



## **SAW Components**

### **SAW Tx Filter**

WCDMA/LTE Band 7

<b>Series/Type:</b>	<b>B9868</b>
<b>Ordering code:</b>	<b>B39252B9868P810</b>
Date:	Dec, 11, 2012
Version:	2.0



Data sheet



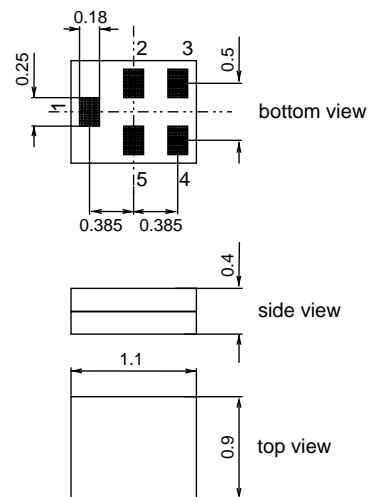
Application

- Low-loss RF filter for mobile telephone WCDMA/LTE Band 7 systems
- Low amplitude ripple
- Usable passband: 70 MHz
- Impedance at input and output 50 Ω
- Unbalanced to unbalanced operation



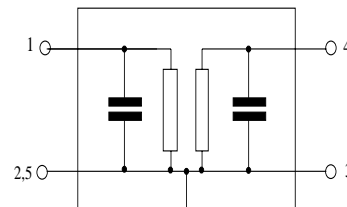
Features

- Package size 1.1 x 0.9 x 0.4 mm<sup>3</sup>
- RoHS compatible
- Approx. weight 0.001 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)
- Moisture Sensitive Level 3



Pin configuration

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





<b>SAW Components</b>	<b>B9868</b>
<b>SAW Tx Filter</b>	<b>2535.0 MHz</b>

Data sheet



**Characteristics**

Operating temperature range: T = -20 °C to +85 °C  
 Terminating source impedance: Z<sub>S</sub> = 50 Ω  
 Terminating load impedance: Z<sub>L</sub> = 50 Ω

		min.	typ. @ 25°C	max.	
<b>Center frequency</b>	f <sub>C</sub>	—	2535.0	—	MHz
<b>Maximum insertion attenuation</b>	α <sub>max</sub>				
2500.0 ... 2570.0 MHz		—	1.5	1.9	dB
<b>Amplitude ripple (p-p)</b>	Δα				
2500.0 ... 2570.0 MHz		—	0.9	1.2	dB
<b>Input VSWR</b>					
2500.0 ... 2570.0 MHz		—	1.6	2.0	
<b>Output VSWR</b>					
2500.0 ... 2570.0 MHz		—	1.7	2.0	
<b>Attenuation</b>	α				
1570.0 ... 1610.0 MHz		25	28	—	dB
2400.0 ... 2460.0 MHz		20	31	—	dB
2620.0 ... 2690.0 MHz		32	37	—	dB
5000.0 ... 5140.0 MHz		35	43	—	dB
7500.0 ... 7710.0 MHz		-	25	—	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>	5	V	
ESD voltage	V <sub>ESD</sub>	50 <sup>1)</sup>	V	machine model, 1 pulse
Input Power at 2500.0...2570.0 MHz	P <sub>IN</sub>	10	dBm	continuous wave

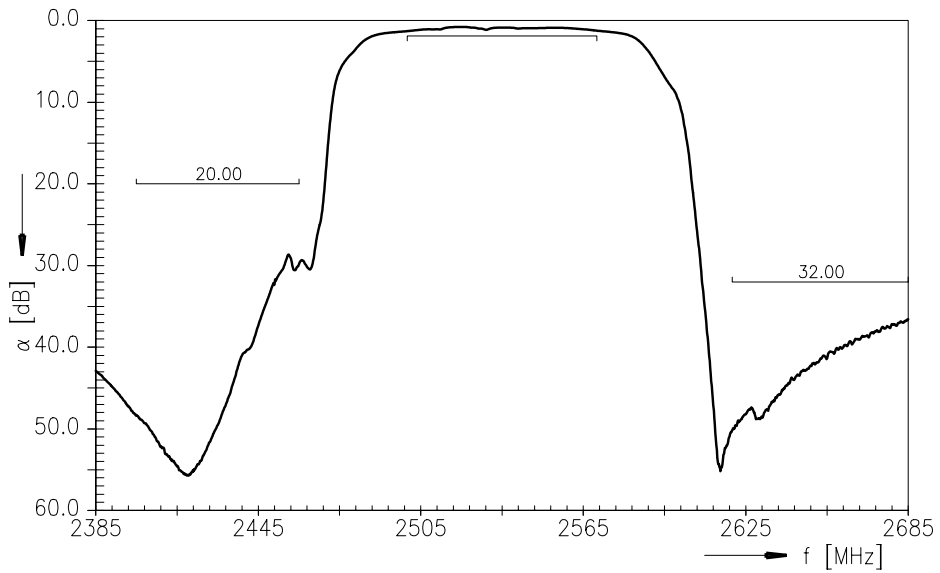
1) acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



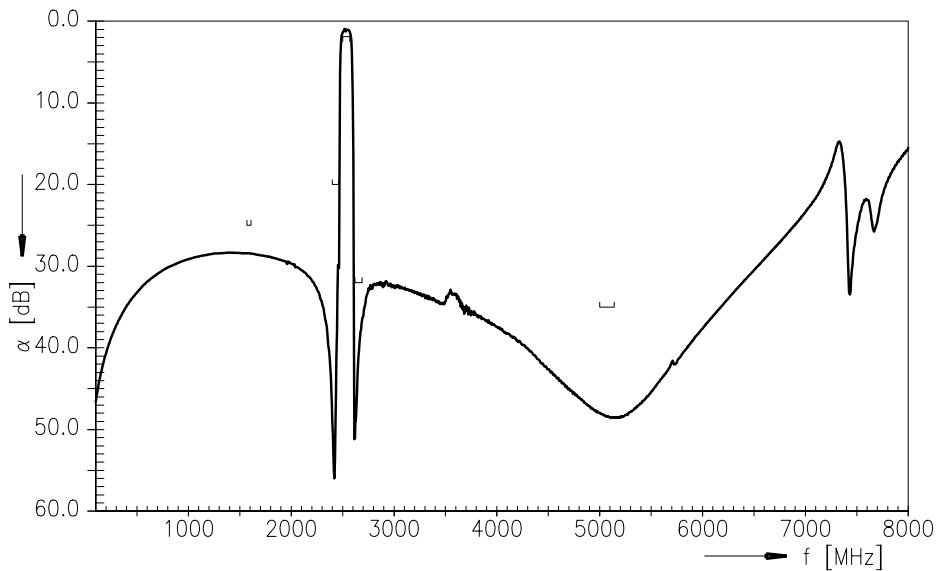
Data sheet



Transfer function

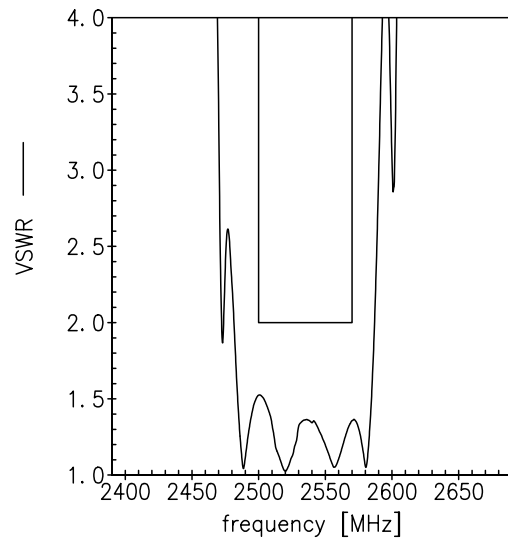
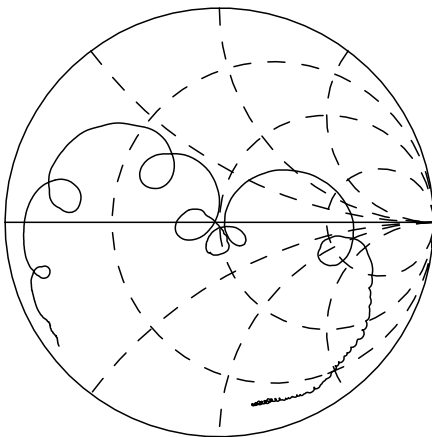


Transfer function (wideband)

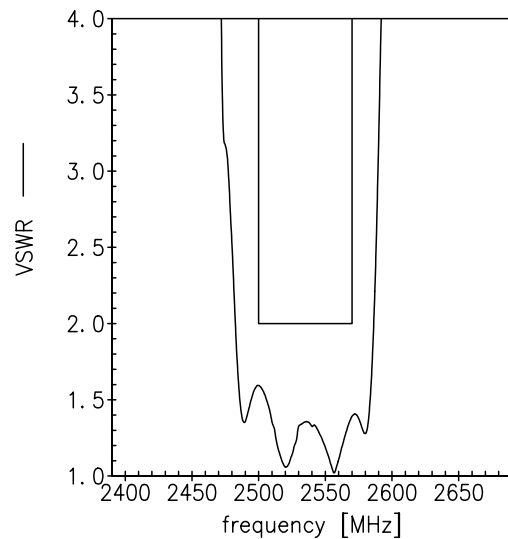
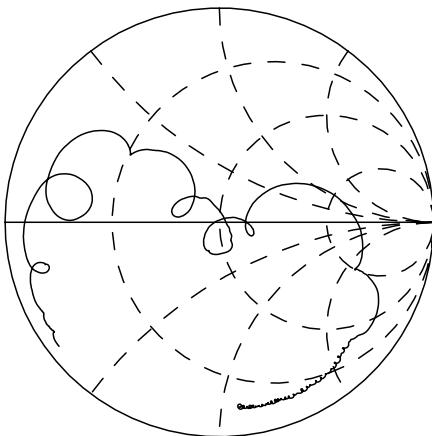


Please read *cautions and warnings* and *important notes* at the end of this document.

**S<sub>11</sub> function**



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





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## References

<b>Type</b>	B9868
<b>Ordering code</b>	B39252B9868P810
<b>Marking and package</b>	C61157-A8-A30
<b>Packaging</b>	F61074-V8255-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B9868_NB.s2p, B9868_WB.s2p 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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<b>Matching coils</b>	See <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a> for a large variety of matching coils.

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