



# SAW Components

## SAW Rx Filter

Low Loss Filter for Mobile Communication

<b>Series/type:</b>	<b>B4684</b>
<b>Ordering code:</b>	<b>B39951B4684Z610</b>
<b>Date:</b>	<b>May 19, 2009</b>
<b>Version:</b>	<b>2.0</b>

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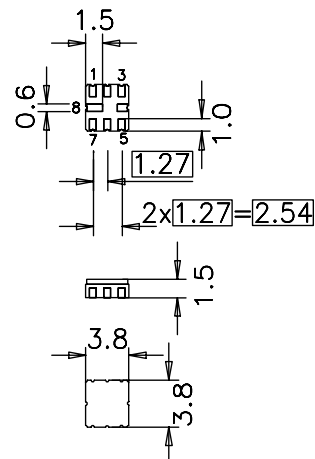
**Data Sheet**

**Application**

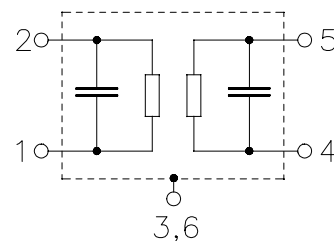
- Low-loss RF filter for mobile telephone, receive path
- Low amplitude ripple
- Usable passband 25MHz
- No matching required for operation at 50 Ω


**Features**

- Package size 3.8 x 3.8 x 1.5 mm<sup>3</sup>
- Package code DCC6
- Approx. weight 0.07 g
- Ceramic package for **Surface Mount Technology (SMT)**
- RoHS compliant
- Ni, gold-plated


**Pin configuration**

- 2 Input
- 1 Input - ground
- 5 Output
- 4 Output - ground
- 3,6 Case ground



**Data Sheet**

**Characteristics**

Temperature range for specification:  $T = 25 \pm 2^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	947.50	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
935.0 ... 960.0 MHz		—	3.0	3.5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
935.0 ... 960.0 MHz		—	0.7	1.0	dB
<b>Attenuation</b>	$\alpha$				
0.0 ... 600.0 MHz		50	65	—	dB
600.0 ... 700.0 MHz		45	60	—	dB
700.0 ... 890.0 MHz		40	50	—	dB
890.0 ... 915.0 MHz		32	40	—	dB
915.0 ... 927.0 MHz		4	12	—	dB
980.0 ... 1000.0 MHz		22	27	—	dB
1000.0 ... 1030.0 MHz		32	36	—	dB
1030.0 ... 1500.0 MHz		40	50	—	dB
1500.0 ... 1900.0 MHz		35	48	—	dB
1900.0 ... 2500.0 MHz		15	24	—	dB
2500.0 ... 2900.0 MHz		10	18	—	dB

**Data Sheet**

**Characteristics**

Temperature range for specification:  $T = -10$  to  $+75$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	947.50	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	3.1	3.8	dB
935.0 ... 960.0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.8	1.5	dB
935.0 ... 960.0 MHz					
<b>Attenuation</b>	$\alpha$				
0.0 ... 600.0 MHz		50	65	—	dB
600.0 ... 700.0 MHz		45	60	—	dB
700.0 ... 890.0 MHz		40	50	—	dB
890.0 ... 915.0 MHz		32	40	—	dB
915.0 ... 927.0 MHz		4	12	—	dB
980.0 ... 1000.0 MHz		20	24	—	dB
1000.0 ... 1030.0 MHz		32	36	—	dB
1030.0 ... 1500.0 MHz		40	50	—	dB
1500.0 ... 1900.0 MHz		35	48	—	dB
1900.0 ... 2500.0 MHz		15	24	—	dB
2500.0 ... 2900.0 MHz		10	18	—	dB

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**B4684**

**SAW Rx Filter**

**947.50 MHz**

Data Sheet

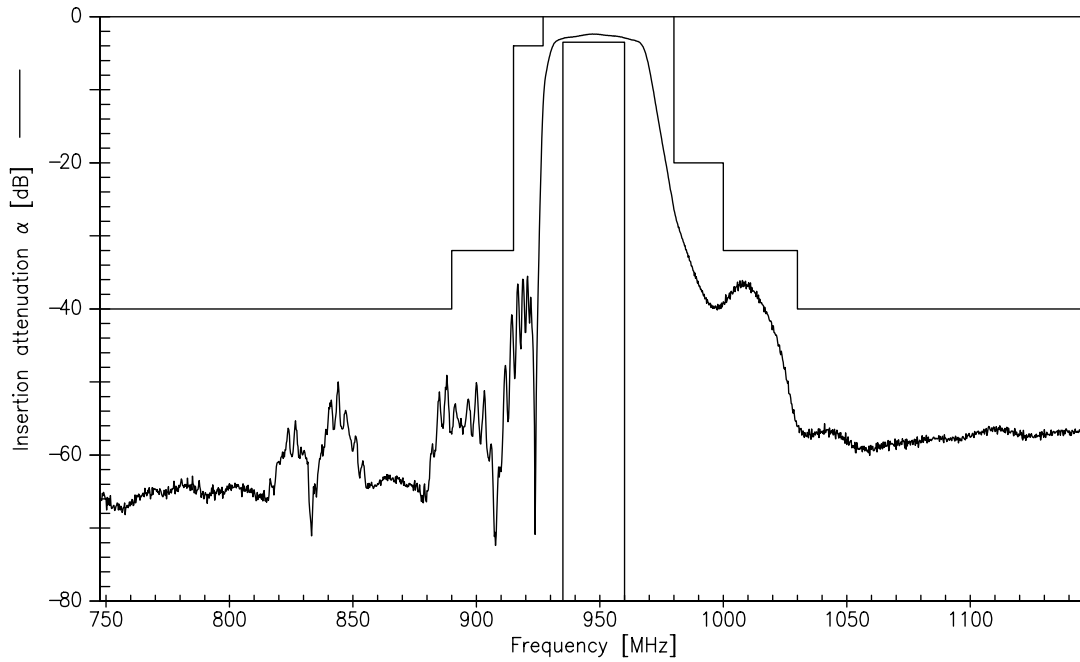


**Maximum ratings**

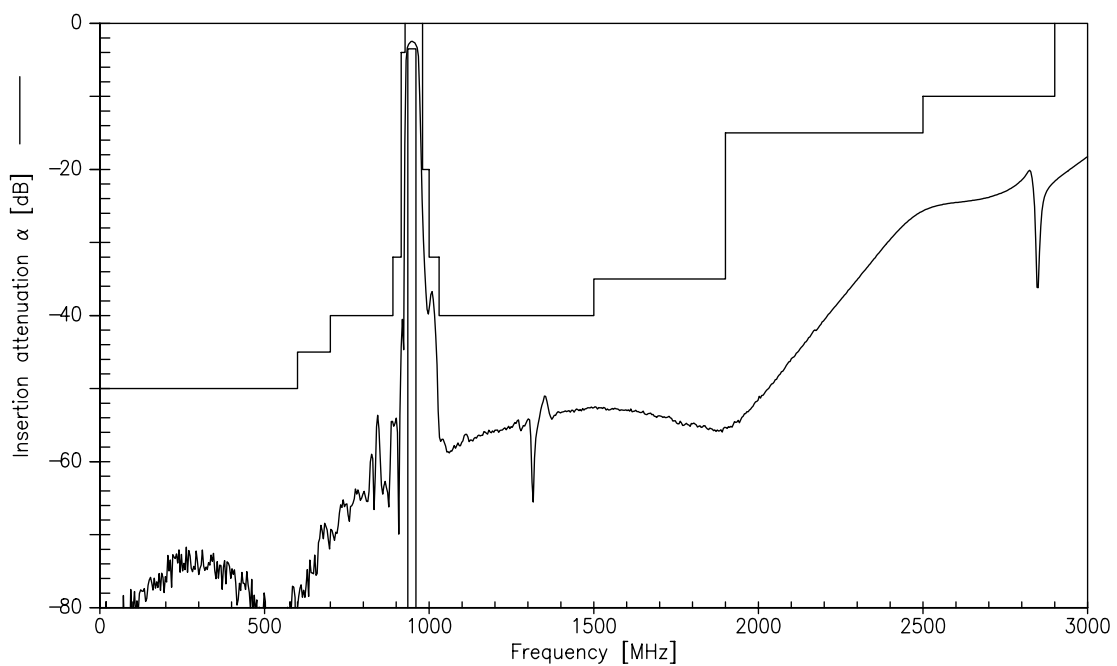
Operable temperature range	T	-10 / +75	°C	
Storage temperature range	T <sub>stg</sub>	-40 / +85	°C	
DC voltage	V <sub>DC</sub>	0	V	
Source power	P <sub>s</sub>	10	dBm	source impedance 50 Ω



Transfer function (narrowband)



Transfer function (wideband)




**References**

<b>Type</b>	B4684
<b>Ordering code</b>	B39951B4684Z610
<b>Marking and package</b>	C61157-A7-A41
<b>Packaging</b>	F61074-V8030-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B4684_NB.s3p B4684_WB.s3p See file header for port/pin assignment table
<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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