



# **SAW Components**

## **SAW RF filter for Base Stations**

GSM 1800

<b>Series/type:</b>	<b>B5085</b>
<b>Ordering code:</b>	<b>B39172-B5085-U410</b>
<b>Date:</b>	<b>April 07, 2008</b>
<b>Version:</b>	<b>1.1</b>

<b>SAW Components</b>	<b>B5085</b>
<b>SAW RF filter</b>	<b>1747.5 MHz</b>

**Preliminary Data-sheet**



**Revision History: Changes compared to previous iteration issue**

ISSUE	ORIGINATOR	DETAIL SPEC CHANGES	DATE
DGLI15AS01			
0.1	S. Chamaly	Initial release	19.11.2007
DGLI15AS02			
0.2	S. Chamaly	Package change to DCC6C	21.11.2007
B5085			
1.0	S. Chamaly	Preliminary data-sheet	20.03.2008
B5085			
1.1	S. Chamaly	Introduction of specification above 2GHz	07.04.2008

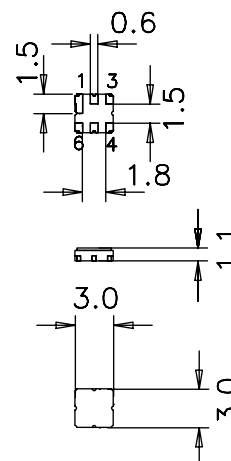
### Application

- RF filter for GSM1800 base station
- Low ripple
- Small size
- Single ended operation on 50  $\Omega$



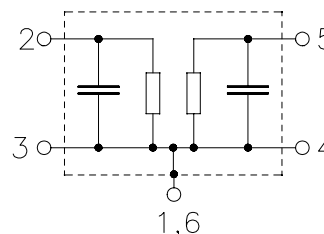
### Features

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code DCC6C
- RoHS compatible
- Approx. weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



### Pin configuration

- 2 Input
- 5 Output
- 1, 3, 4, 6 To be grounded



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**Characteristics**

Temperature range for specification:  $T = -35$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$  (unbalanced)  
 Terminating load impedance:  $Z_L = 50 \Omega$  (unbalanced)

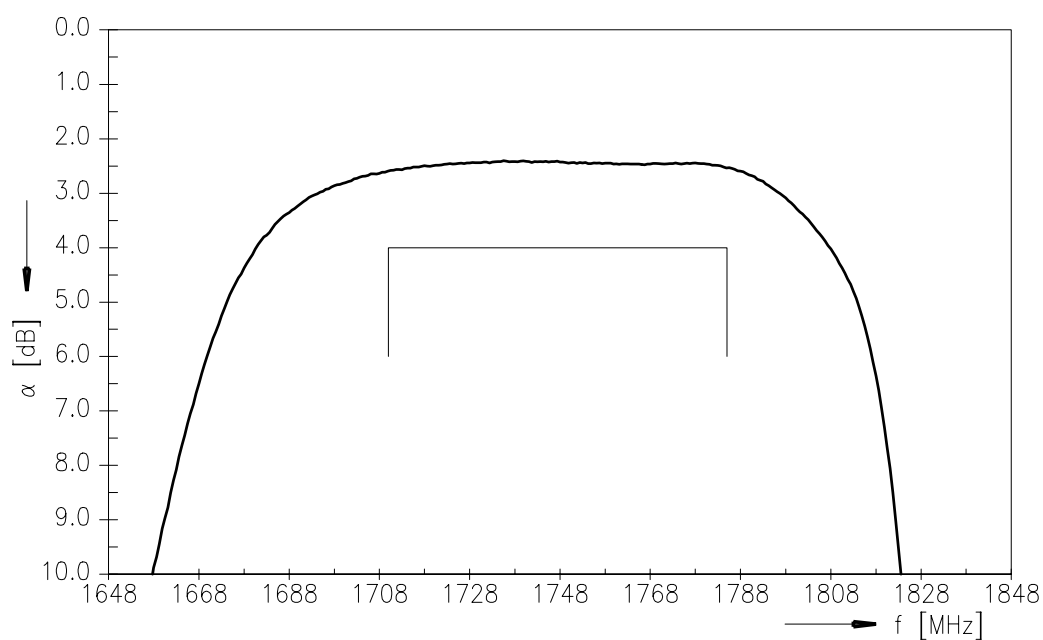
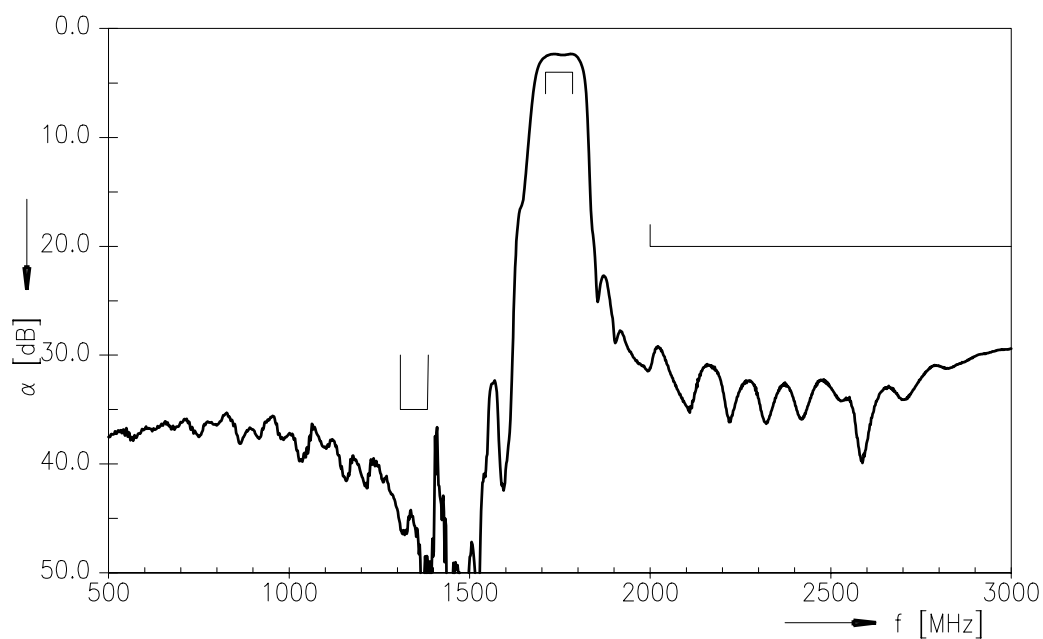
		<b>B5085</b>			
		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1747.5	—	MHz
<b>Minimum insertion attenuation</b> 1710.0 ... 1785.0 MHz	$\alpha_{\min}$	—	2.5	3.0	dB
<b>Maximum insertion attenuation</b> 1710.0 ... 1785.0 MHz	$\alpha_{\max}$	—	3.0	4.0	dB
<b>Amplitude ripple (p-p)</b> 1710.0 ... 1785.0 MHz	$\Delta\alpha$	—	0.5	1.0	dB
<b>Input VSWR</b> 1710.0 ... 1785.0 MHz		—	1.9 : 1	2.2:1	
<b>Output VSWR</b> 1710.0 ... 1785.0 MHz		—	1.8 : 1	2.2:1	
<b>Attenuation</b> 1308.0 ... 1383.0 MHz	$\alpha$	35.0	44.0	—	dB
2000.0 ... 3000.0 MHz		20.0	28.0	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-64	—	ppm/K

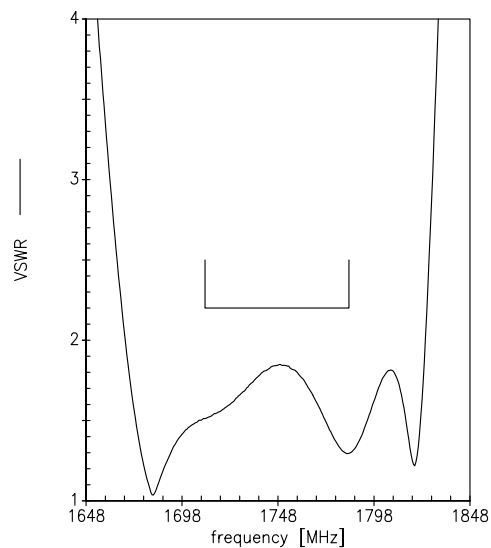
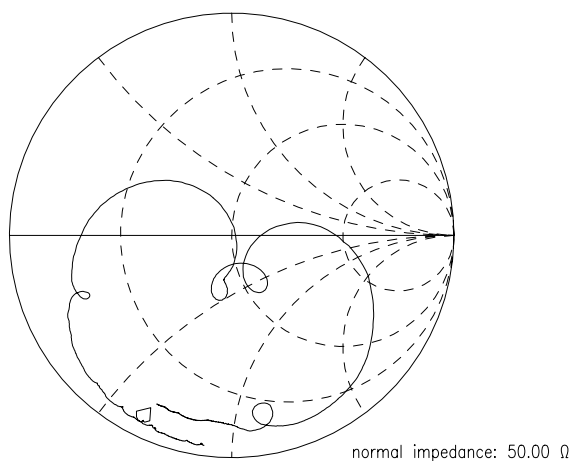
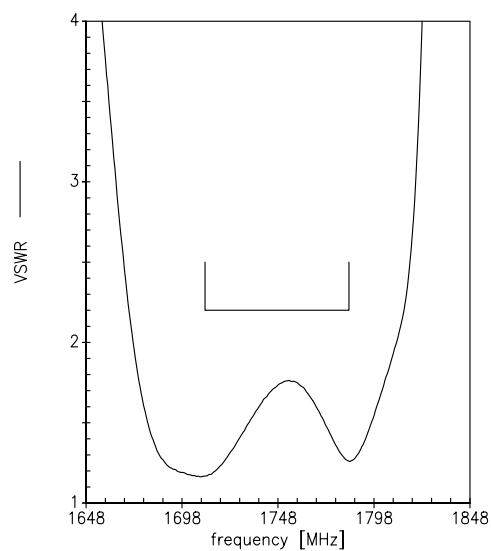
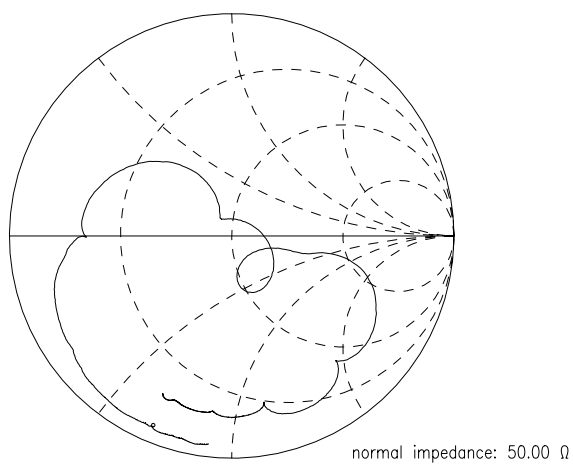
**SAW Components**
**B5085**
**SAW RF filter**
**1747.5 MHz**

Preliminary Data-sheet


**Maximum ratings**

Operable temperature range	T	-35/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	

**Transfer function**

**Transfer function (wideband)**


**Smith charts**

**S<sub>22</sub> function**


**SAW Components****B5085****SAW RF filter****1747.5 MHz**

Preliminary Data-sheet

**References**

<b>Type</b>	B5085
<b>Ordering code</b>	B39172-B5085-U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date code</b>	L_1126
<b>S-parameters</b>	
<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."

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**Published by EPCOS AG**  
**Surface Acoustic Wave Components Division**  
**P.O. Box 80 17 09, 81617 Munich, GERMANY**

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