



# *SAW Components*

*Data Sheet B7759*

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a stylized globe or a series of overlapping planes. The graphic is rendered in a grayscale, metallic style with highlights and shadows, giving it a three-dimensional appearance. The word "EPCOS" is positioned diagonally across the lower half of the image.



## SAW Components

B7759

## Low-Loss Filter for Mobile Communication

1880,0 MHz

### Data Sheet



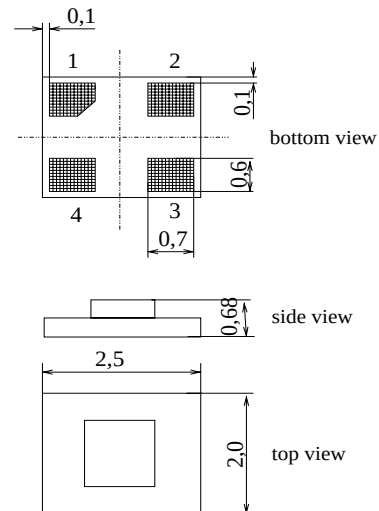
### Chip Sized SAW Package DCS4D

#### Features

- Low-loss RF filter for mobile telephone PCS systems, transmit path
- High selectivity
- Usable passband 60 MHz
- Unbalanced to unbalanced operation
- No external matching required
- Package for **Surface Mounted Technology (SMT)**

#### Terminals

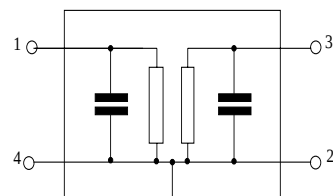
- Gold-plated Ni



Dimensions in mm, approx. weight 0,012g

#### Pin configuration

- 1 Input
- 3 Output
- 2, 4 To be grounded



| Type  | Ordering code     | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| B7759 | B39192-B7759-C810 | C61157-A7-A118                   | F61074-V8153-Z000    |

#### Electrostatic Sensitive Device (ESD)

#### Maximum ratings

|                             |             |            |     |                                                          |
|-----------------------------|-------------|------------|-----|----------------------------------------------------------|
| Operating temperature range | $T$         | - 30 /+ 85 | °C  | Machine Model, 10 pulses<br>source impedance 50 $\Omega$ |
| Storage temperature range   | $T_{stg}$   | - 40 /+ 85 | °C  |                                                          |
| ESD voltage                 | $V_{ESD}^*$ | 50*        | V   |                                                          |
| Input Power max.            | $P_{IN}$    | 12         | dBm |                                                          |

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



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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>                                      | $f_C$           | —    | 1880,0 | —    | MHz |
| <b>Maximum insertion attenuation</b><br>1850,0 ... 1910,0MHz | $\alpha_{\max}$ | —    | 2,9    | 3,5  | dB  |
| <b>Amplitude ripple (p-p)</b><br>1850,0 ... 1910,0MHz        | $\Delta\alpha$  | —    | 1,3    | 1,9  | dB  |
| <b>Attenuation</b>                                           | $\alpha$        |      |        |      |     |
| DC ... 1720,0MHz                                             |                 | 29   | 31     | —    | dB  |
| 1720,0 ... 1770,0MHz                                         |                 | 29   | 33     | —    | dB  |
| 1770,0 ... 1830,0MHz                                         |                 | 18   | 25     | —    | dB  |
| 1930,0 ... 1990,0MHz                                         |                 | 35   | 42     | —    | dB  |
| 1990,0 ... 2032,0MHz                                         |                 | 33   | 37     | —    | dB  |
| 2032,0 ... 2456,0MHz                                         |                 | 35   | 40     | —    | dB  |
| 2456,0 ... 3820,0MHz                                         |                 | 25   | 28     | —    | dB  |
| 3820,0 ... 5000,0MHz                                         |                 | 15   | 21     | —    | dB  |
| <b>Input return loss</b><br>1850,0 ... 1910,0MHz             |                 | 10   | 11     | —    | dB  |
| <b>Output return loss</b><br>1850,0 .. 1910,0MHz             |                 | 10   | 11     | —    | dB  |



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### Low-Loss Filter for Mobile Communication

1880,0 MHz

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#### Characteristics

Operating Temperature Range:  $T = -30$  to  $+85^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 50\ \Omega$   
Terminating load impedance:  $Z_L = 50\ \Omega$

|                                      |                 | min. | typ.   | max. |     |
|--------------------------------------|-----------------|------|--------|------|-----|
| <b>Center frequency</b>              | $f_C$           | —    | 1880,0 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$ |      |        |      |     |
| 1850,0 ... 1910,0MHz                 |                 | —    | 3,9    | 4,8  | dB  |
| 1850,625 ... 1909,375MHz             |                 | —    | 3,7    | 4,5  | dB  |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  |      |        |      |     |
| 1850,0 ... 1910,0MHz                 |                 | —    | 2,4    | 3,0  | dB  |
| 1850,625 ... 1909,375MHz             |                 | —    | 2,2    | 2,8  | dB  |
| <b>Attenuation</b>                   | $\alpha$        |      |        |      |     |
| DC ... 1720,0MHz                     |                 | 29   | 31     | —    | dB  |
| 1720,0 ... 1770,0MHz                 |                 | 29   | 33     | —    | dB  |
| 1770,0 ... 1830,0MHz                 |                 | 10   | 15     | —    | dB  |
| 1930,0 ... 1990,0MHz                 |                 | 27   | 35     | —    | dB  |
| 1930,625 ... 1989,375MHz             |                 | 30   | 36     | —    | dB  |
| 1990,0 ... 2032,0MHz                 |                 | 33   | 37     | —    | dB  |
| 2032,0 ... 2456,0MHz                 |                 | 35   | 40     | —    | dB  |
| 2456,0 ... 3820,0MHz                 |                 | 25   | 28     | —    | dB  |
| 3820,0 ... 5000,0MHz                 |                 | 15   | 21     | —    | dB  |
| <b>Input return loss</b>             |                 |      |        |      |     |
| 1850,0 ... 1910,0MHz                 |                 | 9    | 10     | —    | dB  |
| <b>Output return loss</b>            |                 |      |        |      |     |
| 1850,0 .. 1910,0MHz                  |                 | 9    | 10     | —    | dB  |



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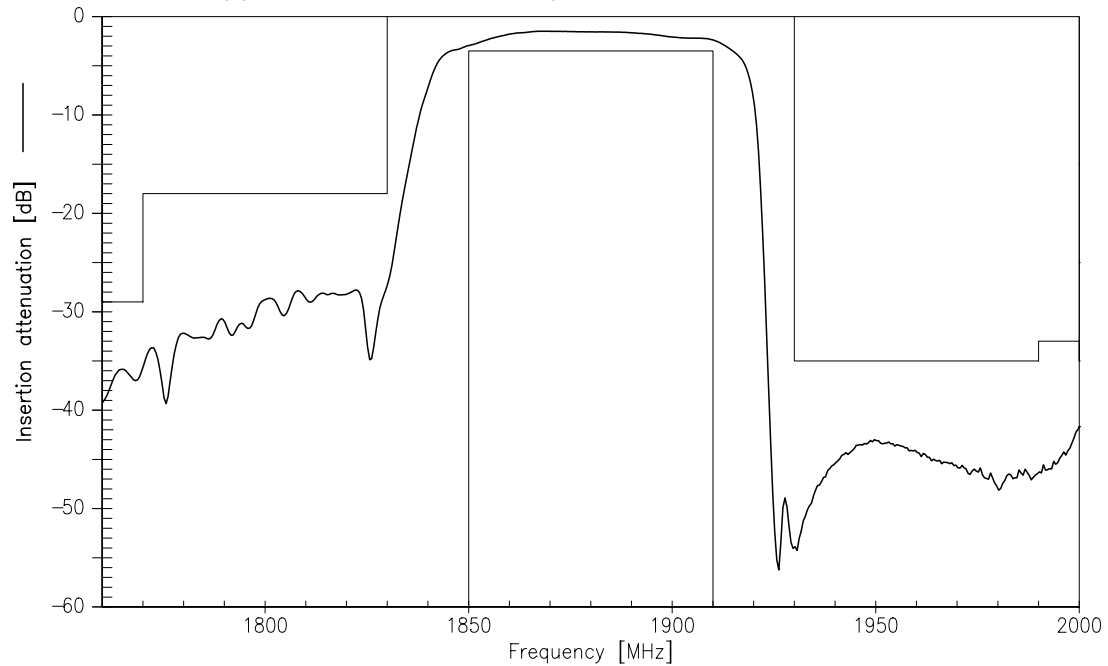
Low-Loss Filter for Mobile Communication

1880,0 MHz

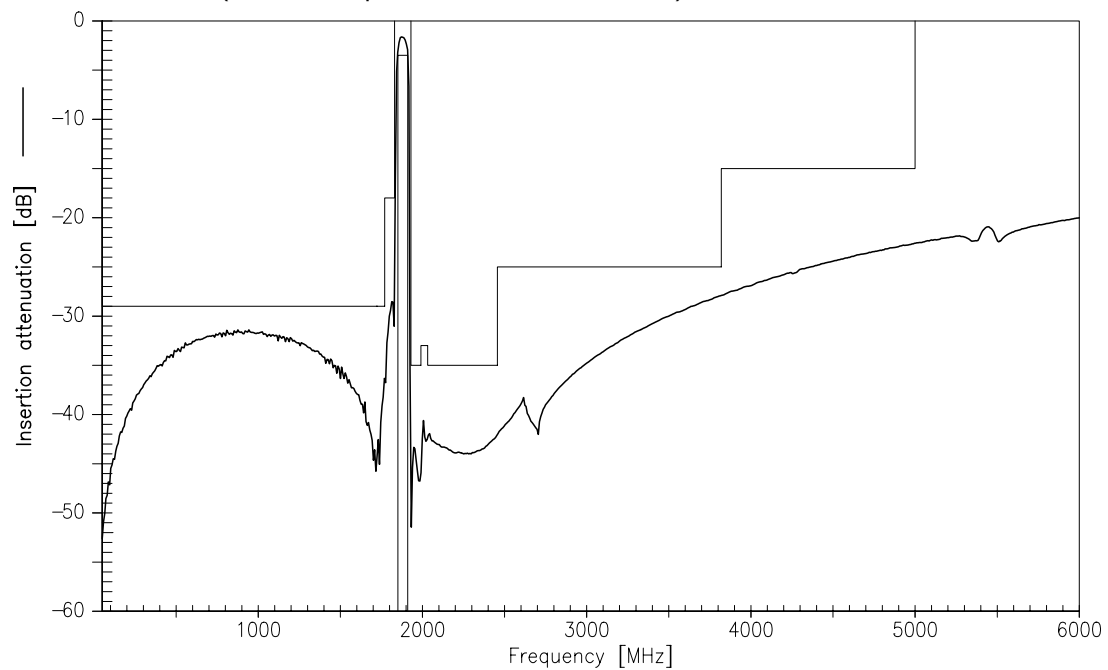
Data Sheet



**Transfer function** (specification for  $T=25 \pm 2^\circ\text{C}$ )



**Transfer function** (wideband, specification for  $T=25 \pm 2^\circ\text{C}$ )





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Low-Loss Filter for Mobile Communication

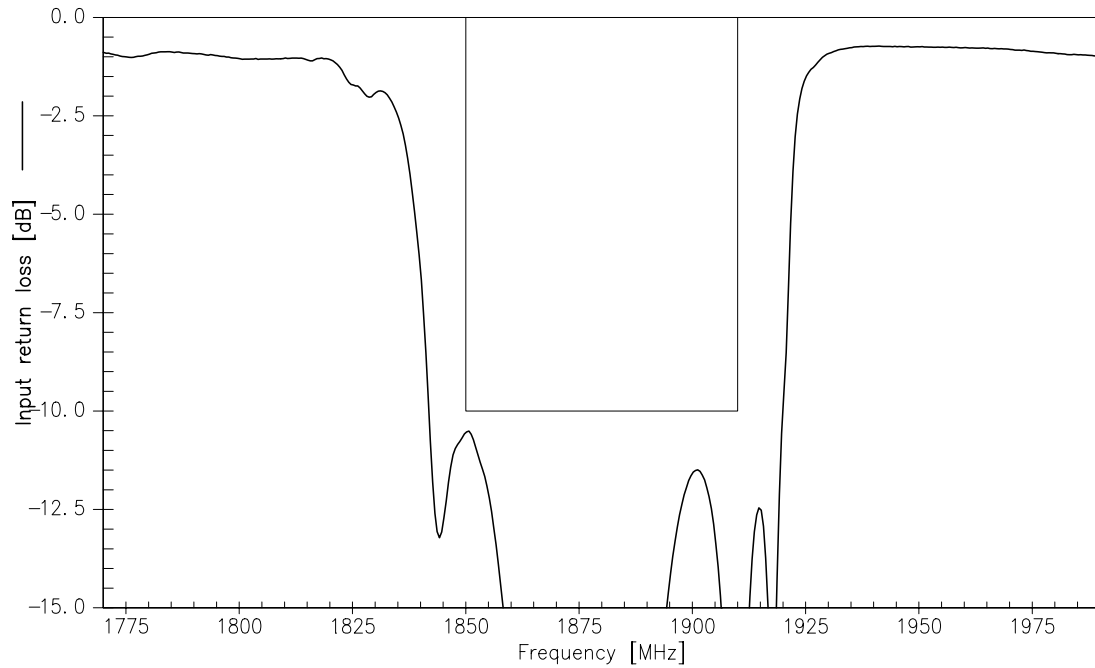
1880,0 MHz

Data Sheet

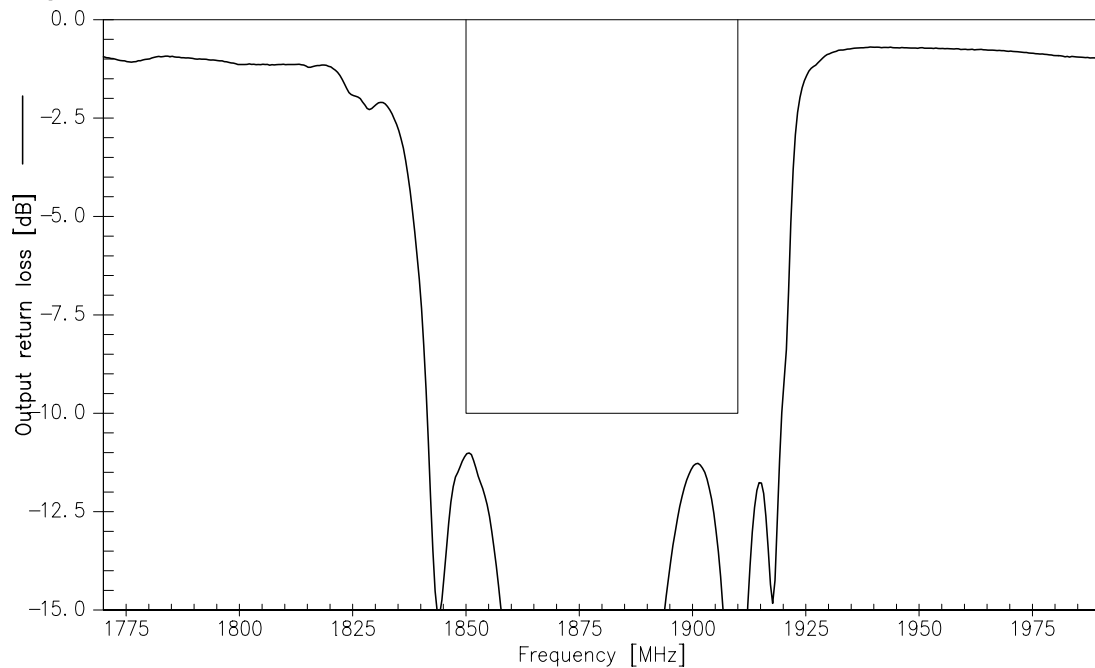


**Matching** (specification for  $T=25 \pm 2^\circ\text{C}$ )

**Input**



**Output**





|                                                 |                   |
|-------------------------------------------------|-------------------|
| <b>SAW Components</b>                           | <b>B7759</b>      |
| <b>Low-Loss Filter for Mobile Communication</b> | <b>1880,0 MHz</b> |
| <b>Data Sheet</b>                               | <b>SMD</b>        |

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**P.O. Box 80 17 09, D-81617 München**

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