

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW Tx filter

WCDMA Band 4

Series/type: B8801  
Ordering code: B39172B8801P810

Date: May 21, 2013  
Version: 2.0

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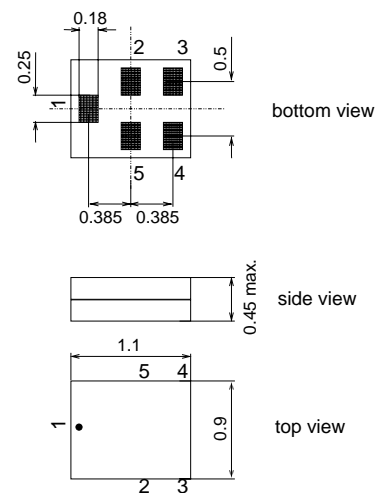
Data sheet


**Application**

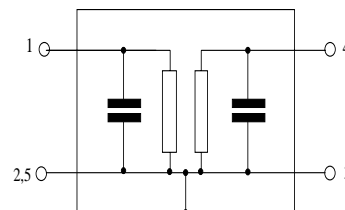
- Low-loss RF filter for mobile telephone WCDMA Band 4 system, transmit path (Tx)
- Suitable for diversity applications
- Impedance 50 ohm input and output
- Unbalanced to unbalanced operation
- Usable passband 45 MHz


**Features**

- Package size 1.1 x 0.9 mm<sup>2</sup>
- Maximum package height 0.45 mm
- RoHS compatible
- Approx. weight 0.001g
- 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



**SAW Components**
**B8801**
**SAW Filter**
**1732.5 MHz**

Data sheet


**Characteristics**

Temperature range for specification:  $T = -30\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25°C	max.	
<b>Center frequency</b>	$f_C$	—	1732.5	—	MHz
<b>Maximum insertion attenuation</b> 1710.0 ... 1755.0 MHz	$\alpha_{\max}$	—	1.4	2.0	dB
<b>Amplitude ripple (p-p)</b> 1710.0 ... 1755.0 MHz	$\Delta\alpha$	—	0.7	1.3	dB
<b>Input VSWR</b> 1710.0 ... 1755.0 MHz		—	1.7	2.0	
<b>Output VSWR</b> 1710.0 ... 1755.0 MHz		—	1.7	2.0	
<b>Attenuation</b>	$\alpha$				
10.0 ... 1574.0 MHz		35	49	—	dB
1574.0 ... 1607.0 MHz		35	46	—	dB
2110.0 ... 2155.0 MHz		35	44	—	dB
2400.0 ... 2500.0 MHz		35	44	—	dB
3415.0 ... 3515.0 MHz		35	38	—	dB
5125.0 ... 5270.0 MHz		25	32	—	dB
5270.0 ... 6000.0 MHz		28	31	—	dB

**SAW Components**

**B8801**

**SAW Filter**

**1732.5 MHz**

Data sheet



**Maximum ratings**

Storage temperature range	$T_{stg}$	-40/+85 <sup>1)</sup>	°C	Machine Model Continuous Wave @ 55°C 2000h
DC voltage	$V_{DC}$	5 <sup>2)</sup>	V	
ESD voltage	$V_{ESD}$	50 <sup>3)</sup>	V	
Input power at 1710.0 ... 1755.0 MHz	$P_{IN}$	15	dBm	

1) extended upperlimit: 168h@125°C acc. to IEC 60068-2-2 Bb

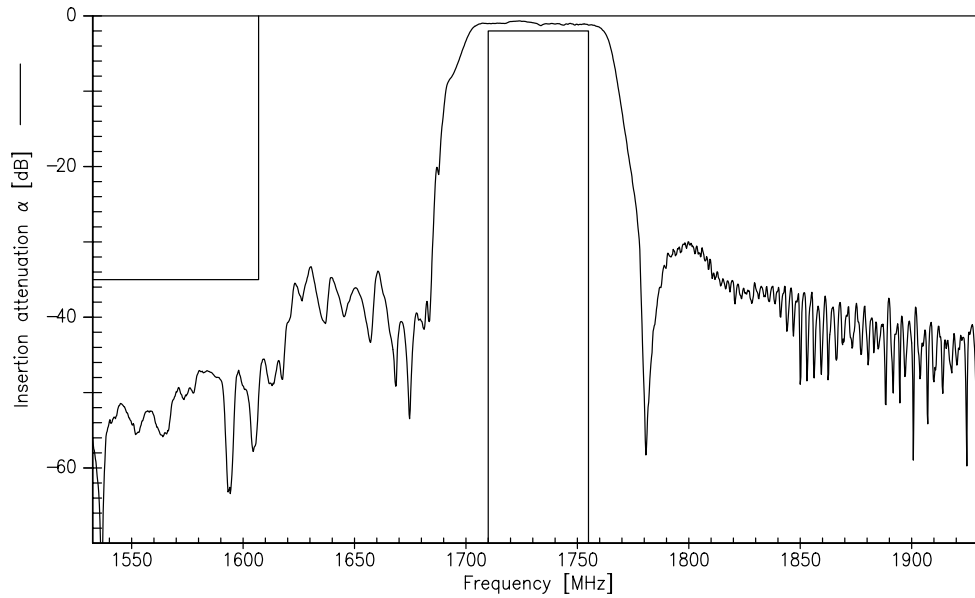
2) 168h Damp Heat Steady State acc. to IEC 60068-2-67 Cy

3) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulse

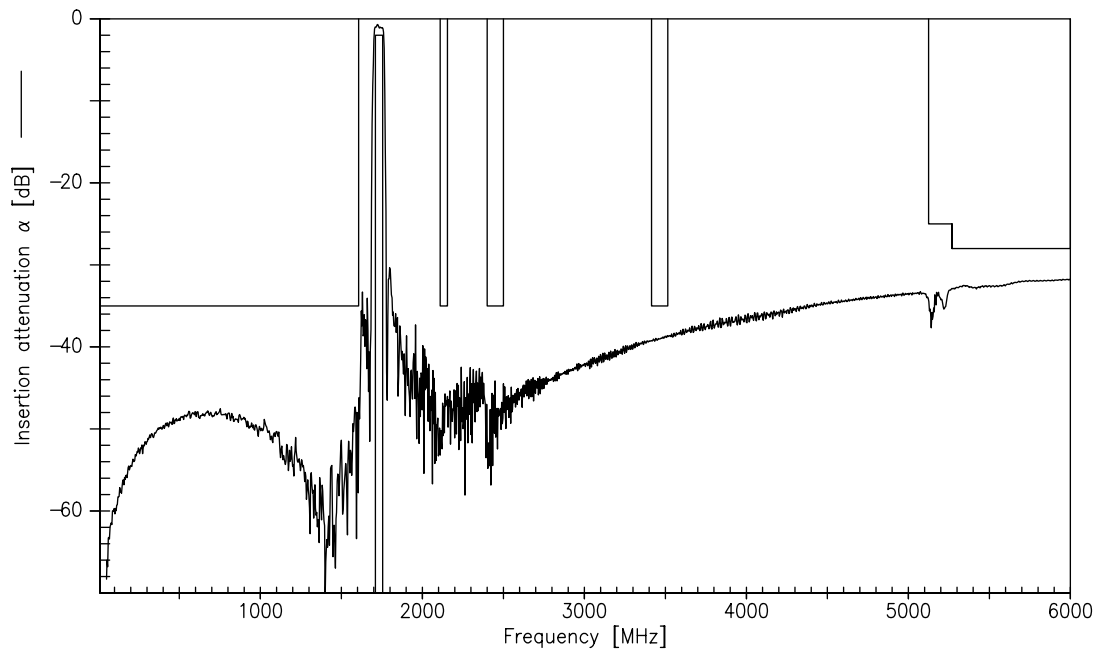
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Transfer function (narrowband)



Transfer function (wideband)

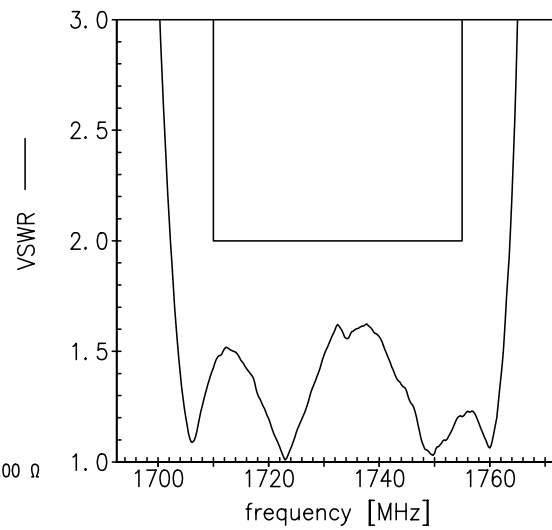
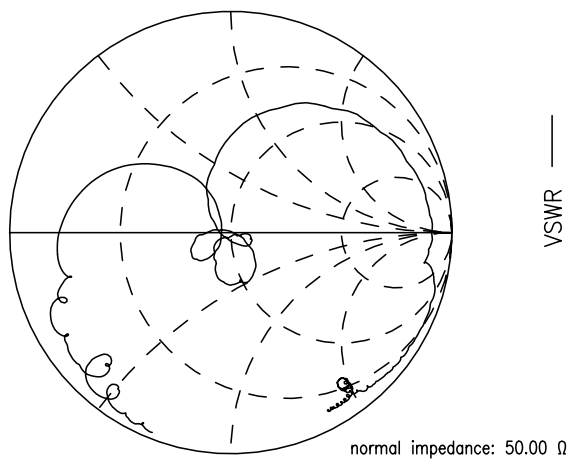


Data sheet

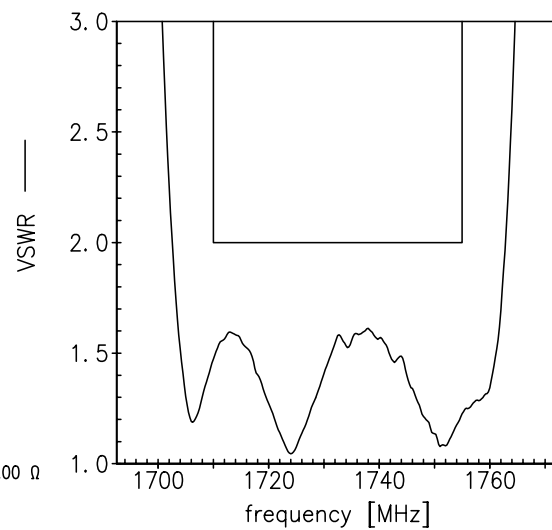
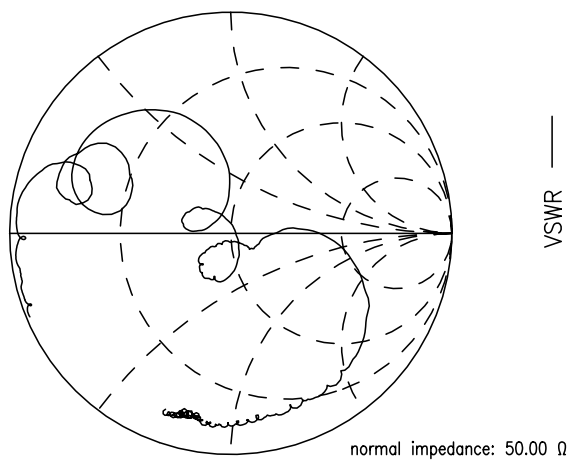


Smith charts

S<sub>11</sub> function



S<sub>22</sub> function





<b>SAW Components</b>	<b>B8801</b>
<b>SAW Filter</b>	<b>1732.5 MHz</b>

Data sheet



#### References

<b>Type</b>	B8801
<b>Ordering code</b>	B39172B8801P810
<b>Marking and package</b>	C61157-A8-A56
<b>Packaging</b>	F61074-V8255-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B8801_NB.s2p, B8801_WB.s2p see file header for port/pin assignment table
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	ROHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases
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<b>Matching coils</b>	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a>

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