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# SAW Filters for Mobile Communications

## **Series/Type: B7775**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39162B7775E510	B39162B9444M410	2009-12-18	2010-06-30	2010-09-30

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## SAW Components

B7775

### SAW GPS filter

1575.42 MHz

#### Data Sheet



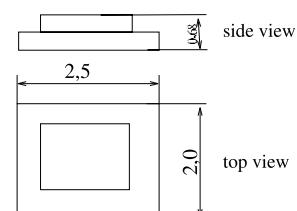
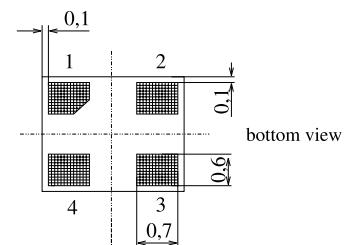
#### Application

- Low-loss RF filter for GPS receivers
- Low amplitude ripple
- Low insertion attenuation
- Usable passband 2 MHz
- No matching network required for operation at  $50 \Omega$
- Unbalanced to unbalanced operation



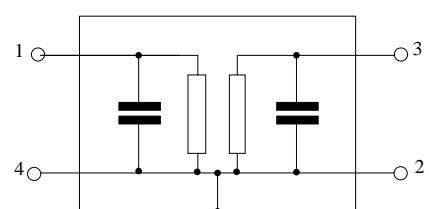
#### Features

- Package size  $2.5 \times 2.0 \times 0.68 \text{ mm}^3$
- Package code DCS4E
- RoHS compatible
- Approximate weight 0.012 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



#### Pin configuration

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



Please read *cautions and warnings and important notes* at the end of this document.



SAW Components	B7775			
SAW GPS filter	1575.42 MHz			
Data Sheet	SMD			
<b>Characteristics</b>				
Operating temperature range:	$T_A$ = -40 ... +85 °C			
Terminating source impedance:	$Z_S$ = 50 Ω			
Terminating load impedance:	$Z_L$ = 50 Ω			
<b>Nominal frequency</b>	$f_N$	min.	typ.	max.
Maximum insertion attenuation	$\alpha_{max}$			
1574,42 ... 1576,42 MHz		—	2,0	3,0
Amplitude ripple in passband (p-p)	$\Delta\alpha$			
1574,42 ... 1576,42 MHz		—	0,1	1,0
Return loss (Input and Output)				
1574,42 ... 1576,42 MHz		12	17	—
Attenuation	$\alpha$			
806,00 ... 902,00 MHz		40	47	—
902,00 ... 1475,42 MHz		35	45	—
1475,42 ... 1535,42 MHz		30	37	—
1612,00 ... 1650,00 MHz		45	53	—
1792,00 ... 1804,00 MHz		45	53	—
Temperature coefficient of frequency	$TC_f$	—	- 36	—
				ppm/K



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**B7775**

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**Data Sheet**



**Maximum ratings of Filter**

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	3	V	
ESD voltage	V <sub>ESD</sub>	50 <sup>1)</sup>	V	machine model, 10 pulses
Input power max. 1573,42 ... 1577,42 MHz	P <sub>IN</sub>	3	dBm	source and load impedance 50 Ω continuous wave signal
50,0...1460 and 1710 ... 4000 MHz	P <sub>IN</sub>	13	dBm	

<sup>1)</sup> acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



SAW Components

B7775

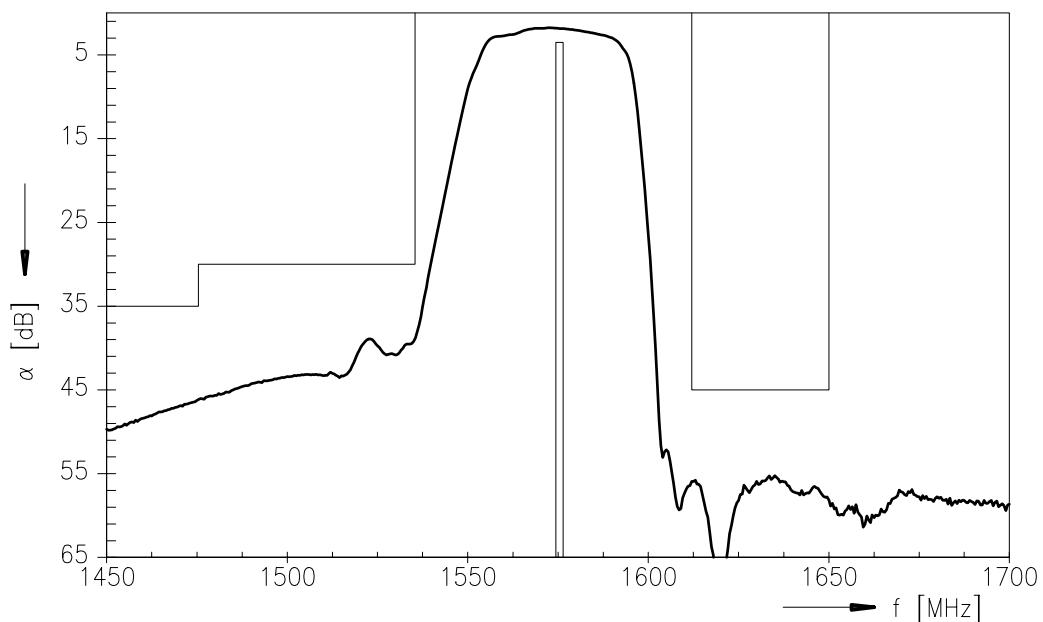
SAW GPS filter

1575.42 MHz

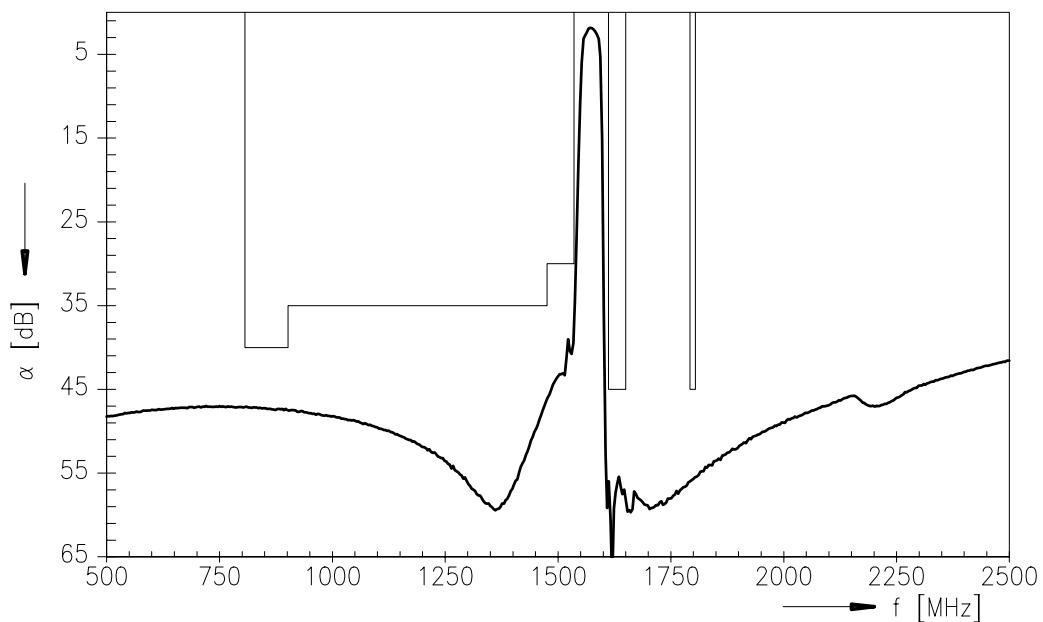
Data Sheet



Transfer function (narrow band)



Transfer function (wide band)





**SAW Components**

**B7775**

**SAW GPS filter**

**1575.42 MHz**

Data Sheet



## References

<b>Type</b>	B7775
<b>Ordering code</b>	B39162B7775E510
<b>Marking and package</b>	C61157-A7-A121
<b>Packaging</b>	F61074-V8153-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B7775_NB.s2p B7775_WB.s2p
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	defined as compatible with the following documents: "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>Moldability</b>	Before using in overmolding environment, please contact your EPCOS sales office.

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