



## **SAW Components**

**SAW LO filter**

iDEN

<b>Series/type:</b>	<b>B3852</b>
<b>Ordering code:</b>	<b>B39102B3852U410</b>
<b>Date:</b>	<b>February 15, 2008</b>
<b>Version:</b>	<b>2.0</b>



SAW Components

B3852

SAW LO filter

1047.65 MHz

Data sheet



### Application

- Low-loss LO filter for iDEN phone
- Usable passband 6 MHz
- No matching required for operation at 50  $\Omega$



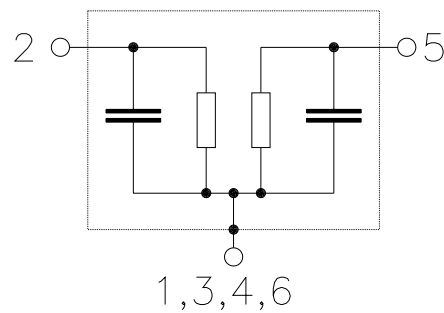
### Features

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)



### Pin configuration

- 2 Input unbalanced
- 5 Output unbalanced
- 1,3,4,6 Case grounded



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



Data sheet



Characteristics

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

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1047.65	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	1.65	2.50	dB
	1044.65 ... 1050.65 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.1	0.6	dB
	1044.65 ... 1050.65 MHz				
<b>Return loss(Input and Output)</b>		14.0	17.0	—	dB
	1044.65 ... 1050.65 MHz				
<b>Attenuation</b>	$\alpha$				
	0.1 ... 935.0 MHz	40	53	—	dB
	935.0 ... 941.0 MHz	40	53	—	dB
	1154.3 ... 1160.3 MHz	40	50	—	dB
	1160.3 ... 2200.0 MHz	25	42	—	dB
	2200.0 ... 3000.0 MHz	23	38	—	dB



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<b>SAW LO filter</b>	<b>1047.65 MHz</b>

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**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1047.65	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	1.8	2.5	dB
1044.65 ... 1050.65 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.3	1.0	dB
1044.65 ... 1050.65 MHz					
<b>Return loss(Input and Output)</b>		14.0	16.0	—	dB
1044.65 ... 1050.65 MHz					
<b>Attenuation</b>	$\alpha$				
0.1 ... 935.0 MHz		40	53	—	dB
935.0 ... 941.0 MHz		40	53	—	
1154.3 ... 1160.3 MHz		40	50	—	dB
1160.3 ... 2200.0 MHz		25	42	—	
2200.0 ... 3000.0 MHz		23	38	—	dB



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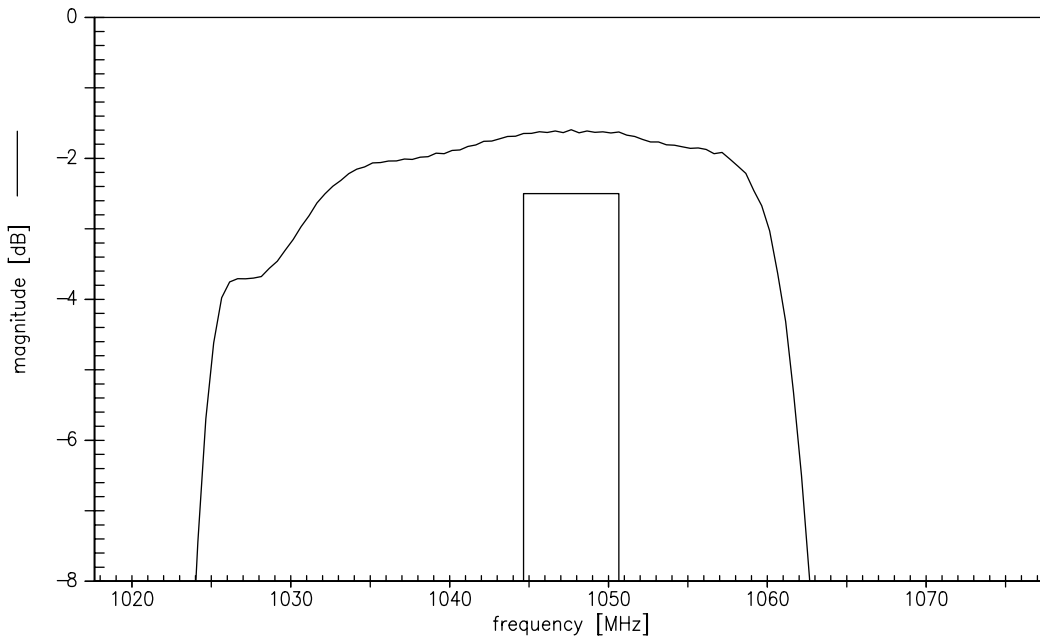
### Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 1 pulse
Input power at 1044.65 ... 1050.65	P <sub>IN</sub>	0	dBm	source impedance 50 Ω

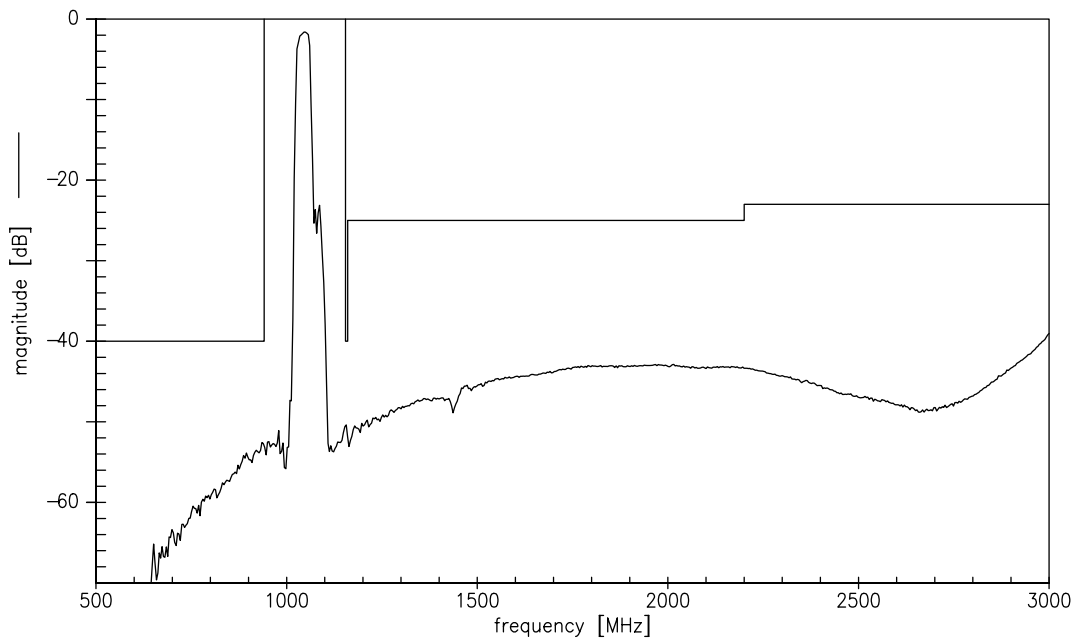
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wideband)



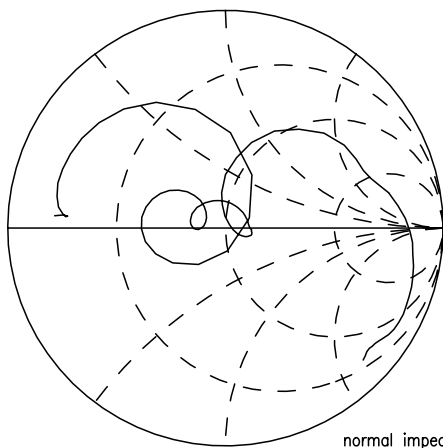


Data sheet

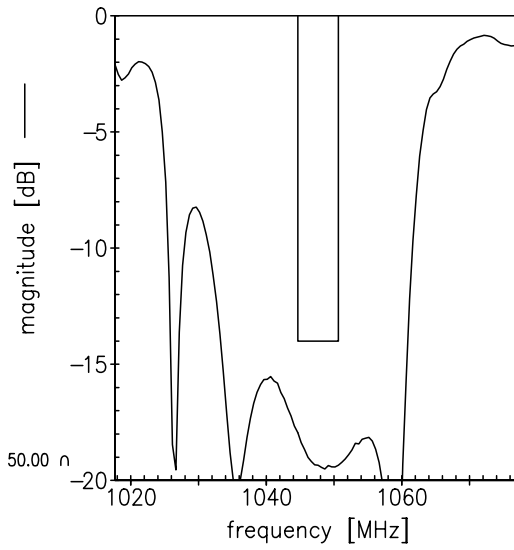


Smith charts

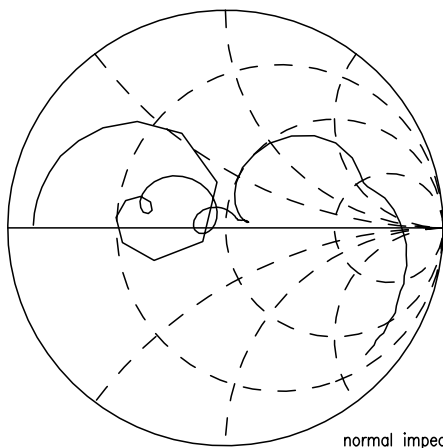
S<sub>11</sub> function



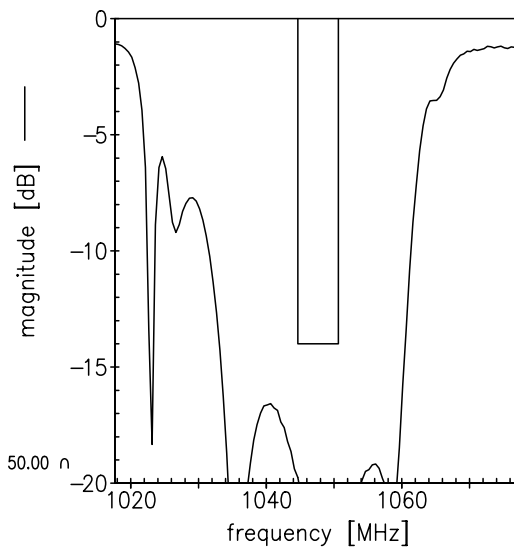
normal impedance: 50.00  $\Omega$



S<sub>22</sub> function



normal impedance: 50.00  $\Omega$





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## References

<b>Type</b>	B3852
<b>Ordering code</b>	B39102B3852U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B3852_NB.s2p B3852_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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