 0,007 g

**Terminals**

- Ni, gold-plated

**Pin configuration**

- 1 Input, unbalanced
- 4 Output, unbalanced
- 2, 3, 5 Case ground
- 2, 3, 5 to be grounded



| Type  | Ordering code     | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| B7833 | B39941-B7833-C710 | C61157-A7-A111                   | F61074-V8151-Z000    |

**Electrostatic Sensitive Device (ESD)**

**Maximum ratings**

|   |             |             |     |   |
|---|-------------|-------------|-----|---|
| Operable temperature range  | $T$         | - 25 / + 85 | °C  | machine model, 10 pulses<br>peak power of GSM signal,<br>duty cycle 4:8 |
| Storage temperature range   | $T_{stg}$   | - 40 / + 85 | °C  |   |
| DC voltage  | $V_{DC}$    | 3           | V   |   |
| ESD voltage   | $V_{ESD}^*$ | 100*        | V   |   |
| Input power at<br>GSM850, GSM900<br>GSM1800 and GSM1900<br>Tx bands | $P_{IN}$    | 15          | dBm |   |

\* acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses



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**Characteristics**

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

|                                      |                 |                       | min. | typ.  | max. |     |
|--------------------------------------|-----------------|-----------------------|------|-------|------|-----|
| <b>Center frequency</b>              | $f_C$           |                       | —    | 942,5 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$ | 925,0 ... 960,0 MHz   | —    | 1,7   | 2,0  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  | 925,0 ... 960,0 MHz   | —    | 0,7   | 1,2  | dB  |
| <b>Input VSWR</b>                    |                 | 925,0 ... 960,0 MHz   | —    | 1,8   | 2,1  |     |
| <b>Output VSWR</b>                   |                 | 925,0 ... 960,0 MHz   | —    | 1,8   | 2,1  |     |
| <b>Attenuation</b>                   | $\alpha$        | 0,0 ... 890,0 MHz     | 33   | 36    | —    | dB  |
|                                      |                 | 890,0 ... 905,0 MHz   | 22   | 28    | —    | dB  |
|                                      |                 | 905,0 ... 915,0 MHz   | 19   | 22    | —    | dB  |
|                                      |                 | 980,0 ... 1015,0 MHz  | 22   | 24    | —    | dB  |
|                                      |                 | 1015,0 ... 6000,0 MHz | 25   | 33    | —    | dB  |



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**Characteristics**

Operating temperature:  $T = -25 \dots +85 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

|                                      |                 |                       | min. | typ.  | max. |     |
|--------------------------------------|-----------------|-----------------------|------|-------|------|-----|
| <b>Center frequency</b>              | $f_C$           |                       | —    | 942,5 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$ |                       |      |       |      |     |
|                                      |                 | 925,0 ... 960,0 MHz   | —    | 1,8   | 2,3  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  |                       |      |       |      |     |
|                                      |                 | 925,0 ... 960,0 MHz   | —    | 0,9   | 1,5  | dB  |
| <b>Input VSWR</b>                    |                 |                       |      |       |      |     |
|                                      |                 | 925,0 ... 960,0 MHz   | —    | 1,8   | 2,1  |     |
| <b>Output VSWR</b>                   |                 |                       |      |       |      |     |
|                                      |                 | 925,0 ... 960,0 MHz   | —    | 1,8   | 2,1  |     |
| <b>Attenuation</b>                   | $\alpha$        |                       |      |       |      |     |
|                                      |                 | 0,0 ... 890,0 MHz     | 33   | 36    | —    | dB  |
|                                      |                 | 890,0 ... 905,0 MHz   | 22   | 25    | —    | dB  |
|                                      |                 | 905,0 ... 915,0 MHz   | 19   | 22    | —    | dB  |
|                                      |                 | 980,0 ... 1015,0 MHz  | 22   | 24    | —    | dB  |
|                                      |                 | 1015,0 ... 6000,0 MHz | 25   | 32    | —    | dB  |



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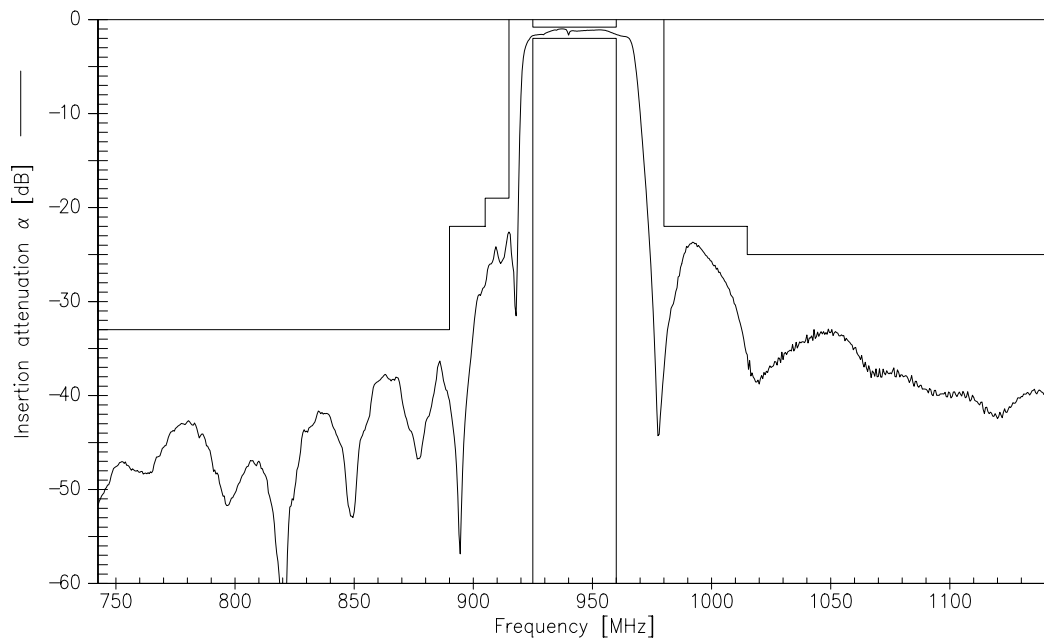
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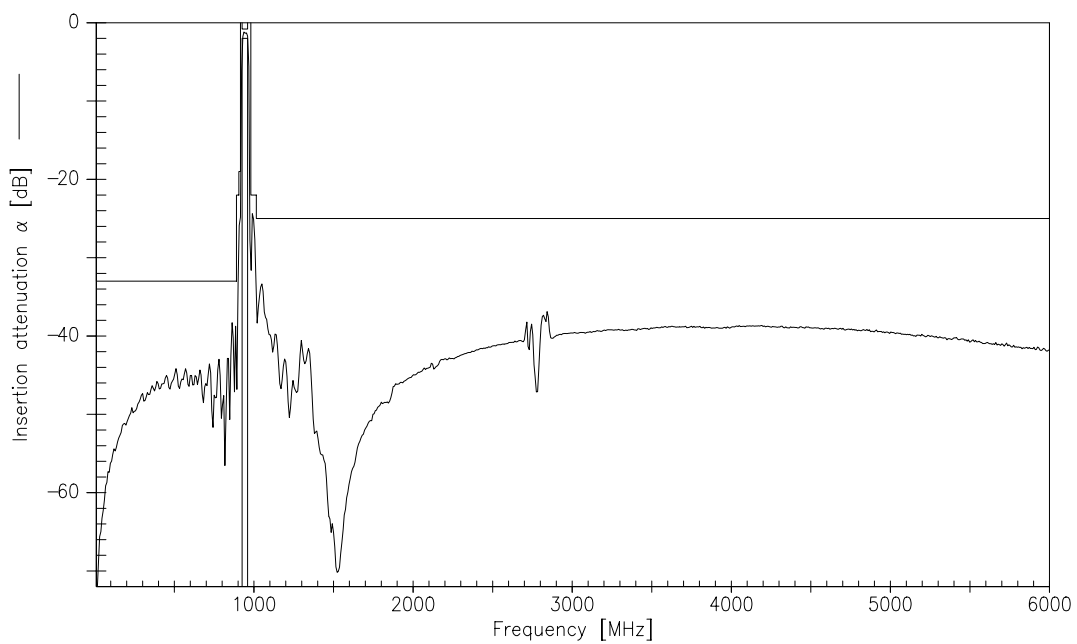
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Transfer function (measurement at 25 °C)



Transfer function (wideband measurement)





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