



# *SAW Components*

*Data Sheet B7602*

Data Sheet

An abstract, grayscale graphic featuring a globe with a grid pattern. Overlaid on the globe is a large, stylized, 3D-looking "EPCOS" logo in a light gray color. The logo is tilted and appears to be floating or emerging from the globe. The background is dark and textured.



## SAW Components

B7602

## Low-Loss Filter for Mobile Communication

942,5 MHz

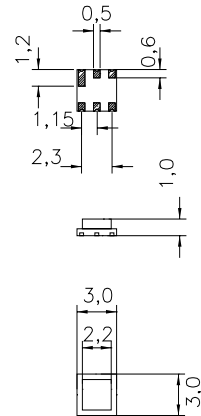
### Data Sheet



### Chip sized SAW package

#### Features

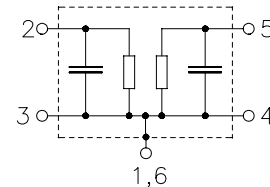
- Low-loss RF filter for mobile telephone EGSM system, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- No matching network required for operation at 50  $\Omega$
- Ceramic package for **Surface Mounted Technology (SMT)**



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 |
|-------|-------------------|----------------------------------|----------------------|
| B7602 | B39941-B7602-A610 | C61157-A7-A62                    | F61074-V8086-Z000    |

Electrostatic Sensitive Device (ESD)

#### Maximum ratings

|                            |                  |             |                    |                                                                                                           |
|----------------------------|------------------|-------------|--------------------|-----------------------------------------------------------------------------------------------------------|
| Operable temperature range | $T$              | - 10 / + 80 | $^{\circ}\text{C}$ | source and load impedance 50 $\Omega$<br>peak power of GSM signal,<br>duty cycle 1 : 8<br>continuous wave |
| Storage temperature range  | $T_{\text{stg}}$ | - 40 / + 85 | $^{\circ}\text{C}$ |                                                                                                           |
| DC voltage                 | $V_{\text{DC}}$  | 0           | V                  |                                                                                                           |
| ESD voltage                | $V_{\text{ESD}}$ | 50          | V                  |                                                                                                           |
| Input power max.           |                  |             |                    |                                                                                                           |
| 880...915 MHz              | $P_{\text{IN}}$  | 10          | dBm                |                                                                                                           |
| elsewhere                  |                  | 0           | dBm                |                                                                                                           |



# SAW Components

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## Low-Loss Filter for Mobile Communication

942,5 MHz

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### Characteristics

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

|                                      |                       |  | min. | typ.   | max. |     |
|--------------------------------------|-----------------------|--|------|--------|------|-----|
| <b>Center frequency</b>              | $f_c$                 |  | —    | 942,50 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,5    | 3,0  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$        |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 1,1    | 1,6  | dB  |
| <b>Input VSWR</b>                    |                       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,1    | 2,3  |     |
| <b>Output VSWR</b>                   |                       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,1    | 2,3  |     |
| <b>Attenuation</b>                   | $\alpha$              |  |      |        |      |     |
|                                      | 0,0 ... 880,0 MHz     |  | 20   | 21     | —    | dB  |
|                                      | 880,0 ... 905,0 MHz   |  | 20   | 26     | —    | dB  |
|                                      | 905,0 ... 915,0 MHz   |  | 13   | 25     | —    | dB  |
|                                      | 980,0 ... 1005,0 MHz  |  | 20   | 28     | —    | dB  |
|                                      | 1005,0 ... 1725,0 MHz |  | 20   | 23     | —    | dB  |
|                                      | 1725,0 ... 1920,0 MHz |  | 23   | 28     | —    | dB  |
|                                      | 1920,0 ... 3000,0 MHz |  | 19   | 26     | —    | dB  |
|                                      | 3000,0 ... 4000,0 MHz |  | 8    | 19     | —    | dB  |
|                                      | 4000,0 ... 4800,0 MHz |  | 5    | 18     | —    | dB  |



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## Low-Loss Filter for Mobile Communication

942,5 MHz

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### Characteristics

Operating temperature range:  $T = 10$  to  $+60^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 50\ \Omega$   
Terminating load impedance:  $Z_L = 50\ \Omega$

|                                      |                       |  | min. | typ.   | max. |     |
|--------------------------------------|-----------------------|--|------|--------|------|-----|
| <b>Center frequency</b>              | $f_c$                 |  | —    | 942,50 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,7    | 3,1  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$        |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 1,3    | 1,7  | dB  |
| <b>Input VSWR</b>                    |                       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,1    | 2,3  |     |
| <b>Output VSWR</b>                   |                       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,1    | 2,3  |     |
| <b>Attenuation</b>                   | $\alpha$              |  |      |        |      |     |
|                                      | 0,0 ... 880,0 MHz     |  | 20   | 21     | —    | dB  |
|                                      | 880,0 ... 905,0 MHz   |  | 20   | 26     | —    | dB  |
|                                      | 905,0 ... 915,0 MHz   |  | 11   | 21     | —    | dB  |
|                                      | 980,0 ... 1005,0 MHz  |  | 20   | 28     | —    | dB  |
|                                      | 1005,0 ... 1725,0 MHz |  | 20   | 23     | —    | dB  |
|                                      | 1725,0 ... 1920,0 MHz |  | 23   | 28     | —    | dB  |
|                                      | 1920,0 ... 3000,0 MHz |  | 19   | 26     | —    | dB  |
|                                      | 3000,0 ... 4000,0 MHz |  | 8    | 19     | —    | dB  |
|                                      | 4000,0 ... 4800,0 MHz |  | 5    | 18     | —    | dB  |



|                                                 |                  |
|-------------------------------------------------|------------------|
| <b>SAW Components</b>                           | <b>B7602</b>     |
| <b>Low-Loss Filter for Mobile Communication</b> | <b>942,5 MHz</b> |

# Data Sheet



## Characteristics

Operating temperature range:  $T = -10$  to  $+80^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 50\ \Omega$   
Terminating load impedance:  $Z_L = 50\ \Omega$

|                                      |                       |  | min. | typ.   | max. |     |
|--------------------------------------|-----------------------|--|------|--------|------|-----|
| <b>Center frequency</b>              | $f_c$                 |  | —    | 942,50 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,8    | 3,5  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$        |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 1,4    | 2,1  | dB  |
| <b>Input VSWR</b>                    |                       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,1    | 2,3  |     |
| <b>Output VSWR</b>                   |                       |  |      |        |      |     |
|                                      | 925,0 ... 960,0 MHz   |  | —    | 2,1    | 2,3  |     |
| <b>Attenuation</b>                   | $\alpha$              |  |      |        |      |     |
|                                      | 0,0 ... 880,0 MHz     |  | 20   | 21     | —    | dB  |
|                                      | 880,0 ... 905,0 MHz   |  | 20   | 26     | —    | dB  |
|                                      | 905,0 ... 915,0 MHz   |  | 7    | 19     | —    | dB  |
|                                      | 980,0 ... 1005,0 MHz  |  | 20   | 28     | —    | dB  |
|                                      | 1005,0 ... 1725,0 MHz |  | 20   | 23     | —    | dB  |
|                                      | 1725,0 ... 1920,0 MHz |  | 23   | 28     | —    | dB  |
|                                      | 1920,0 ... 3000,0 MHz |  | 19   | 26     | —    | dB  |
|                                      | 3000,0 ... 4000,0 MHz |  | 8    | 19     | —    | dB  |
|                                      | 4000,0 ... 4800,0 MHz |  | 5    | 18     | —    | dB  |



# SAW Components

B7602

## Low-Loss Filter for Mobile Communication

942,5 MHz

### Data Sheet



### Characteristics

Operating temperature range:  $T = -20$  to  $+70^{\circ}\text{C}$

Terminating source impedance:  $Z_S = 50\ \Omega$

Terminating load impedance:  $Z_L = 50\ \Omega$

|                                      |                 | min. | typ.   | max. |     |
|--------------------------------------|-----------------|------|--------|------|-----|
| <b>Center frequency</b>              | $f_c$           | —    | 942,50 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$ |      |        |      |     |
| 925,0 ... 960,0 MHz                  |                 | —    | 2,8    | 3,6  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  |      |        |      |     |
| 925,0 ... 960,0 MHz                  |                 | —    | 1,4    | 2,2  | dB  |
| <b>Input VSWR</b>                    |                 |      |        |      |     |
| 925,0 ... 960,0 MHz                  |                 | —    | 2,1    | 2,3  |     |
| <b>Output VSWR</b>                   |                 |      |        |      |     |
| 925,0 ... 960,0 MHz                  |                 | —    | 2,1    | 2,3  |     |
| <b>Attenuation</b>                   | $\alpha$        |      |        |      |     |
| 0,0 ... 880,0 MHz                    |                 | 20   | 21     | —    | dB  |
| 880,0 ... 905,0 MHz                  |                 | 20   | 26     | —    | dB  |
| 905,0 ... 915,0 MHz                  |                 | 7    | 20     | —    | dB  |
| 980,0 ... 1005,0 MHz                 |                 | 20   | 28     | —    | dB  |
| 1005,0 ... 1725,0 MHz                |                 | 20   | 23     | —    | dB  |
| 1725,0 ... 1920,0 MHz                |                 | 23   | 28     | —    | dB  |
| 1920,0 ... 3000,0 MHz                |                 | 19   | 26     | —    | dB  |
| 3000,0 ... 4000,0 MHz                |                 | 8    | 19     | —    | dB  |
| 4000,0 ... 4800,0 MHz                |                 | 5    | 18     | —    | dB  |



SAW Components

B7602

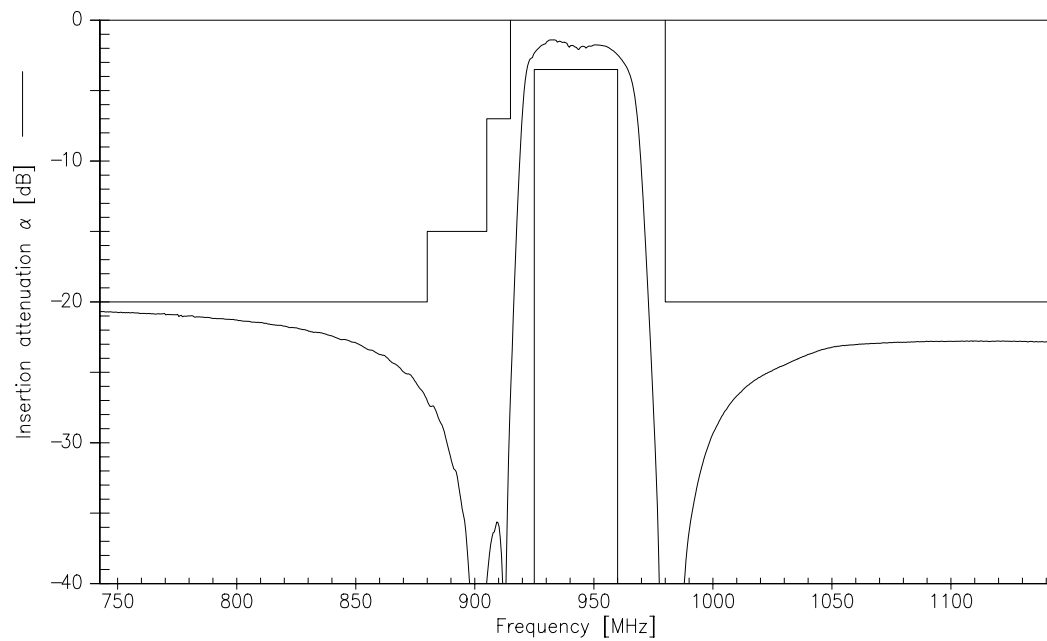
Low-Loss Filter for Mobile Communication

942,5 MHz

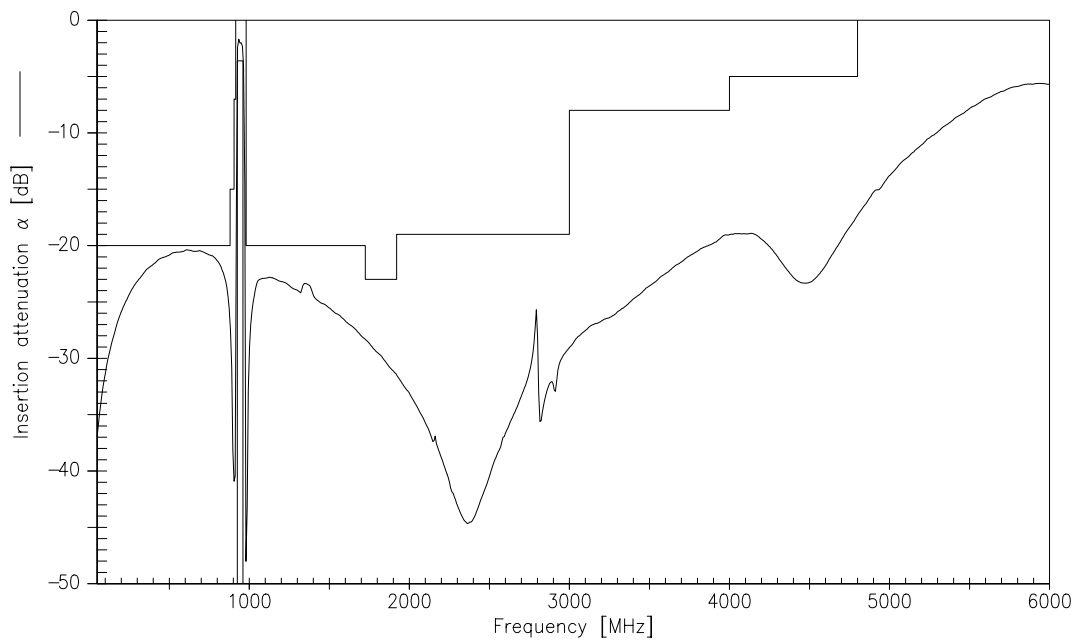
Data Sheet



### Transfer function



### Transfer function (wideband)





|                                                 |                  |
|-------------------------------------------------|------------------|
| <b>SAW Components</b>                           | <b>B7602</b>     |
| <b>Low-Loss Filter for Mobile Communication</b> | <b>942,5 MHz</b> |
| <b>Data Sheet</b>                               | <b>SMD</b>       |

**Published by EPCOS AG**  
**Surface Acoustic Wave Components Division, OFW E MF**  
**P.O. Box 80 17 09, D-81617 München**

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