



## **SAW Components**

### **SAW filter**

Trunked Radio

<b>Series/type:</b>	<b>B3822</b>
<b>Ordering code:</b>	<b>B39391B3822Z810</b>
<b>Date:</b>	<b>April 06, 2009</b>
<b>Version:</b>	<b>2.0</b>



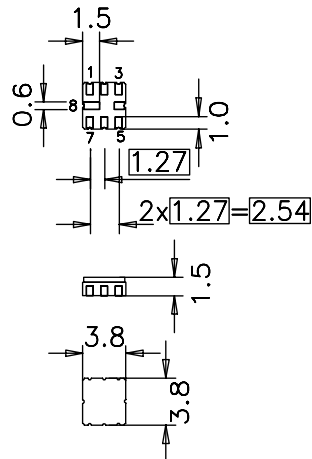
**Application**

- Low-loss filter (Rx) for Trunked Radio
- Low amplitude ripple
- No matching required for operation at 50 Ω
- Usable passband of 5 MHz



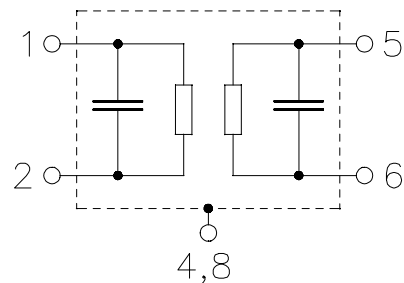
**Features**

- Package size 3.8 x 3.8 x 1.5 mm<sup>3</sup>
- Package code QCC8B
- RoHS compatible
- Approximate weight 0.07 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)



**Pin configuration**

- 1 Input
- 2 Input ground
- 5 Output
- 6 Output ground
- 3,7 Ground
- 4,8 Case grounded





Data sheet



**Characteristics**

Temperature range for specification:  $T = +15\text{ °C to }+35\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	392.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
390.0 ... 395.0 MHz		—	2.7	3.5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
390.0 ... 395.0 MHz		—	0.6	1.4	dB
<b>VSWR</b>					
390.0 ... 395.0 MHz		—	1.65:1	2.0:1	
<b>Attenuation</b>	$\alpha$				
0.1 ... 350.0 MHz		40	60	—	dB
350.0 ... 385.0 MHz		25	35	—	dB
430.0 ... 885.0 MHz		40	45	—	dB
885.0 ... 2000.0 MHz		20	25	—	dB



Data sheet



Characteristics

Temperature range for specification:  $T = -30\text{ °C to }+70\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	392.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	3.0	3.5	dB
390.0 ... 395.0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.8	2.0	dB
390.0 ... 395.0 MHz					
<b>VSWR</b>		—	1.65:1	2.0:1	
<b>Attenuation</b>	$\alpha$				
0.1 ... 350.0 MHz		40	60	—	dB
350.0 ... 385.0 MHz		25	35	—	dB
430.0 ... 885.0 MHz		40	45	—	dB
885.0 ... 2000.0 MHz		20	25	—	dB



SAW Components

B3822

SAW filter

392.50 MHz

Data sheet



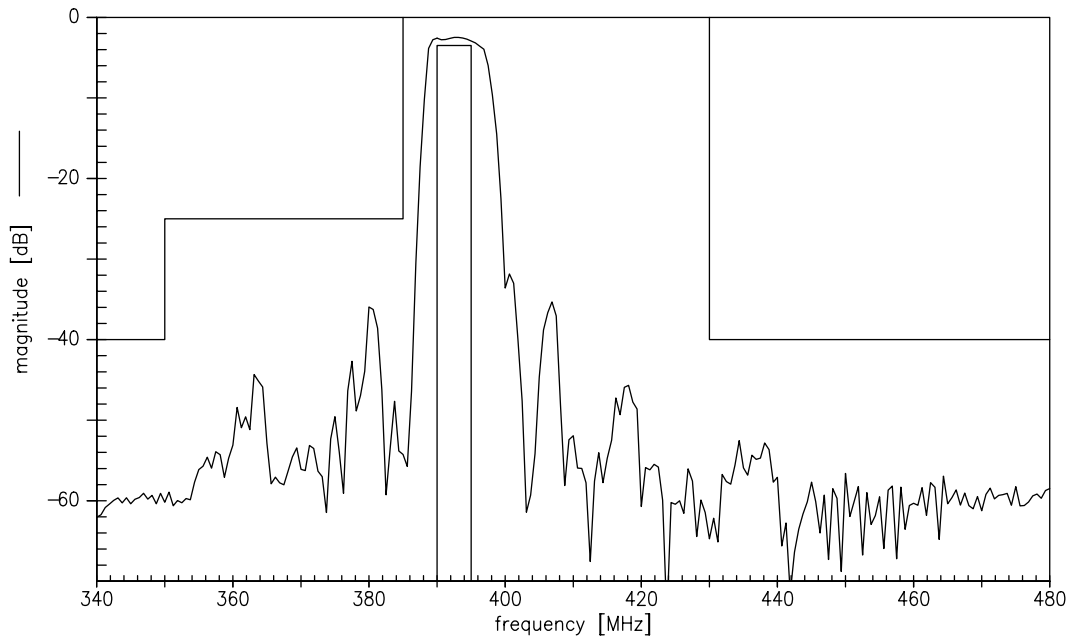
### Maximum ratings

Operable temperature range	T	-30/+70	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 1 pulse
Input power at 390.0 ... 395.0	P <sub>IN</sub>	10	dBm	CW

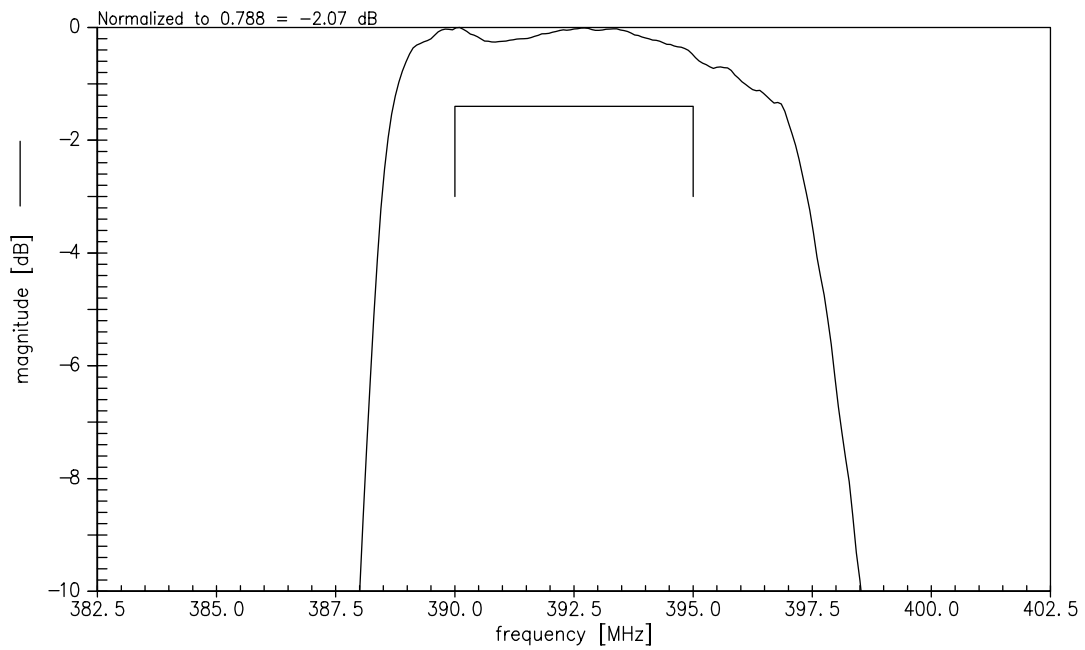
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Normalized transfer function (passband; +15°C to 35°C)



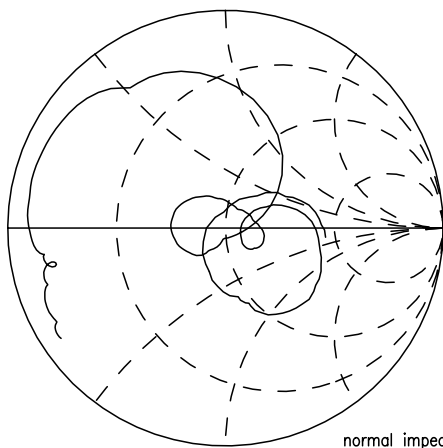


Data sheet

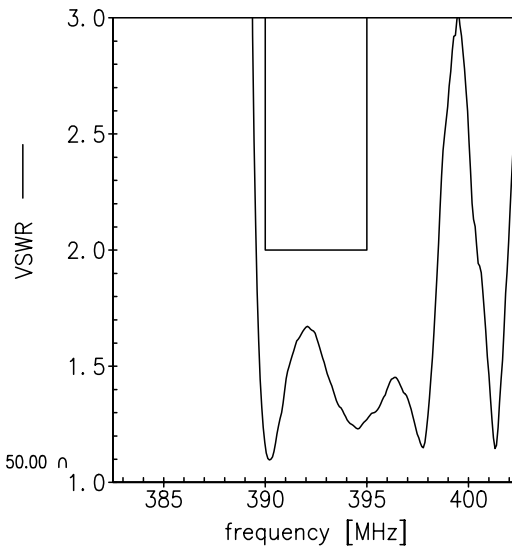


Smith charts

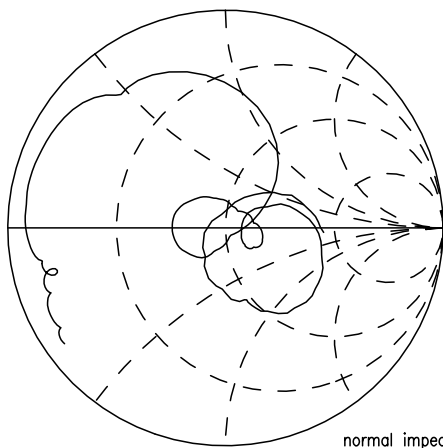
S<sub>11</sub> function



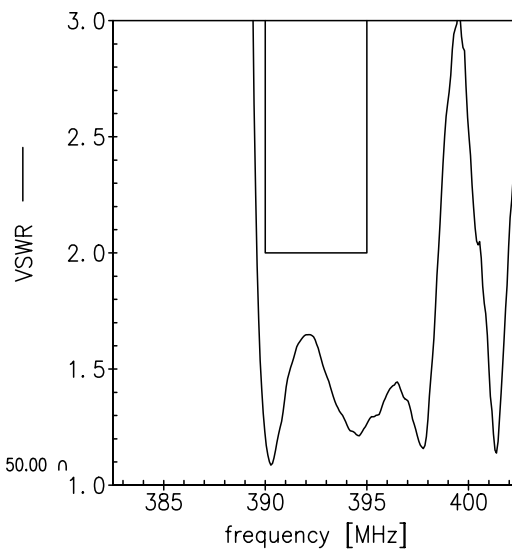
normal impedance: 50.00  $\Omega$



S<sub>22</sub> function



normal impedance: 50.00  $\Omega$





<b>SAW Components</b>	<b>B3822</b>
<b>SAW filter</b>	<b>392.50 MHz</b>
Data sheet	

## References

<b>Type</b>	B3822
<b>Ordering code</b>	B39391B3822Z810
<b>Marking and package</b>	C61157-A7-A46
<b>Packaging</b>	F61074-V8167-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B3822_NB.s2p B3822_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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