SAW Components

SAW RF filter for Base Stations

GSM 1800

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

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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

Preliminay Data-sheet SMD

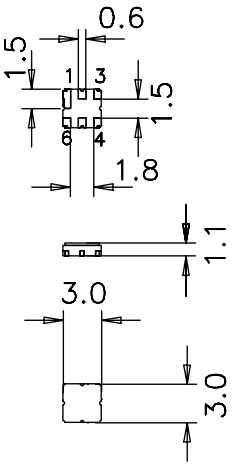
Application

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



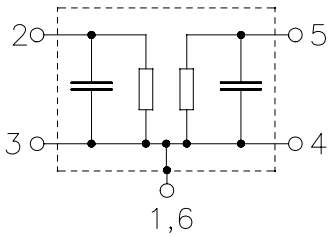
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approx. weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- Filter surface passivated



Pin configuration

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



Preliminay Data-sheet SMD

Characteristics

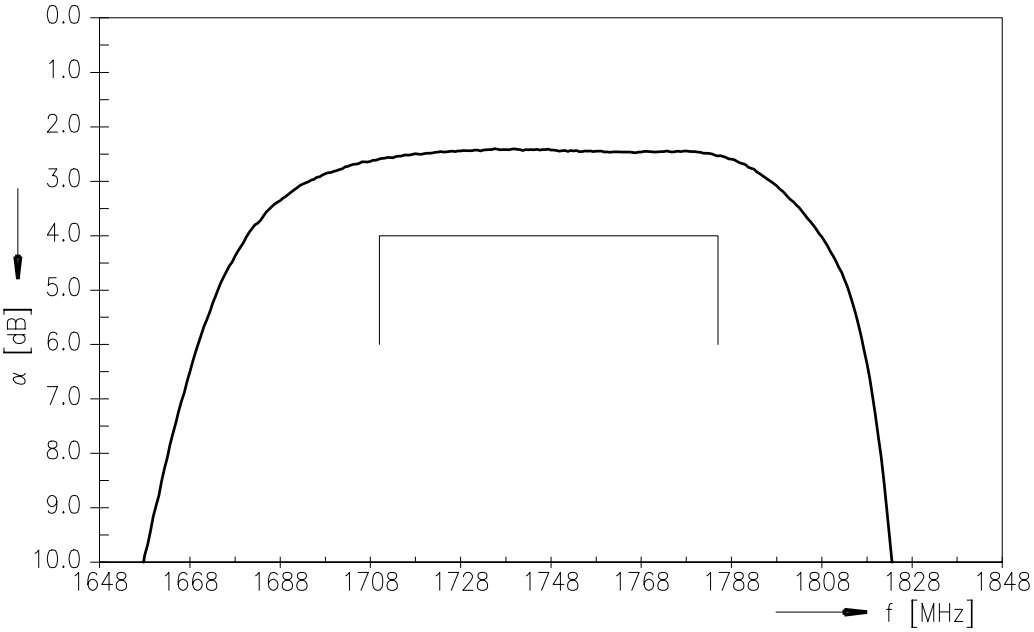
Temperature range for specification: T = -35 to +85 ˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (unbalanced)

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

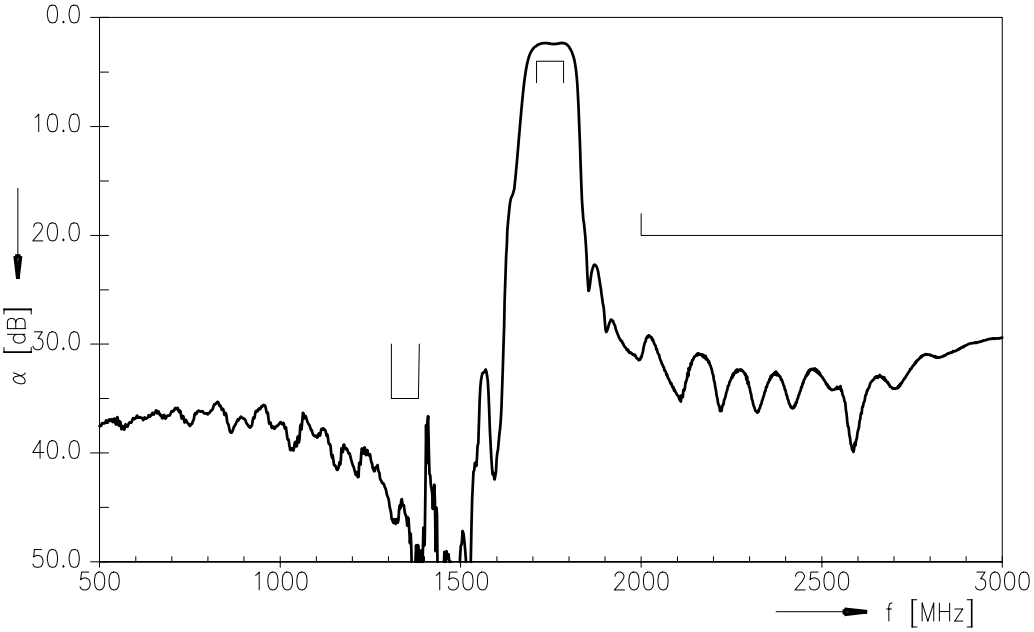
Maximum ratings

Operable temperature range	T	–35/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	0	V	

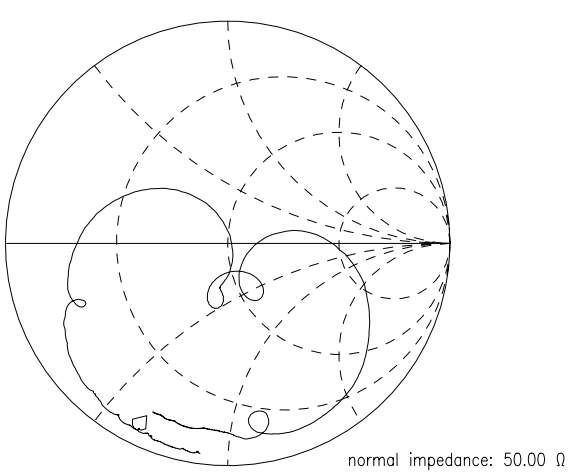
Transfer function

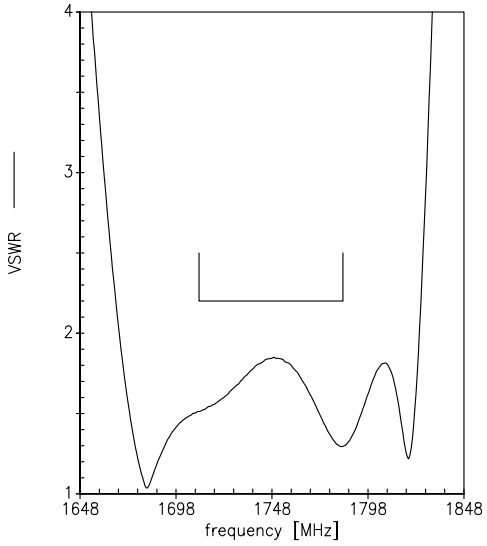


Transfer function (wideband)

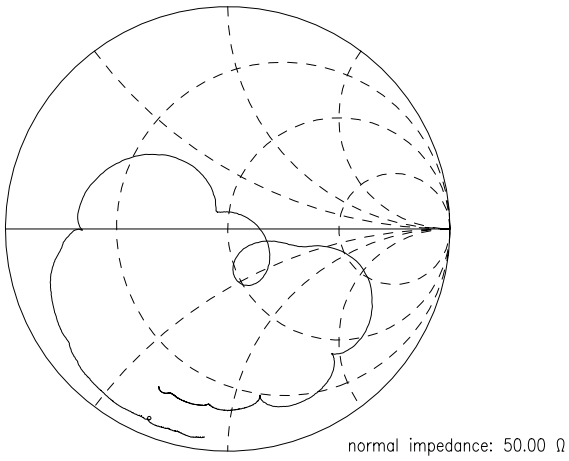


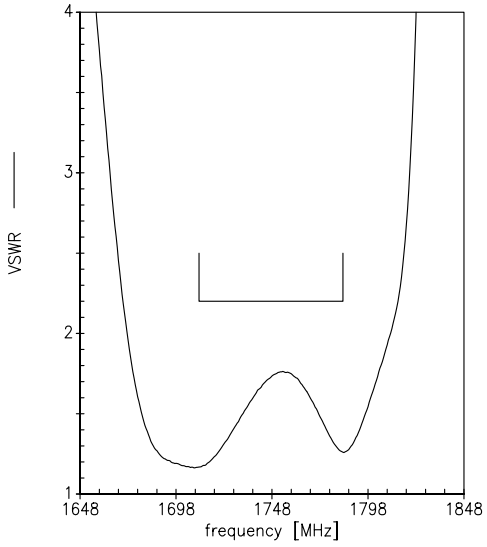
Smith charts





S_{22} function





References

Type	B5085
Ordering code	B39172-B5085-U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date code	L_1126
S-parameters	
Soldering profile	S_6001
RoHS compatible	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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