



# SAW Components

## SAW Tx Filter

LTE Band 13

<b>Series/type:</b>	<b>B9865</b>
<b>Ordering code:</b>	<b>B39781B9865P810</b>
<b>Date:</b>	<b>May 03, 2012</b>
<b>Version:</b>	<b>2.0</b>

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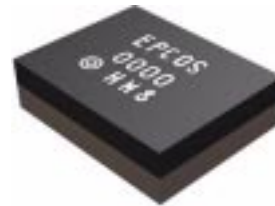
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Datasheet



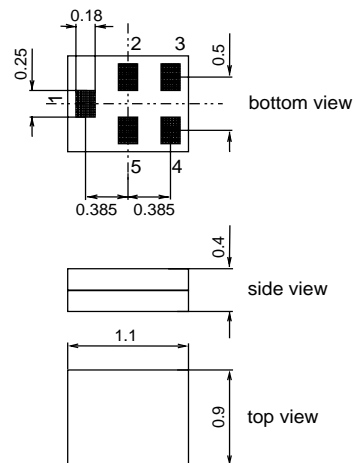
**Application**

- Low-loss RF filter for LTE systems (Tx)
- Impedance 50Ω input and output
- Unbalanced / unbalanced operation
- Usable passband 10MHz



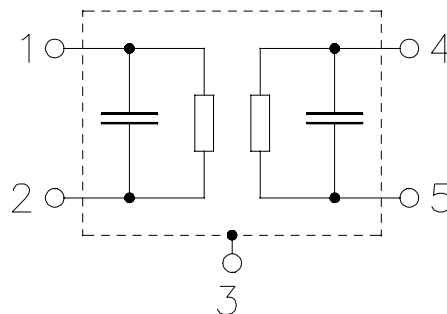
**Features**

- Package size 1.1 x 0.9 x 0.4 mm<sup>3</sup>
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitivity Level 3**



**Pin configuration**

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



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

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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:  $Z_L = 50\ \Omega$  (unbalanced)

		AI54A			
		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	782.0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	1.5	2.0	dB
777.0 ... 787.0MHz					
<b>Amplitude ripple (p-p)</b>		—	0.5	1.0	dB
777.0 ... 787.0MHz					
<b>Input VSWR</b>		—	1.5	2.0	
777.0 ... 787.0MHz					
<b>Output VSWR</b>		—	1.5	2.0	
777.0 ... 787.0MHz					
<b>Absolute attenuation</b>	$\alpha$				
11 ... 716.0MHz		45	70	—	dB
716.0 ... 728.0MHz		45	54	—	dB
728.0 ... 746.0MHz		45	50.0	—	dB
746.0 ... 756.0MHz		45	50.0	—	dB
756.0 ... 768.0MHz		25	38.0	—	dB
799.0 ... 805.0MHz		10	20.0	—	dB
808.0 ... 818.0MHz		30	38.0	—	dB
869.0 ... 894.0MHz		30	60.0	—	dB
1554.0 ... 1565.0MHz		30	55	—	dB
1565.0 ... 1585.0MHz		45	54	—	dB
1597.0 ... 1607.0MHz		45	54	—	dB
1805.0 ... 1880.0MHz		30	50	—	dB
1930.0 ... 1990.0MHz		30	50	—	dB
2110.0 ... 2170.0MHz		30	47	—	dB
2331.0 ... 2361.0MHz		30	45	—	dB
2400.0 ... 2484.0MHz		35	45	—	dB
3108.0 ... 3148.0MHz		25	40	—	dB

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**Maximum ratings**

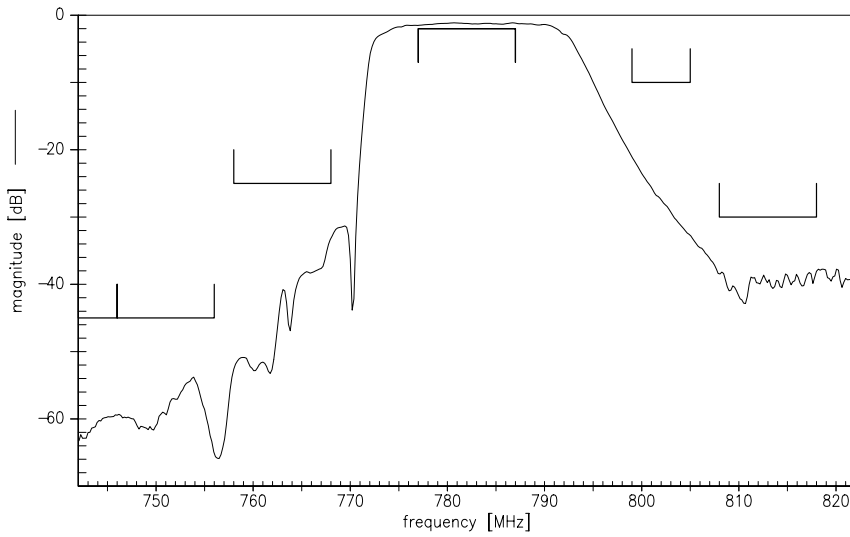
Operable temperature range	T	-30/+85	°C	machine model, 1 pulse
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	
Input power	P <sub>IN</sub>	10	dBm	

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

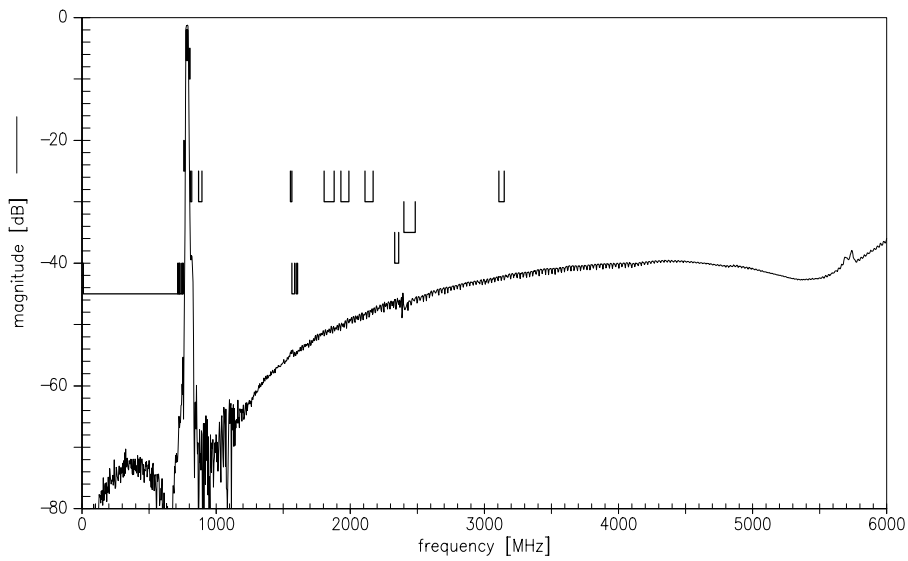
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Transfer function (Narrow band)



Transfer function (Wide band)

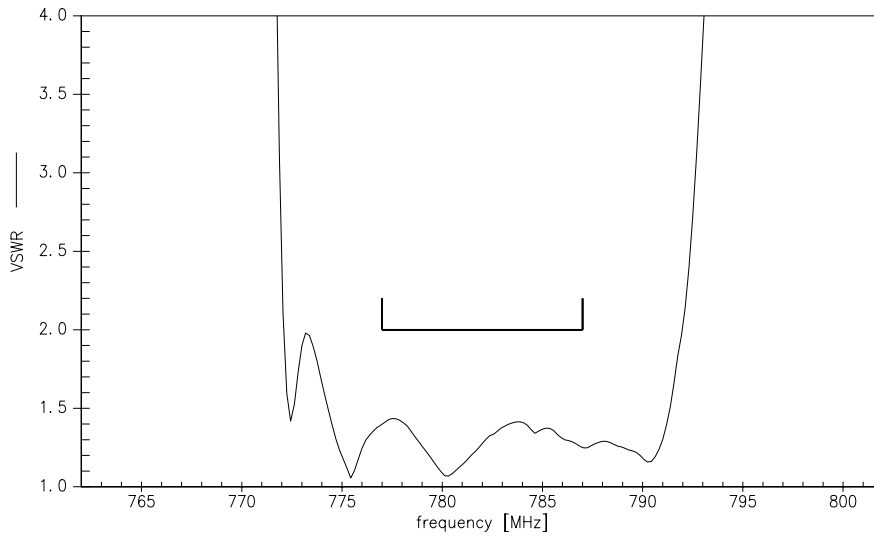


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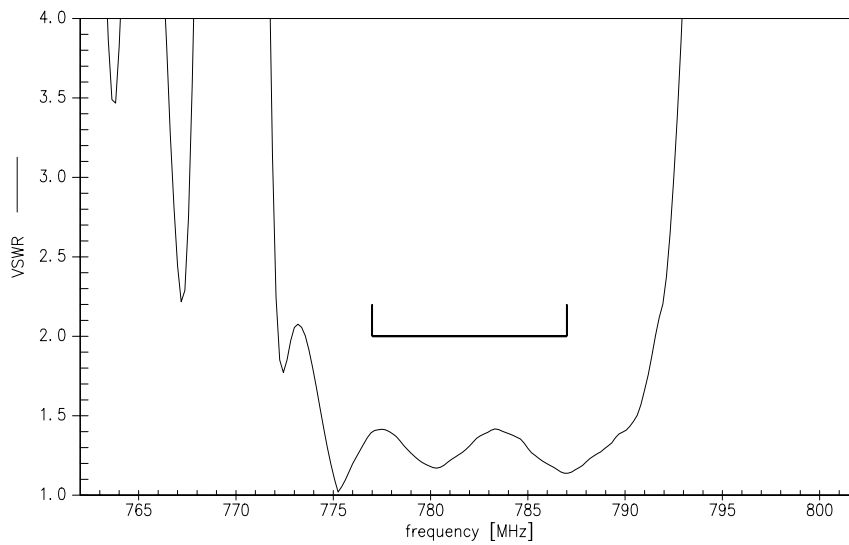
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**VSWR11**



**VSWR22**



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**782.0 MHz**

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**References**

<b>Type</b>	B9865
<b>Ordering code</b>	B39781B9865P810
<b>Marking and package</b>	C61157-A8-A56
<b>Packaging</b>	F61074-V8255-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B9865_NB.S2P B9865_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."
<b>Moldability</b>	Before using in overmolding environment, please contact your EPCOS sales office.

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