



# SAW Components

Data Sheet B7725, Pb-free

Data Sheet

A large, stylized graphic of a globe is shown, with the word "EPCOS" overlaid in large, glowing, white letters. The globe is rendered with a grid of latitude and longitude lines, and the letters are positioned diagonally across the lower half of the image, creating a sense of global reach and technological advancement.



## SAW Components

B7725

### Low-Loss Filter

1575,42 MHz

#### Data Sheet

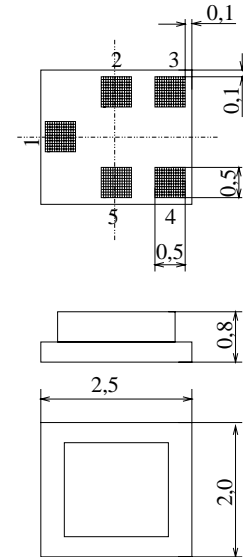
#### Chip Sized SAW Package QCS5H

##### Features

- Low loss RF filter for GPS receivers
- Unbalanced to balanced operation
- Low amplitude ripple
- Impedance transformation from 50  $\Omega$  to 100  $\Omega$
- Package for **Surface Mounted Technology (SMT)**
- Pb-free

##### Terminals

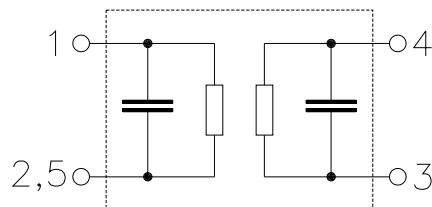
- Ni, gold-plated



Dimensions 2,0x2,5 mm<sup>2</sup>, approx. weight 0,015 g

##### Pin configuration

- |      |                   |
|------|-------------------|
| 1    | Input, unbalanced |
| 3, 4 | Output, balanced  |
| 2, 5 | Case ground       |



Type	Ordering code	Marking and Package according to	Packing according to
B7725	B39162-B7725-K910	C61157-A7-A139	F61074-V8189-Z000

#### Electrostatic Sensitive Device (ESD)

##### Maximum ratings

Operable temperature range	$T$	- 40/+ 85	°C	machine model, 10 pulses source impedance 50 $\Omega$ , load impedance 100 $\Omega$
Storage temperature range	$T_{stg}$	- 40/+ 85	°C	
DC voltage	$V_{DC}$	3	V	
ESD voltage	$V^*_{ESD}$	50*	V	
Source power	$P_s$	10	dBm	

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



# SAW Components

B7725

## Low-Loss Filter

1575,42 MHz

### Data Sheet

#### Characteristics

Operating temperature range:  $T_A = -30 \dots +85 \text{ }^\circ\text{C}$   
Terminating source impedance:  $Z_S = 50 \text{ } \Omega \text{ unbal.}$   
Terminating load impedance:  $Z_L = 100 \text{ } \Omega \text{ bal.}$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	1575,42	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
1574,42MHz ... 1576,42 MHz		—	1,3	1,8	dB
1574,42MHz ... 1576,42 MHz		—	1,3	1,7*)	dB
<b>Amplitude ripple in passband (p-p)</b>	$\Delta\alpha$				
1574,42MHz ... 1576,42 MHz		—	0,1	0,5	dB
<b>Phase linearity deviation</b>	$\Delta\phi$				
1574,42MHz ... 1576,42 MHz		—	0,05	1,0	$^\circ$ rms
<b>Output phase balance (<math>\phi(S_{31}) - \phi(S_{21}) + 180^\circ</math>)</b>					
1574,42MHz ... 1576,42 MHz		-15	7	15	$^\circ$
<b>Output amplitude balance (<math> S_{31} / S_{21} </math>)</b>					
1574,42MHz ... 1576,42 MHz		-1,5	0,2	1,5	dB
<b>Relative attenuation (relative to att. at <math>f_N</math>)</b>	$\alpha_{\text{rel}}$				
100,0MHz ... 1475,0 MHz		40	48	—	dB
1475,0 MHz ... 1501,0 MHz		35	40	—	dB
1501,0 MHz ... 1525,0 MHz		20	28	—	dB
1625,0 MHz ... 1675,0 MHz		10	22	—	dB
1675,0 MHz ... 1750,0 MHz		30	35	—	dB
1750,0 MHz ... 1800,0 MHz		35	42	—	dB
1800,0 MHz ... 1980,0 MHz		40	48	—	dB
1980,0 MHz ... 2400,0 MHz		35	41	—	dB
2400,0 MHz ... 3155,0 MHz		40	50	—	dB
3155,0 MHz ... 6000,0 MHz		35	46	—	dB
824,0MHz ... 894,0 MHz		40	48	—	dB
1850,0 MHz ... 1910,0 MHz		40	50	—	dB
1920,0 MHz ... 1980,0 MHz		40	51	—	dB
<b>VSWR</b>					
1574,42MHz ... 1576,42 MHz		—	1,4	1,8	

\*)  $T_A = +25 \text{ }^\circ\text{C}$



SAW Components

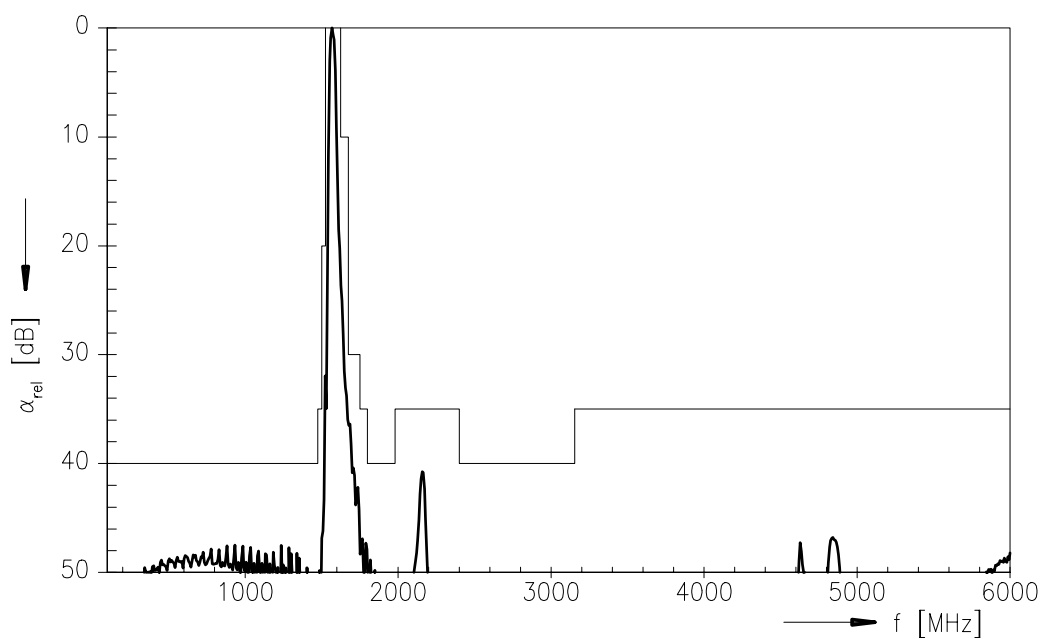
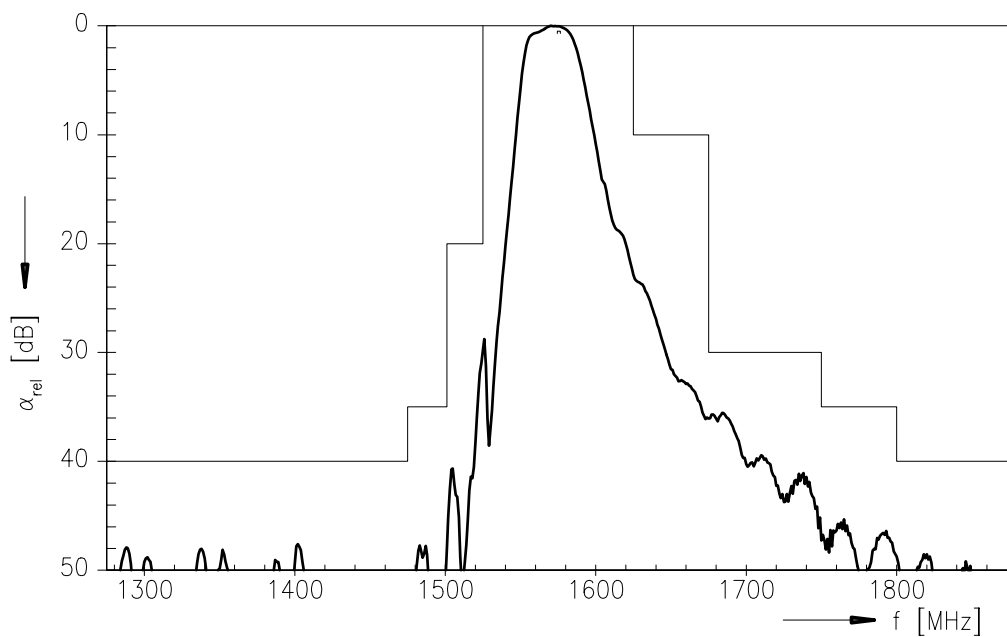
B7725

Low-Loss Filter

1575,42 MHz

Data Sheet

Transfer function





<b>SAW Components</b>	<b>B7725</b>
<b>Low-Loss Filter</b>	<b>1575,42 MHz</b>

Data Sheet

**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW MC PD**

**P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2005. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.