

## SAW Components

### SAW Rx filter

GSM 1800 Rx

|                       |                        |
|-----------------------|------------------------|
| <b>Series/type:</b>   | <b>B3832</b>           |
| <b>Ordering code:</b> | <b>B39172B3832U410</b> |
| <b>Date:</b>          | <b>June 27, 2012</b>   |
| <b>Version:</b>       | <b>2.0</b>             |

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B3832

## SAW Rx filter

1747.5 MHz

Data sheet



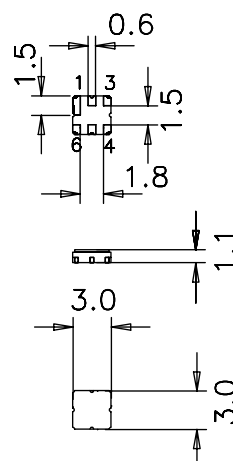
### Application

- Low-loss filter GSM 1800 Rx
- Unbalanced to Unbalanced operation
- Usable passband of 75MHz
- No matching required for operation at 50Ω



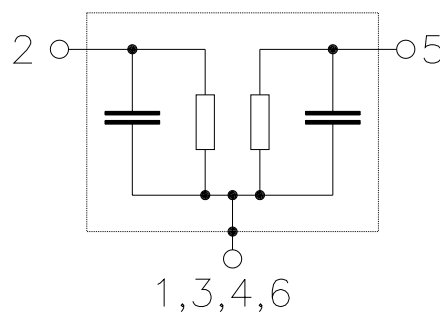
### Features

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 1**
- Filter surface passivated



### Pin configuration

- 2 Input unbalanced
- 5 Output unbalanced
- 1,3,4,6 To be grounded



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**Characteristics**

Temperature range for specification:  $T = -0\text{ }^{\circ}\text{C to } +70\text{ }^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\text{ }\Omega$   
 Terminating load impedance:  $Z_L = 50\text{ }\Omega$

|                                      |                       | min. | typ.<br>@ 25 °C | max. |     |
|--------------------------------------|-----------------------|------|-----------------|------|-----|
| <b>Centre frequency</b>              | $f_C$                 | —    | 1747.5          | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$       |      |                 |      |     |
| 1710.0 ... 1785.0 MHz                |                       | —    | 3.1             | 4.0  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$        |      |                 |      |     |
| 1710.0 ... 1785.0 MHz                |                       | —    | 1.1             | 2.0  | dB  |
| <b>VSWR</b>                          |                       |      |                 |      |     |
| Input 1710.0 ... 1785.0 MHz          |                       | —    | 2.2             | 3.0  |     |
| Output 1710.0 ... 1785.0 MHz         |                       | —    | 2.2             | 3.0  |     |
| <b>Absolute attenuation</b>          | $\alpha_{\text{abs}}$ |      |                 |      |     |
| 1330.0... 1405.0 MHz                 |                       | 42   | 45              | —    | dB  |
| 1464.0... 1539.0 MHz                 |                       | 40   | 43              | —    | dB  |
| 1615.0 MHz                           |                       | 28   | 35              | —    | dB  |
| 1690.0 MHz                           |                       | 5    | 12              | —    | dB  |
| 1805.0 MHz                           |                       | 5    | 14              | —    | dB  |
| 1880.0 MHz                           |                       | 25   | 32              | —    | dB  |
| 1956.0... 2031.0 MHz                 |                       | 32   | 34              | —    | dB  |

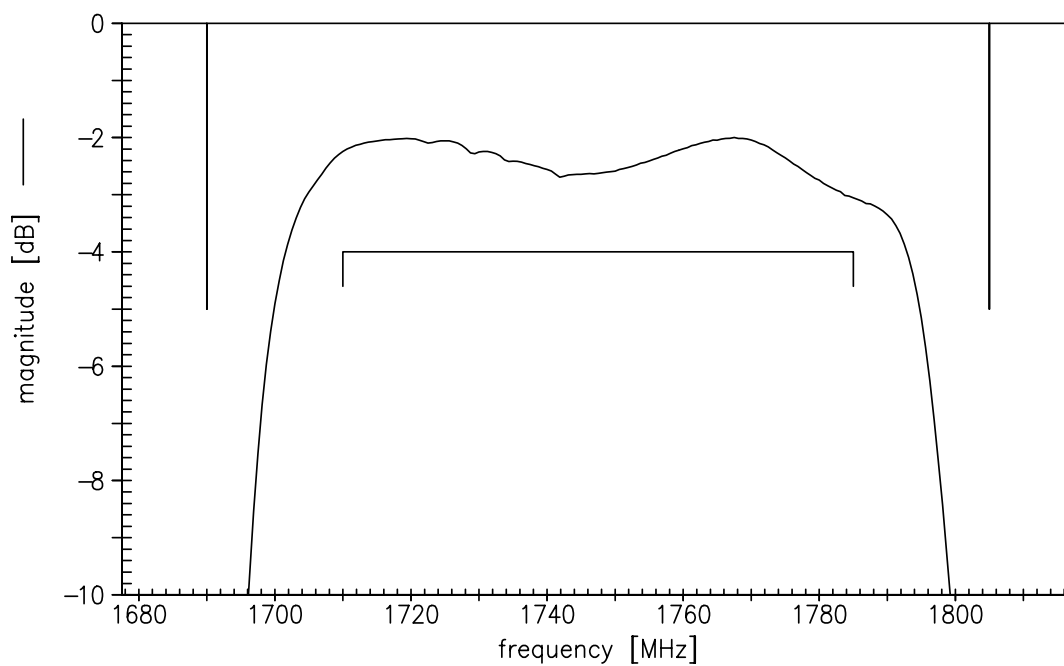
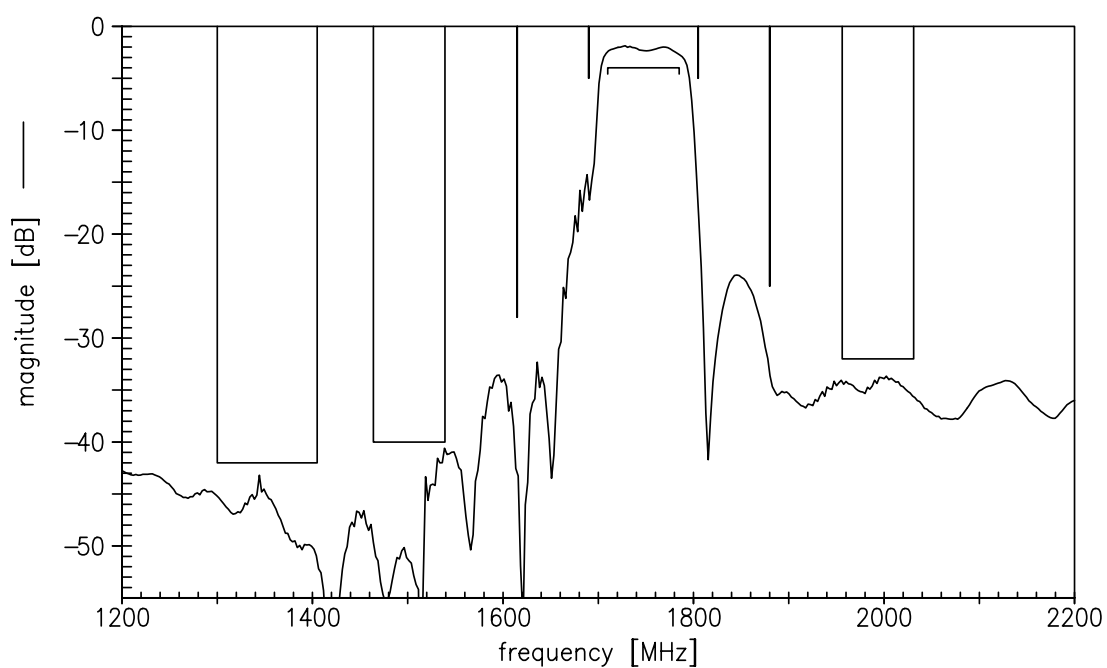
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Data sheet


**Maximum ratings**

|                            |                  |                  |     |                                      |
|----------------------------|------------------|------------------|-----|--------------------------------------|
| Operable temperature range | T                | −40/+85          | °C  |                                      |
| Storage temperature range  | T <sub>stg</sub> | −40/+85          | °C  |                                      |
| DC voltage                 | V <sub>DC</sub>  | 0                | V   |                                      |
| ESD voltage                | V <sub>ESD</sub> | 50 <sup>1)</sup> | V   | machine model, 1 pulse               |
| Input power                |                  |                  |     |                                      |
| 1710.0 ... 1785.0 MHz      | P <sub>IN</sub>  | 9.5              | dBm | continuous wave, 100000 hrs,<br>85°C |

<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

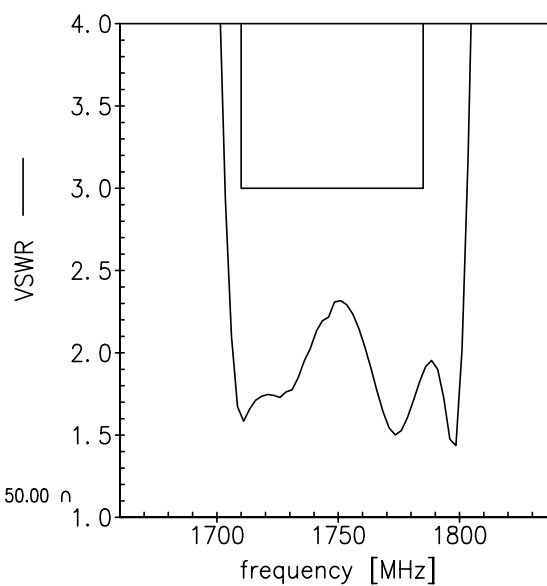
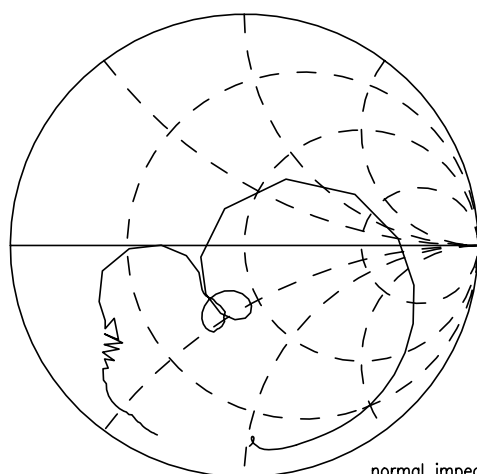
**Transfer function**

**Transfer function (wideband)**


Data sheet

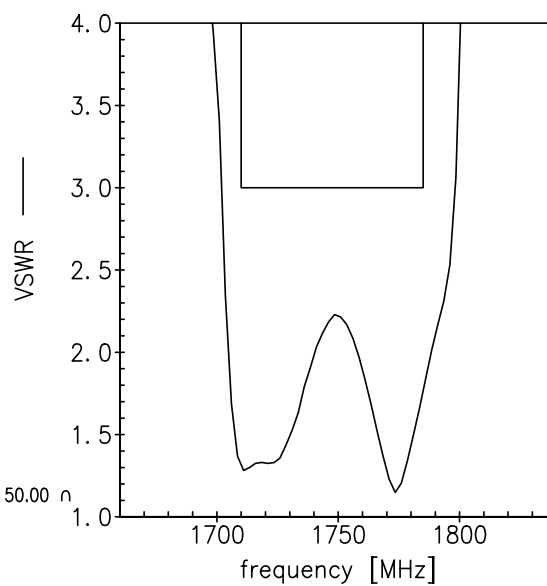
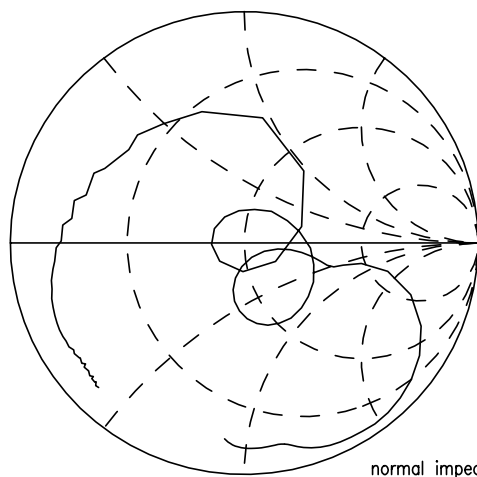


Smith charts

**S<sub>11</sub> function**



**S<sub>22</sub> function**



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Data sheet


**References**

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b>                | B3832                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Ordering code</b>       | B39172B3832U410                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Marking and package</b> | C61157-A7-A67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Packaging</b>           | F61074-V8168-Z000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Date codes</b>          | L_1126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>S-parameters</b>        | B3832_NB.s2p, B3832_WB.s2p<br>see file header for port/pin assignment table                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Soldering profile</b>   | S_6001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>RoHS compatible</b>     | defined as compatible with the following documents:<br>"DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment." |
| <b>Matching coils</b>      | See Inductor pdf-catalog<br><a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a><br>and Data Library for circuit simulation<br><a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a><br>for a large variety of matching coils.                                                                                                                                                                                              |

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