



## SAW Components

### SAW RF filter

GSM 1900

<b>Series/type:</b>	<b>B5104</b>
<b>Ordering code:</b>	<b>B39192B5104U410</b>
Date:	September 10, 2008
Version:	2.2



## SAW Components

B5104

### SAW RF filter

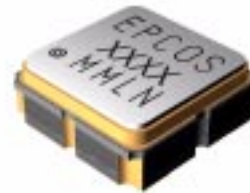
1880 MHz

#### Data Sheet



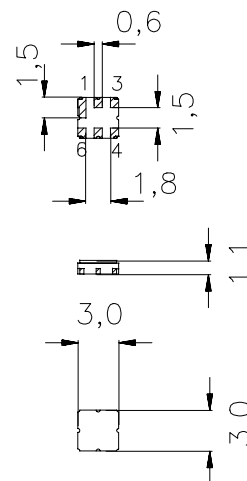
#### Application

- RF filter for GSM1900 base station
- Low ripple
- Small size
- Single ended operation on 50  $\Omega$



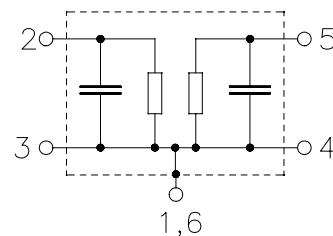
#### Features

- 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>LI35A 1)</b>			
		<b>min.</b>	<b>typ. @ 25 °C</b>	<b>max.</b>	
<b>Center frequency</b>	$f_C$	—	1880	—	MHz
<b>Minimum insertion attenuation</b> 1850.0 ... 1910.0 MHz	$\alpha_{\min}$	---	2.3	3.0	dB
<b>Maximum insertion attenuation</b> 1850.0 ... 1910.0 MHz	$\alpha_{\max}$	---	2.6	4.0	dB
<b>Amplitude ripple (p-p)</b> 1850.0 ... 1910.0 MHz	$\Delta\alpha$	—	0.3	1.0	dB
<b>VSWR</b> 1850.0 ... 1910.0 MHz		—	1.75	2.1	
<b>Attenuation</b> 1448.0 ... 1508.0 MHz	$\alpha$	30.0	36.0	---	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-64	—	ppm/K

1) Values in columns min, typ and max indicate the development status of the current version.



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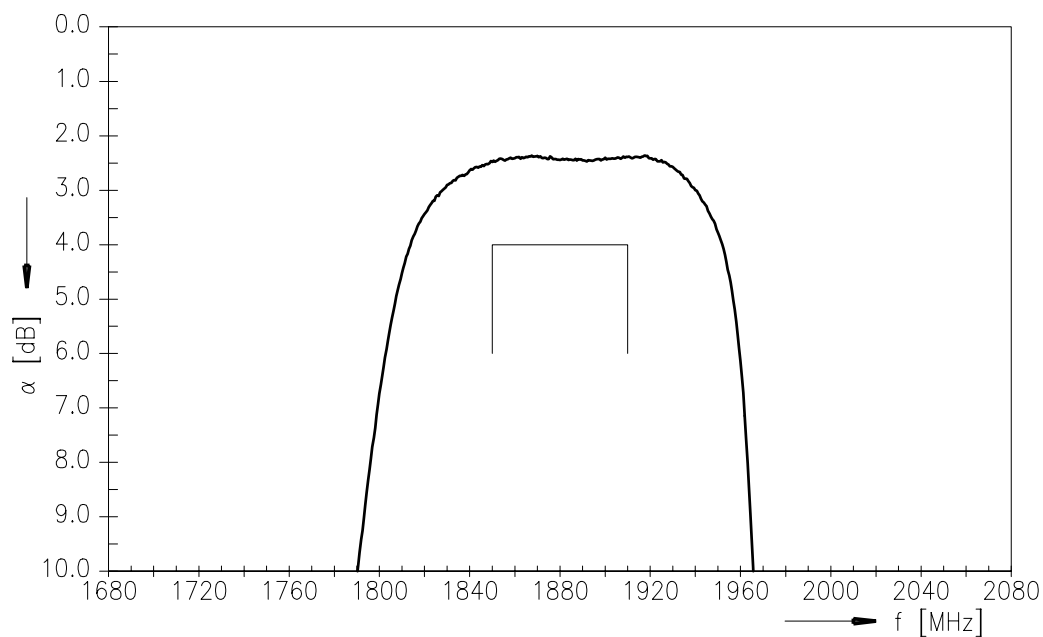
**SAW RF filter**

**1880 MHz**

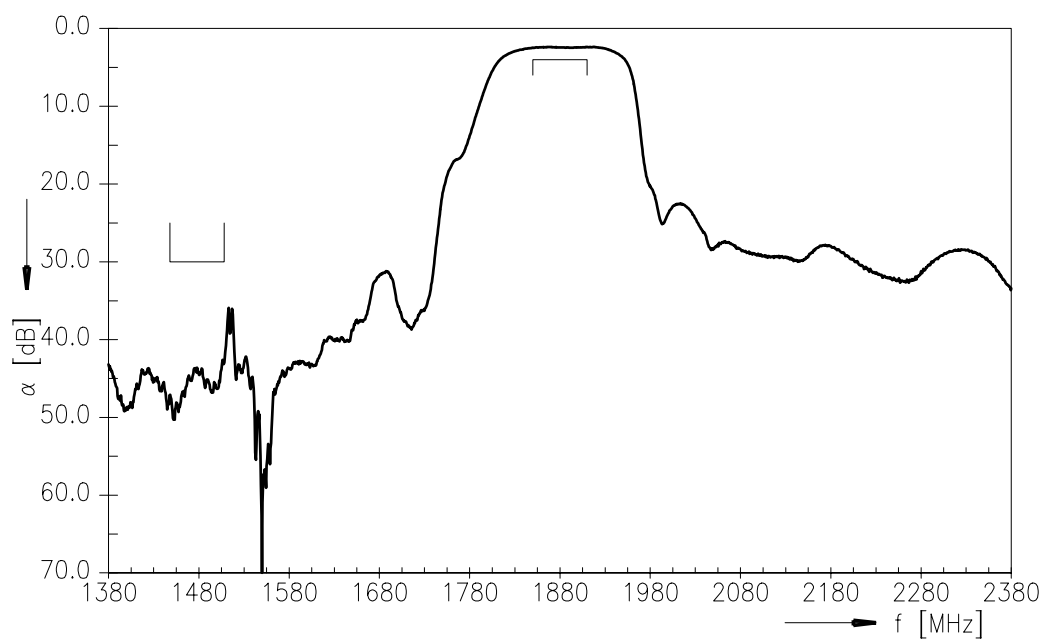
**Data Sheet**



**Transfer function**



**Transfer function (wideband)**





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**B5104**

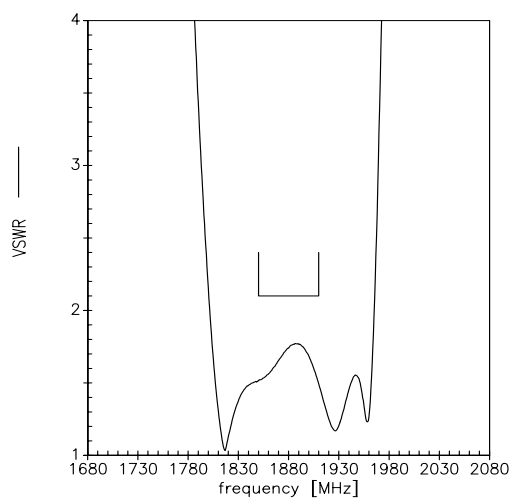
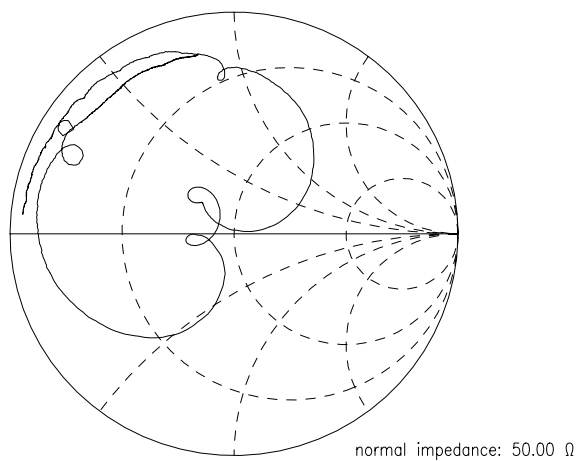
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**1880 MHz**

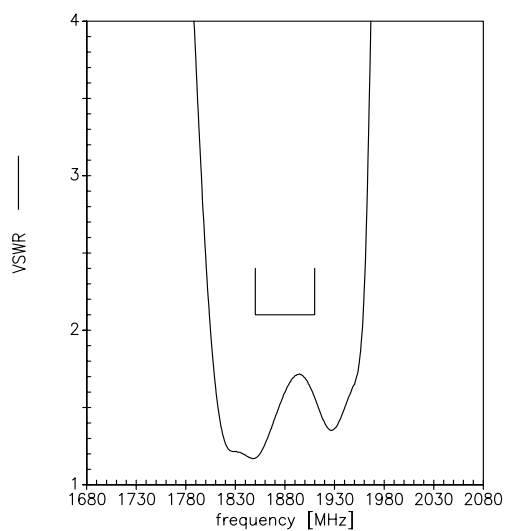
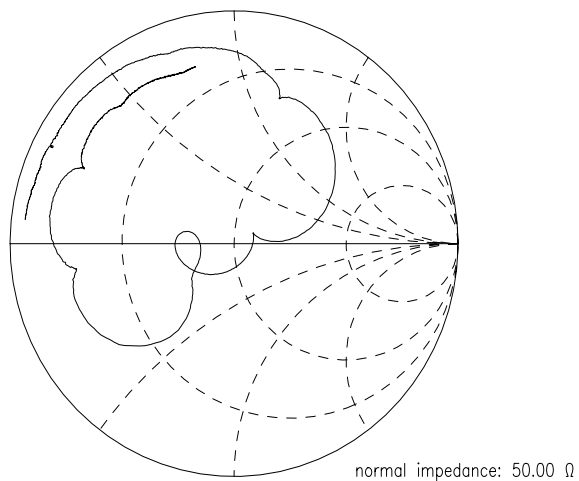
**Data Sheet**



**Smith charts**



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





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Data Sheet



**Maximun ratings**

Operable temperature range	T	-35/+85	°C	
Storage temperature range	T <sub>sta</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
Input power	P <sub>in</sub>	15	dBm	



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## References

Type	B5104
Ordering code	B39192B5104U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date code	L_1126
S-parameters	LI35A_NB.s2p
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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