



## **SAW Components**

### **Rx SAW filter**

LTE Band 17

<b>Series/type:</b>	<b>B9480</b>
<b>Ordering code:</b>	<b>B39741B9480M410</b>
<b>Date:</b>	<b>October 10, 2011</b>
<b>Version:</b>	<b>2.1</b>



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B9480

### Rx SAW filter

740.0 MHz

#### Data sheet



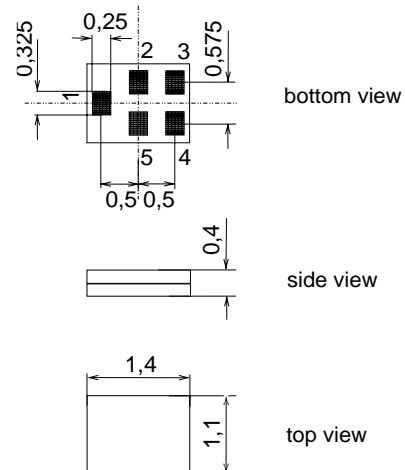
#### Application

- Rx SAW filter for telephone LTE Band 17 system
- Usable band width 12MHz
- Unbalanced to balanced operation (50  $\Omega$ /100  $\Omega$ )



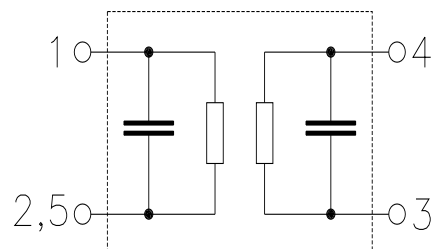
#### Features

- Package size 1.4 x 1.1 mm<sup>2</sup>, package height 0.4 mm
- RoHS compatible
- Approx. weight 0.035 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Moisture Sensitive Level 3



#### Pin configuration

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





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#### Characteristics

Temperature range for specification:  $T = -30\text{ °C to }+85\text{ °C}$   
Terminating source impedance:  $Z_S = 50\ \Omega$  (unbalanced)  
Terminating load impedance:  $Z_L = 100\ \Omega$  (balanced)

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	740.0	—	MHz
<b>Maximum insertion attenuation</b> 734.0 ... 746.0 MHz	$\alpha_{\max}$	—	2.2	3.5	dB
<b>Amplitude ripple (p-p)</b> 734.0 ... 746.0 MHz	$\Delta\alpha$	—	0.8	1.8	dB
<b>Input VSWR</b> 734.0 ... 746.0 MHz		—	1.3	2.0	
<b>Output VSWR</b> 734.0 ... 746.0 MHz		—	1.4	2.0	
<b>CMRR (<math> S_{21}-S_{31}  /  S_{21}+S_{31} </math>)</b> 734.0 ... 746.0 MHz		—	40	23	dB
<b>Absolute attenuation</b>	$\alpha$				
30.0 ... 686.0 MHz		50	68	—	dB
704.0 ... 716.0 MHz		52	57	—	dB
716.0 ... 722.0 MHz		40	45	—	dB
722.0 ... 724.0 MHz		30	45	—	dB
724.0 ... 725.0 MHz		25	45	—	dB
725.0 ... 728.0 MHz		15	45	—	dB
777.0 ... 793.0 MHz		46	53	—	dB
793.0 ... 1438.0 MHz		40	66	—	dB
1438.0 ... 1462.0 MHz		40	69	—	dB
1468.0 ... 1492.0 MHz		40	68	—	dB
1570.0 ... 1610.0 MHz		50	75	—	dB
2124.0 ... 2178.0 MHz		40	65	—	dB
2202.0 ... 2238.0 MHz		40	52	—	dB
2400.0 ... 2484.0 MHz		40	68	—	dB
2496.0 ... 2690.0 MHz		40	66	—	dB
2936.0 ... 2984.0 MHz		40	65	—	dB
3400.0 ... 3800.0 MHz		40	59	—	dB
4404.0 ... 4476.0 MHz		40	57	—	dB
4900.0 ... 5850.0 MHz		40	54	—	dB
5872.0 ... 5968.0 MHz		40	54	—	dB

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

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**Maximum ratings**

Storage temperature range	$T_{\text{stg}}$	-40/+85	°C	
DC voltage	$V_{\text{DC}}$	5	V	
ESD voltage	$V_{\text{ESD}}$	100 <sup>1)</sup>	V	M model, 1 pulse
ESD voltage	$V_{\text{ESD}}$	300 <sup>2)</sup>	V	HB model, 1 pulse
ESD voltage	$V_{\text{ESD}}$	600 <sup>3)</sup>	V	CD model, 1 pulse
Input power				
704.0 ... 716.0 MHz	$P_{\text{in}}$	15	dBm	T=85°C, 50 000 h

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

<sup>2)</sup> acc. to JESD22-A114F (Human Body model), 1 negative & 1 positive pulses.

<sup>3)</sup> acc. to JESD22-C101-C (Charge Device model), 1 negative & 1 positive pulses.



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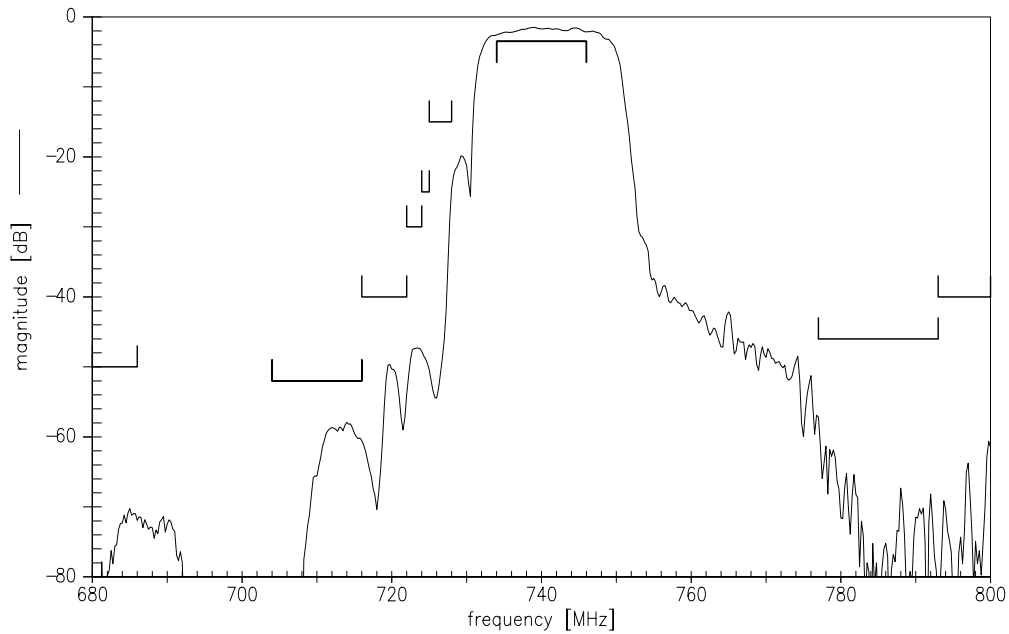
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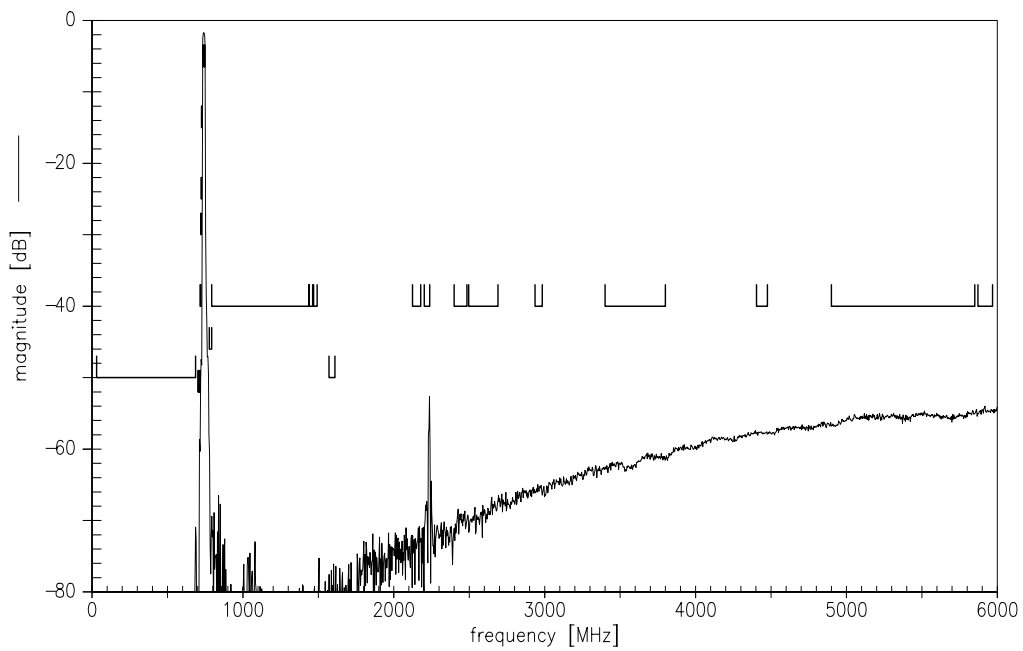
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### Transfer function (narrow band)



### Transfer function (wide band)



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Data sheet

**References**

<b>Type</b>	B9480
<b>Ordering code</b>	B39741B9480M410
<b>Marking and package</b>	C61157-A8-A1-*-27
<b>Packaging</b>	F61074-V8237-Z000-*-27
<b>Date codes</b>	L-1126
<b>S-parameters</b>	B9480_NB.s3p, B9480_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 maxi- mum concentration values for certain hazardous substances in electrical and electronic equipment."
<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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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

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