



# SAW Components

## SAW Tx Filter

LTE Band 13

<b>Series/type:</b>	<b>B9475</b>
<b>Ordering code:</b>	<b>B39781B9475M410</b>
<b>Date:</b>	<b>December 01, 2010</b>
<b>Version:</b>	<b>2.0</b>

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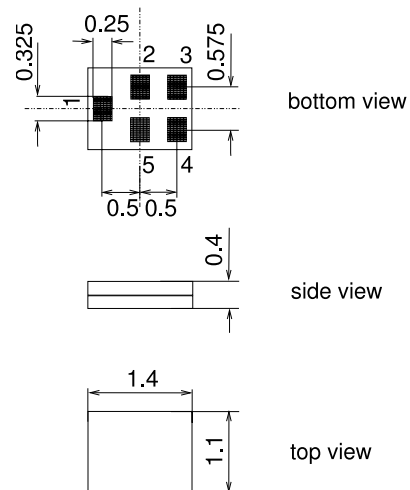
**Datasheet**

**Application**

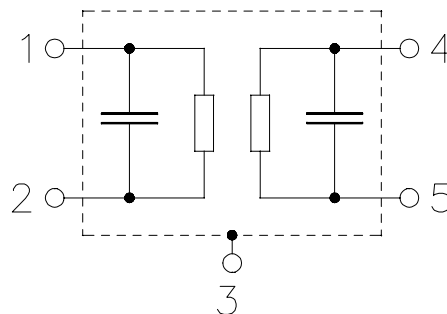
- Low-loss RF filter for LTE systems (Tx)
- Impedance 50Ω input and output
- Unbalanced / unbalanced operation
- Usable passband 10MHz


**Features**

- Package size 1.4 x1.1 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



**Datasheet**

**Characteristics**

Temperature range for specification:	T = -30 °C to +85 °C
Terminating source impedance:	Z <sub>S</sub> = 50 Ω (unbalanced)
Terminating load impedance:	Z <sub>L</sub> = 50 Ω (unbalanced)

		min.	typ. @ 25 °C	max.		
<b>Center frequency</b>	f <sub>C</sub>	—	782.0	—	MHz	
<b>Maximum insertion attenuation</b> 777.0 ... 787.0MHz	α <sub>max</sub>	—	2.3	2.7	dB	CTQ
<b>Amplitude ripple (p-p)</b> 777.0 ... 787.0MHz		—	0.6	1.0		
<b>Input VSWR</b> 777.0 ... 787.0MHz		—	1.7	2.0		
<b>Output VSWR</b> 777.0 ... 787.0MHz		—	1.8	2.2		
<b>Absolute attenuation</b>	α					
11 ... 716.0MHz		45	79	—	dB	
716.0 ... 728.0MHz		45	66	—	dB	
728.0 ... 746.0MHz		45	55	—	dB	
746.0 ... 756.0MHz		45	51	—	dB	
756.0 ... 768.0MHz		20	30	—	dB	
799.0 ... 805.0MHz		15	27	—	dB	
808.0 ... 818.0MHz		30	66	—	dB	
869.0 ... 894.0MHz		30	66	—	dB	
1554.0 ... 1565.0MHz		25	54	—	dB	
1565.0 ... 1585.0MHz		45	54	—	dB	
1597.0 ... 1607.0MHz		45	54	—	dB	
1805.0 ... 1880.0MHz		30	51	—	dB	
1930.0 ... 1990.0MHz		30	49	—	dB	
2110.0 ... 2170.0MHz		30	47	—	dB	
2331.0 ... 2361.0MHz		40	48	—	dB	
2400.0 ... 2484.0MHz		35	47	—	dB	
3108.0 ... 3148.0MHz		15	43	—	dB	

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**782.0 MHz**

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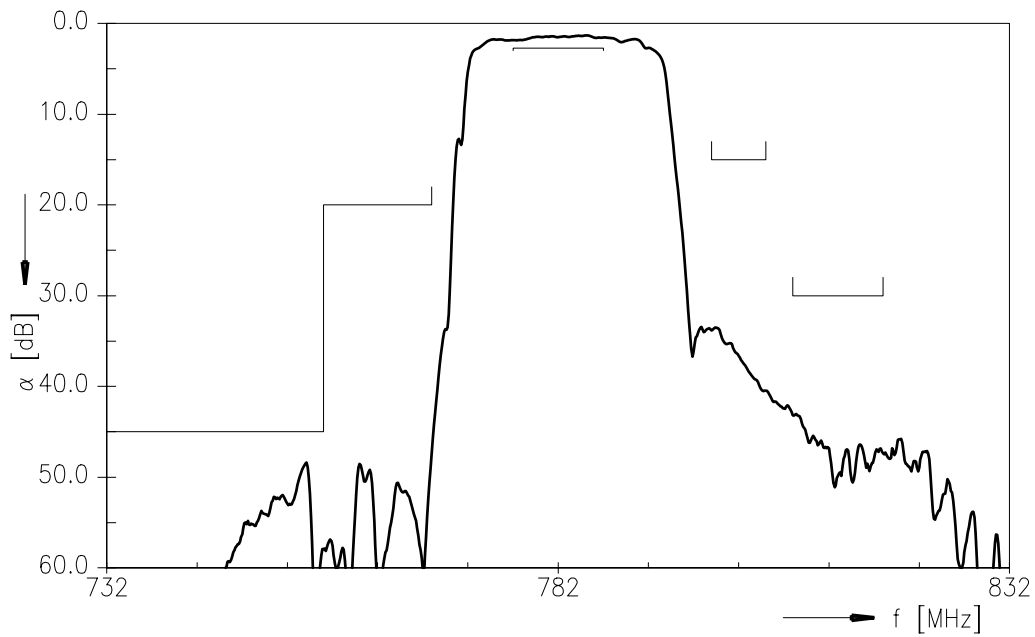


**Maximum ratings**

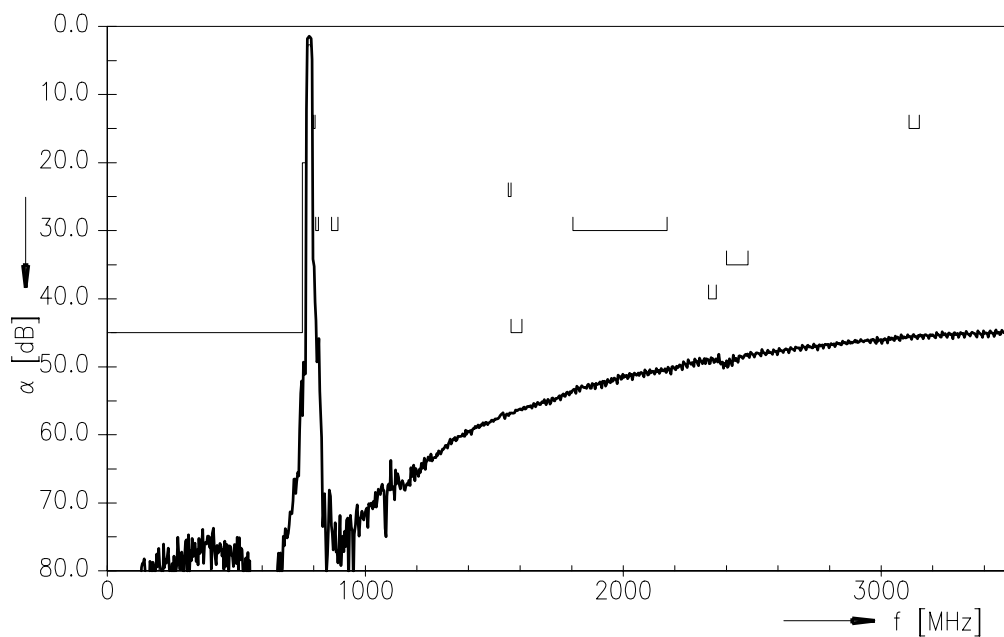
Operable temperature range	T	-30/+85	°C	machine model, 1 pulse
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	
Input power	P <sub>IN</sub>	10	dBm	

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

Transfer function

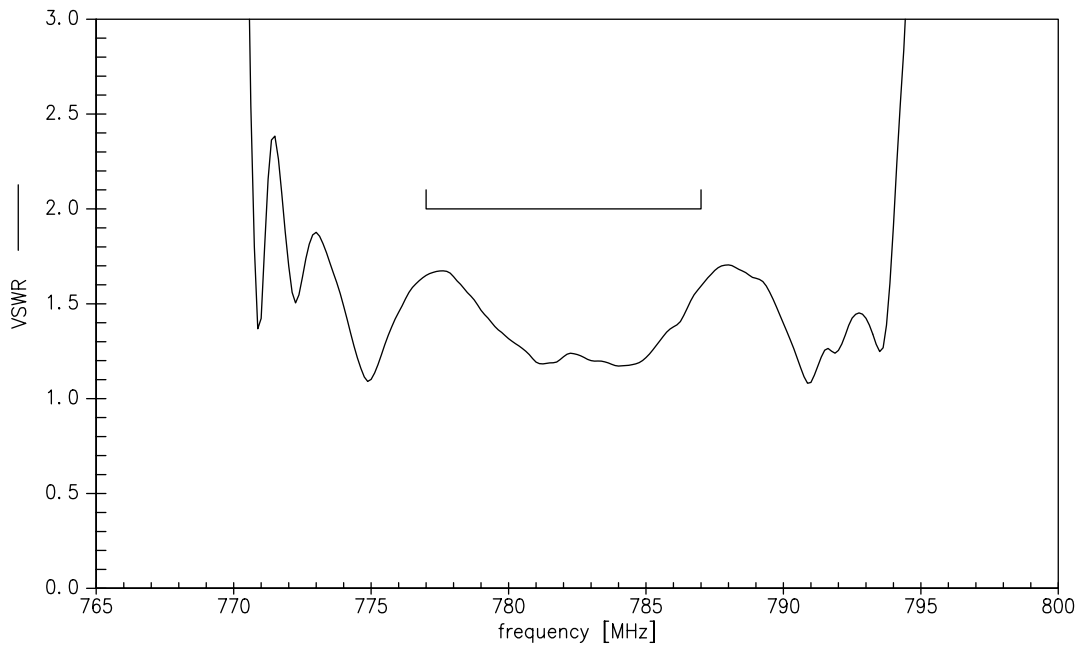


Transfer function (wideband)

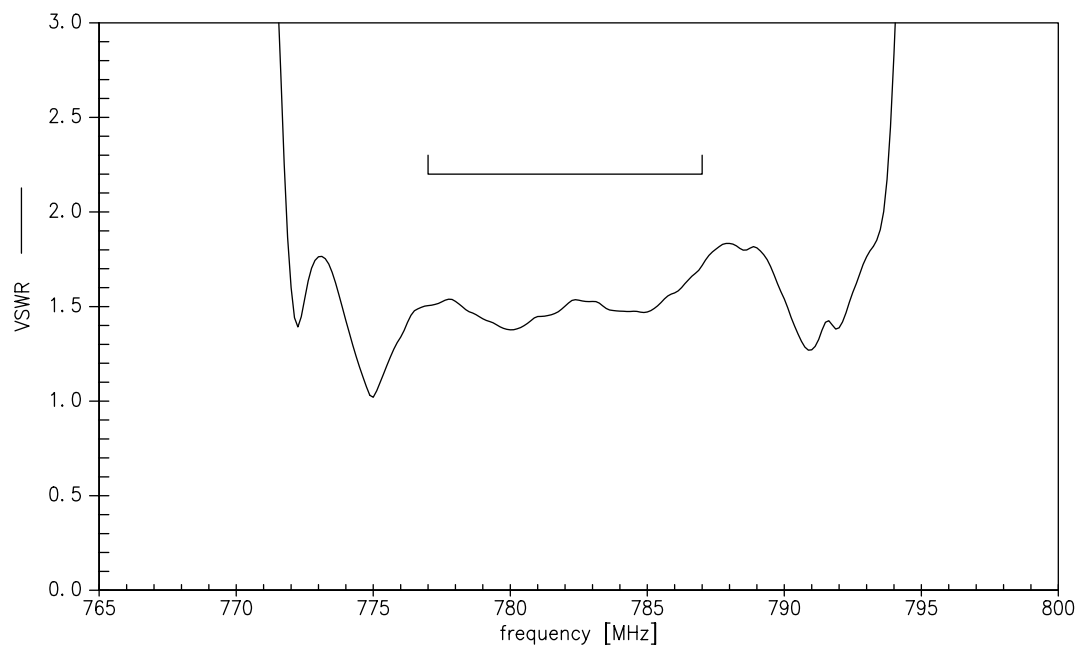




Input VSWR (S11)



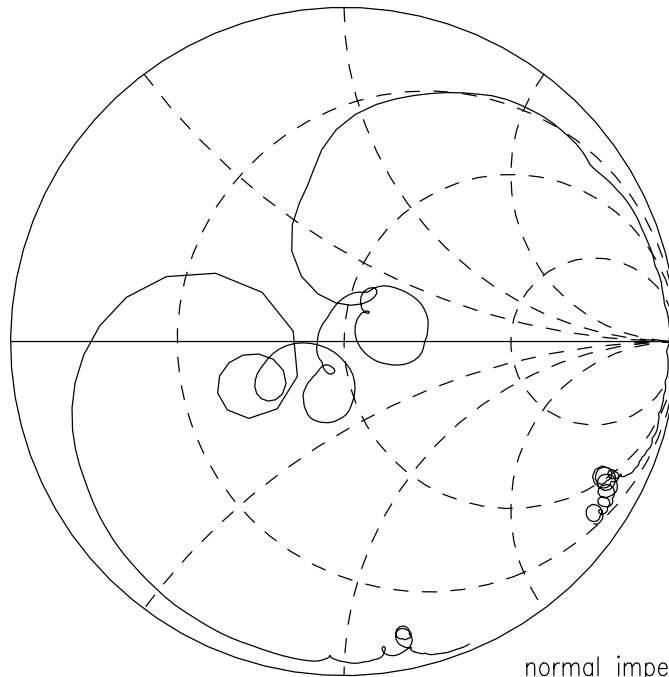
Output VSWR (S22)



Datasheet

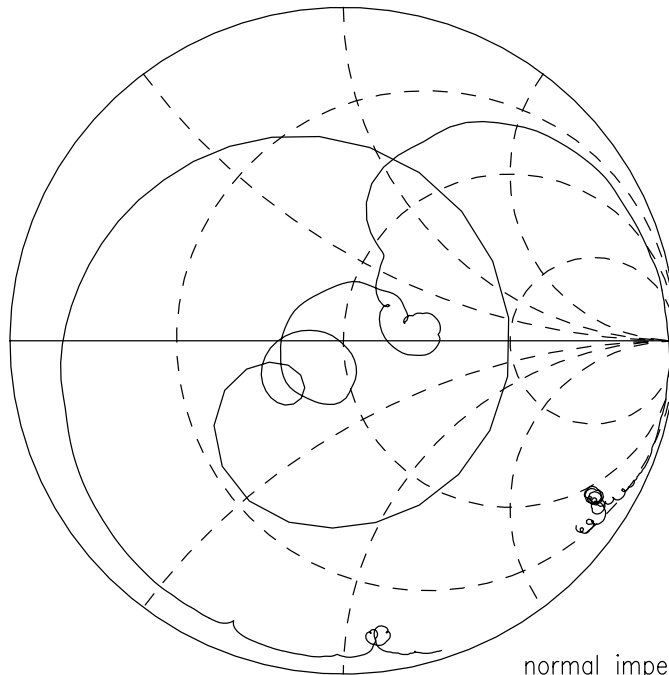
**SMD**

**Smith chart (S11)**



normal impedance: 50.00  $\Omega$

**Smith chart (S22)**



normal impedance: 50.00  $\Omega$

**SAW Components**
**B9475**
**SAW Tx Filter**
**782.0 MHz**

Datasheet


**References**

<b>Type</b>	B9475
<b>Ordering code</b>	B39781B9475M410
<b>Marking and package</b>	C61157-A8-A3
<b>Packaging</b>	F61074-V8237-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B9475_NB.s2p B9475_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."
<b>Moldability</b>	Before using in overmolding environment, please contact your EPCOS sales office.

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