



## **SAW Components**

### **SAW Tx Filter**

R-GSM

<b>Series/type:</b>	<b>B5057</b>
<b>Ordering code:</b>	<b>B39941B5057U410</b>
<b>Date:</b>	<b>March 22, 2007</b>
<b>Version:</b>	<b>2.0</b>



SAW Components

B5057

SAW Tx Filter

940.5 MHz

Data Sheet

**SMD**

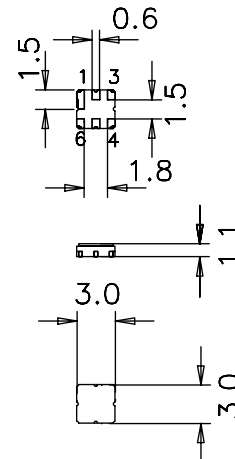
### Application

- Low-loss filter for Basestation R-GSM, transmit path (Tx)
- Usable passband 39 MHz
- Unbalanced to unbalanced operation
- No matching required
- Filter impedance 50  $\Omega$



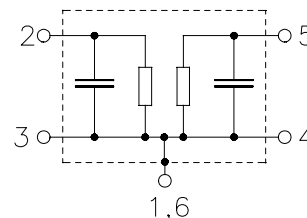
### Features

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



### Pin configuration

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



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



Data Sheet



Characteristics

Temperature range for specification:  $T = -30$  to  $+80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	940.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	2.7	4.0 <sup>1)</sup>	dB
921.0 ... 960.0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1.4	3.0 <sup>2)</sup>	dB
921.0 ... 960.0 MHz					
<b>Input VSWR</b>		—	2.3	3.0 <sup>3)</sup>	
921.0 ... 960.0 MHz					
<b>Output VSWR</b>		—	2.6	3.0 <sup>4)</sup>	
921.0 ... 960.0 MHz					
<b>Attenuation</b>	$\alpha$				
0.3 ... 800.0 MHz		25	47	—	dB
800.0 ... 880.0 MHz		26	39	—	dB
880.0 ... 905.0 MHz		20 <sup>5)</sup>	31	—	dB
905.0 ... 915.0 MHz		2 <sup>6)</sup>	6	—	dB
980.0 ... 985.0 MHz		23	42	—	dB
985.0 ... 1005.0 MHz		30	34	—	dB
1005.0 ... 1025.0 MHz		30	34	—	dB
1025.0 ... 1760.0 MHz		27	34	—	dB
1760.0 ... 2000.0 MHz		28	32	—	dB
2000.0 ... 4000.0 MHz		18	23	—	dB

- 1) 3.0 dB at 25 °C.
- 2) 2.0 dB at 25 °C.
- 3) 2.8 at 25 °C.
- 4) 2.8 at 25 °C.
- 5) 28 dB at 25 °C.
- 6) 3 dB at 25 °C.



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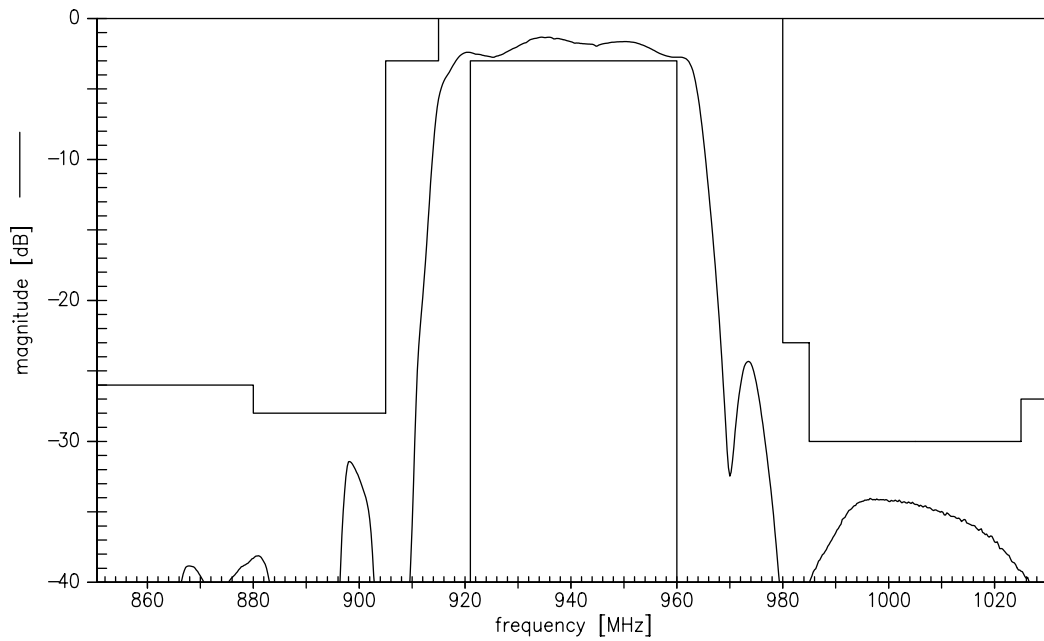
### Maximum ratings

Operable temperature range	T	-40 / +85	°C	
Storage temperature range	T <sub>stg</sub>	-40 / +85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 10 pulses
Input Power at 921.0 ... 960.0 MHz	P <sub>IN</sub>	10	dBm	continuous wave

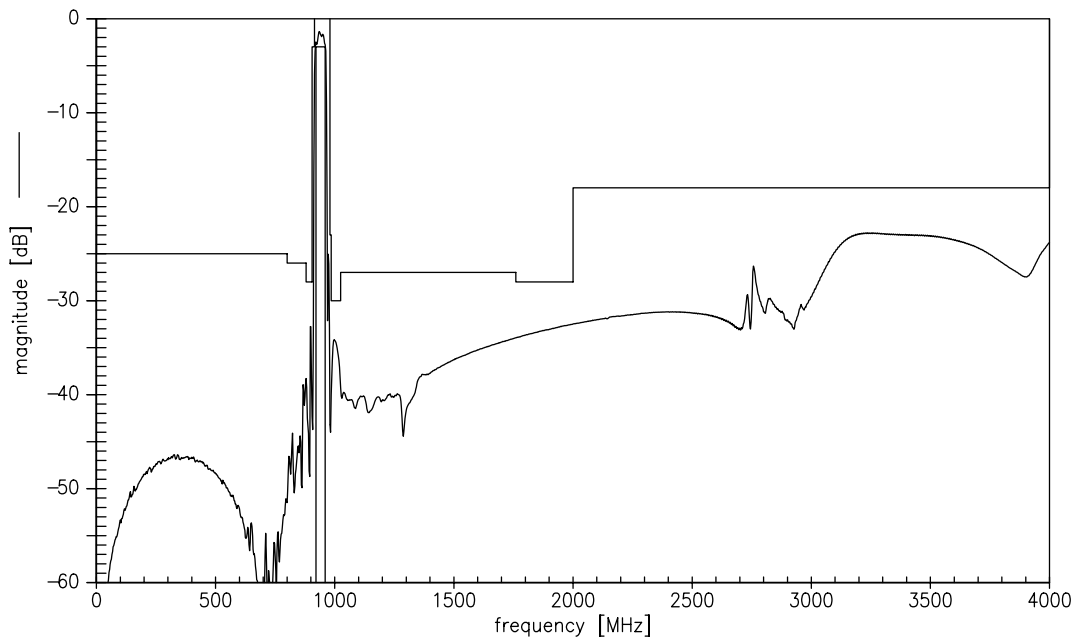
<sup>1)</sup> acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



Transfer function (narrowband)



Transfer function (wideband)



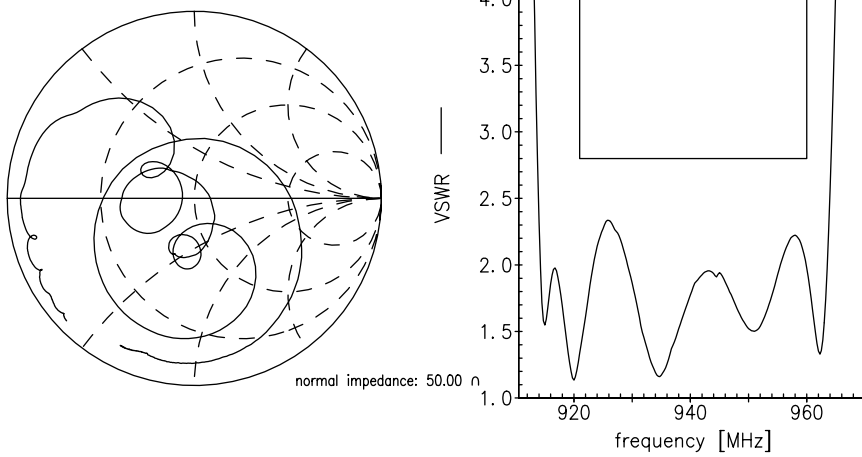


Data Sheet

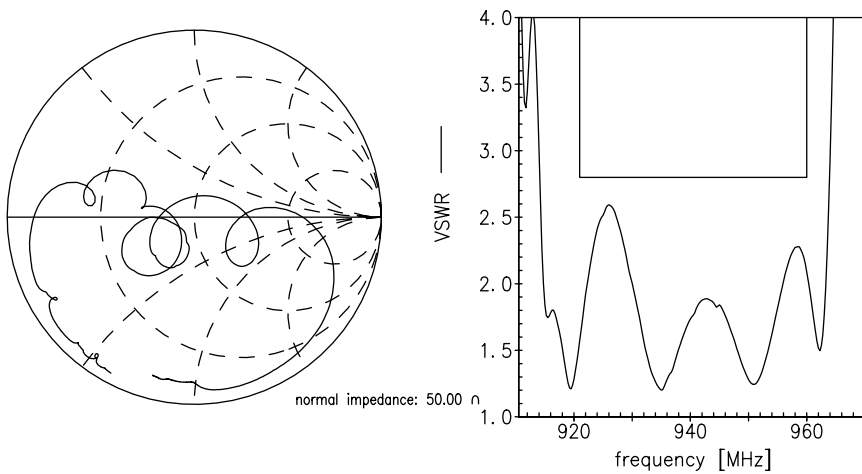


Smith chart

$S_{11}$  function



$S_{22}$  function





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Data Sheet



## References

<b>Type</b>	B5057
<b>Ordering code</b>	B39941B5057U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5057_NB.s2p B5057_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."

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

7 March 22, 2007



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