



# RF Filters for Cellular Phones

## Series/Type: B9032

The following products presented in this data sheet are being withdrawn.

| Ordering Code   | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B39881B9032K310 | B39881B9400K610    | 2007-09-21         | 2007-12-31           | 2008-03-31     |

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Data Sheet Sheet

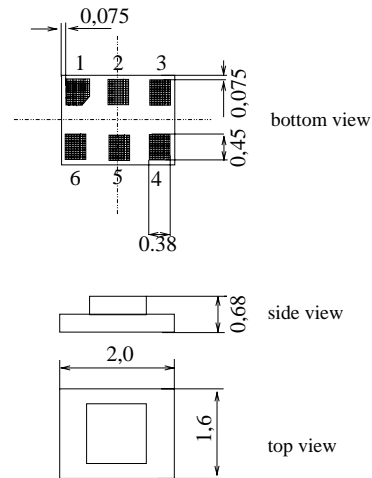
Chip sized SAW package DCS6T

Features

- Low-loss RF filter for mobile telephone GSM850/AMPS system, receive path
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to12
- Ceramic package for **Surface Mounted Technology (SMT)**

Terminals

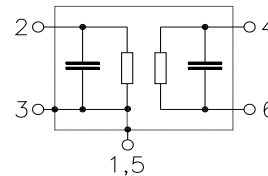
- Ni, gold-plated



Dimensions in mm, approx. weight 0,007g

Pin configuration

- 2 Unbalanced input
- 4, 6 Balanced output
- 1, 3, 5 To be grounded



| Type  | Ordering code     | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| B9032 | B39881-B9032-K310 | C61157-A7-A128                   | F61074-V8152-Z000    |

Electrostatic Sensitive Device (ESD)

Maximum ratings

|  |           |             |     |                          |
|--|-----------|-------------|-----|--------------------------|
| Operable temperature range                                       | $T$       | - 40 / + 85 | °C  | Machine Model, 10 pulses |
| Storage temperature range  | $T_{stg}$ | - 40 / + 85 | °C  |                          |
| DC voltage   | $V_{DC}$  | 3           | V   |                          |
| ESD  | $V_{ESD}$ | 100*        | V   |                          |
| Input power at<br>GSM850, GSM900<br>GSM1800, GSM1900<br>Tx bands | $P_{IN}$  | 15          | dBm |                          |

\* - acc. to JEESD22-A115A (Machine Model), 10 negative & 10 positive pulses



Data Sheet Sheet

Characteristics

Operating temperature range:  $T = +25\text{ }^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$  (unbalanced)  
 Terminating load impedance:  $Z_L = 150\ \Omega$  (balanced) || 82nH

|                                      |                |                       | min. | typ.  | max. |     |
|--------------------------------------|----------------|-----------------------|------|-------|------|-----|
| <b>Center frequency</b>              | $f_C$          |                       | —    | 881,5 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{max}$ | 869,0 ... 894,0 MHz   | —    | 1,5   | 1,8  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$ | 869,0 ... 894,0 MHz   | —    | 0,4   | 0,7  | dB  |
| <b>Input VSWR</b>                    | $vswr_{IN}$    | 869,0 ... 894,0 MHz   | —    | 1,6   | 2,0  |     |
| <b>Output VSWR</b>                   | $vswr_{OUT}$   | 869,0 ... 894,0 MHz   | —    | 1,6   | 2,0  |     |
| <b>Common mode Suppression</b>       | $S_{sc12}$     | 824,0 ... 995,0 MHz   | 20   | 27    | —    | dB  |
|                                      |                | 1648,0 ... 1990,0 MHz | 20   | 50    | —    | dB  |
|                                      |                | 3296,0 ... 3980,0 MHz | 20   | 40    | —    | dB  |
| <b>Attenuation</b>                   | $\alpha$       | 0,0 ... 450,0 MHz     | 45   | 57    | —    | dB  |
|                                      |                | 450,0 ... 820,0 MHz   | 30   | 34    | —    | dB  |
|                                      |                | 820,0 ... 849,0 MHz   | 30   | 34    | —    | dB  |
|                                      |                | 914,0 ... 1738,0 MHz  | 25   | 29    | —    | dB  |
|                                      |                | 1738,0 ... 1788,0 MHz | 45   | 55    | —    | dB  |
|                                      |                | 1788,0 ... 4000,0 MHz | 40   | 47    | —    | dB  |
|                                      |                | 4000,0 ... 6000,0 MHz | 20   | 30    | —    | dB  |



SAW Components

B9032

Low-Loss Filter for Mobile Communication

881,5 MHz

Data Sheet Sheet

Characteristics

Operating temperature range:  $T = -10$  to  $+80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$  (unbalanced)  
 Terminating load impedance:  $Z_L = 150 \Omega$  (balanced) || 82nH

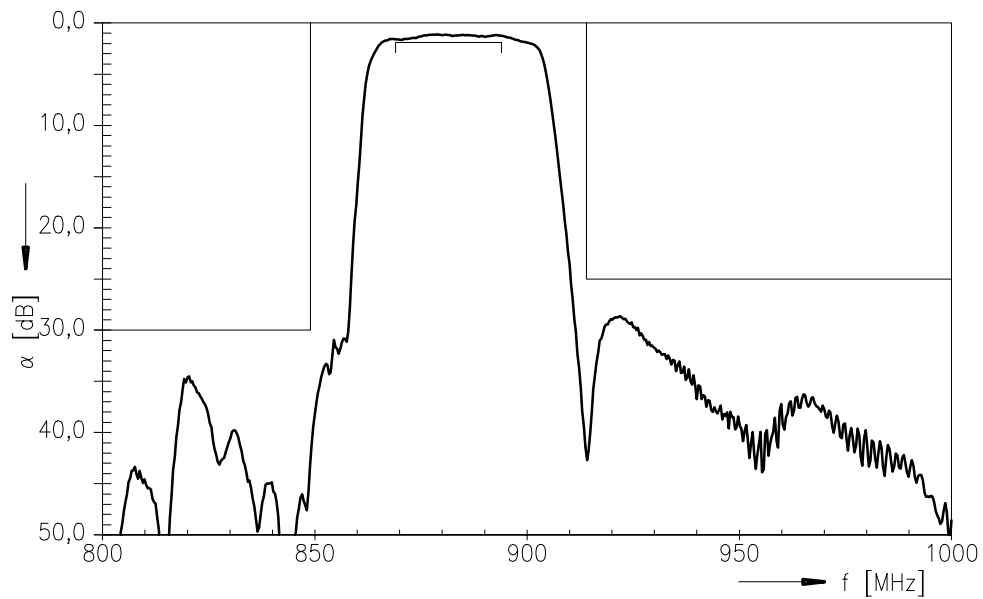
|                                      |                 |                       | min. | typ.  | max.              |     |
|--------------------------------------|-----------------|-----------------------|------|-------|-------------------|-----|
| <b>Center frequency</b>              | $f_C$           |                       | —    | 881,5 | —                 | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{max}$  | 869,0 ... 894,0 MHz   | —    | 1,5   | 1,8 <sup>1)</sup> | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  | 869,0 ... 894,0 MHz   | —    | 0,4   | 0,8               | dB  |
| <b>Input VSWR</b>                    | $v_{SWR_{IN}}$  | 869,0 ... 894,0 MHz   | —    | 1,6   | 2,0               |     |
| <b>Output VSWR</b>                   | $v_{SWR_{OUT}}$ | 869,0 ... 894,0 MHz   | —    | 1,6   | 2,0               |     |
| <b>Common mode Suppression</b>       | $S_{sc12}$      |                       |      |       |                   |     |
|                                      |                 | 824,0 ... 995,0 MHz   | 20   | 27    | —                 | dB  |
|                                      |                 | 1648,0 ... 1990,0 MHz | 20   | 50    | —                 | dB  |
|                                      |                 | 3296,0 ... 3980,0 MHz | 20   | 40    | —                 | dB  |
| <b>Attenuation</b>                   | $\alpha$        |                       |      |       |                   |     |
|                                      |                 | 0,0 ... 450,0 MHz     | 45   | 57    | —                 | dB  |
|                                      |                 | 450,0 ... 820,0 MHz   | 30   | 34    | —                 | dB  |
|                                      |                 | 820,0 ... 849,0 MHz   | 30   | 34    | —                 | dB  |
|                                      |                 | 914,0 ... 1738,0 MHz  | 25   | 29    | —                 | dB  |
|                                      |                 | 1738,0 ... 1788,0 MHz | 45   | 55    | —                 | dB  |
|                                      |                 | 1788,0 ... 4000,0 MHz | 40   | 47    | —                 | dB  |
|                                      |                 | 4000,0 ... 6000,0 MHz | 20   | 30    | —                 | dB  |

1) Maximum insertion attenuation from -30 to -10 & from +80 to +85 °C is 2.0 dB

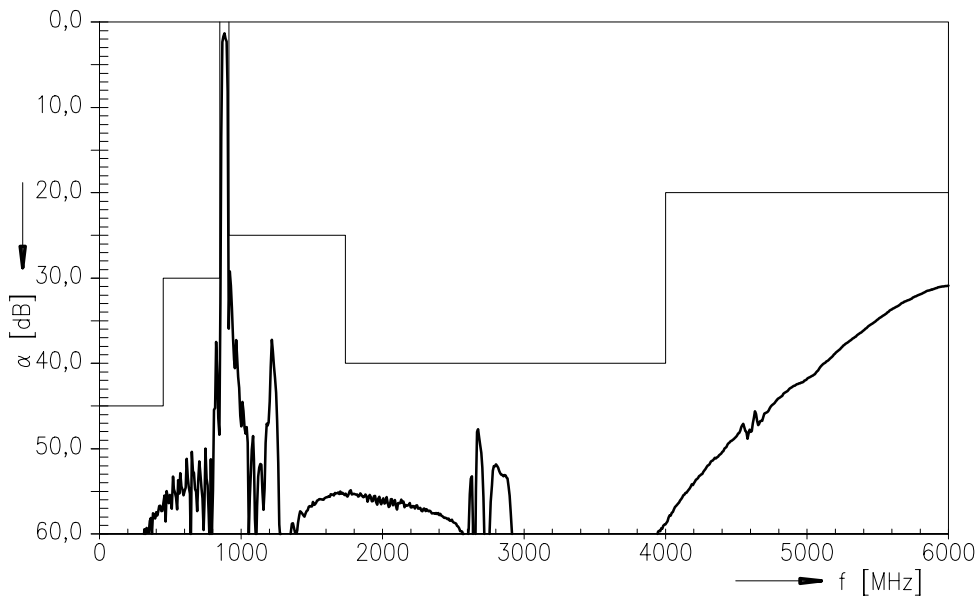


Data Sheet Sheet

Transfer function (narrowband; 50  $\Omega$  to 150  $\Omega$  operation)



Transfer function (wideband; 50  $\Omega$  to 150  $\Omega$  operation)





**SAW Components**

**B9032**

**Low-Loss Filter for Mobile Communication**

**881,5 MHz**

Data Sheet Sheet

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