



# SAW Components

## SAW Tx filter

Cellular / WCDMA Band V

<b>Series/type:</b>	<b>B9425</b>
<b>Ordering code:</b>	<b>B39841B9425M410</b>
<b>Date:</b>	<b>May 11, 2006</b>
<b>Version:</b>	<b>2.0</b>

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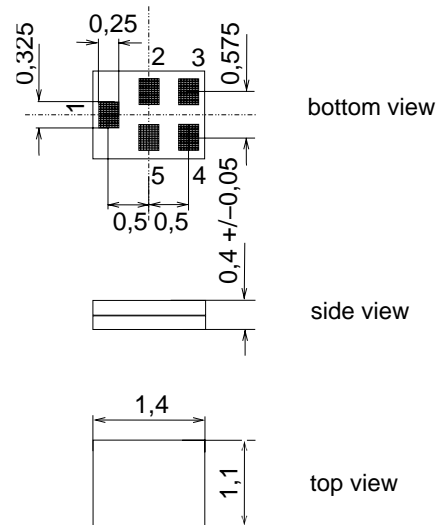
**Data Sheet**

**Application**

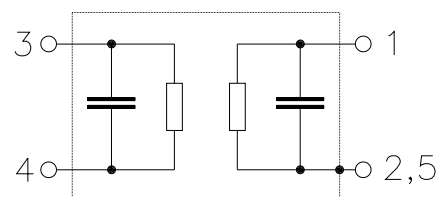
- Low-loss RF filter for mobile telephone Cellular systems, transmit path (TX)
- Impedance 50 Ω input and output
- Unbalanced / unbalanced operation
- Very high RX suppression
- Usable passband 25 MHz


**Features**

- Package size 1.4 x 1.1 x 0.4 mm<sup>3</sup>
- Package code QCS5I
- RoHS compatible
- Approximate weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)


**Pin configuration**

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



**Data Sheet**

**Characteristics**

Temperature range for specification:	T = -30 °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>	—	836.5	—	MHz
<b>Maximum insertion attenuation</b>	α <sub>max</sub>				
824.0 ... 849.0 MHz		—	1.7	2.3	dB
<b>Amplitude ripple (p-p)</b>	Δα				
824.0 ... 849.0 MHz		—	0.7	1.3	dB
<b>Input VSWR</b>					
824.0 ... 849.0 MHz		—	1.7	2.0	
<b>Output VSWR</b>					
824.0 ... 849.0 MHz		—	1.7	2.0	
<b>Attenuation</b>	α				
0.0 ... 779.0 MHz		45	47	—	dB
779.0 ... 804.0 MHz		40	44	—	dB
804.0 ... 814.0 MHz		12 <sup>1)</sup>	19	—	dB
859.0 ... 869.0 MHz		7 <sup>2)</sup>	14	—	dB
869.0 ... 894.0 MHz		40	42	—	dB
894.0 ... 1570.0 MHz		33	35	—	dB
1570.0 ... 2200.0 MHz		35	42	—	dB
2200.0 ... 6000.0 MHz		33	38	—	dB

1) for -15 °C to 80 °C

2) for -15 °C to 80 °C

**Maximum ratings**

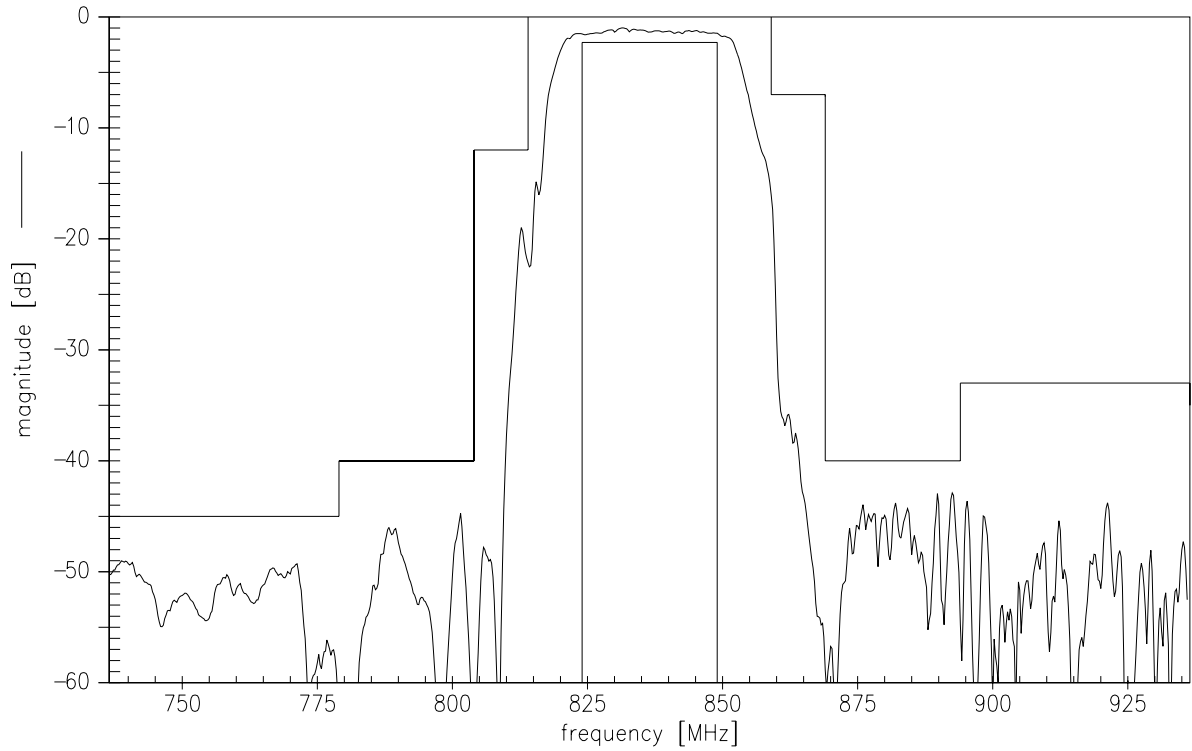
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	Machine model, 10 pulses
Input Power				
824 - 849 MHz	P <sub>IN</sub>	16	dBm	source impedance 50 Ω
elsewhere	P <sub>IN</sub>	10	dBm	source impedance 50 Ω

1) acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.

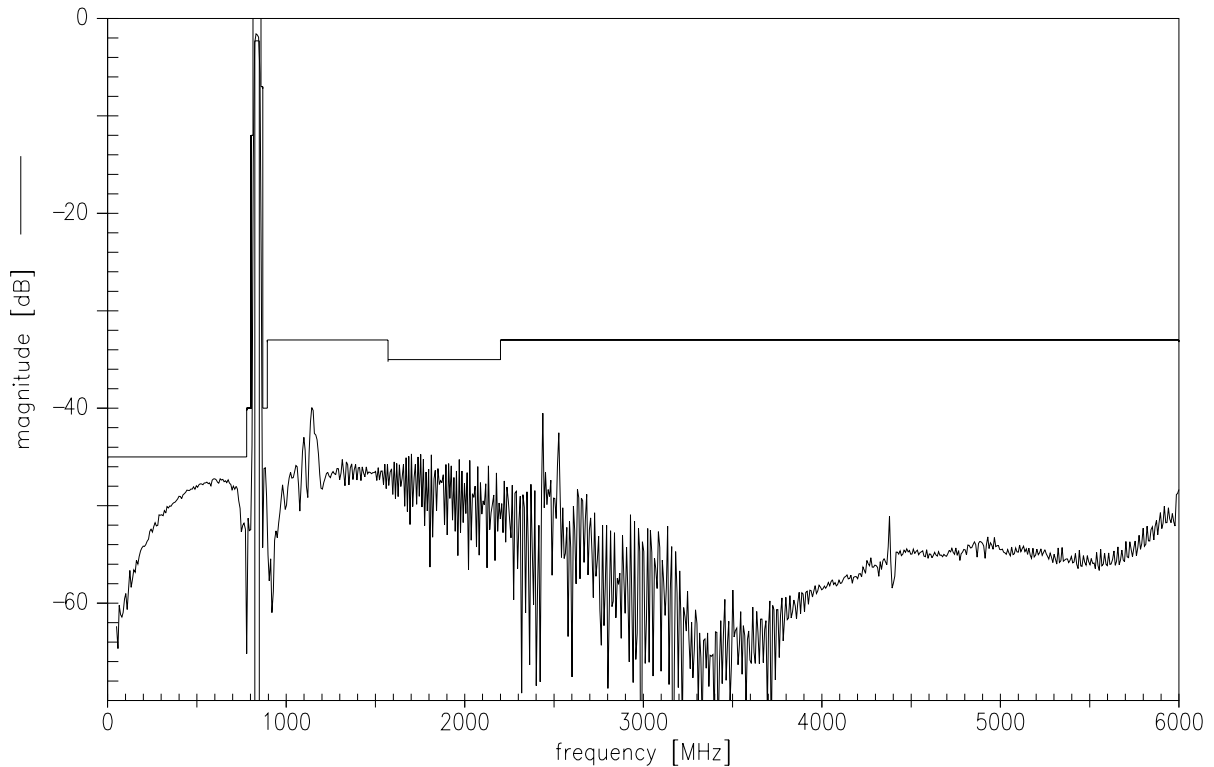
Data Sheet



**Transfer function**



**Transfer function (wideband)**



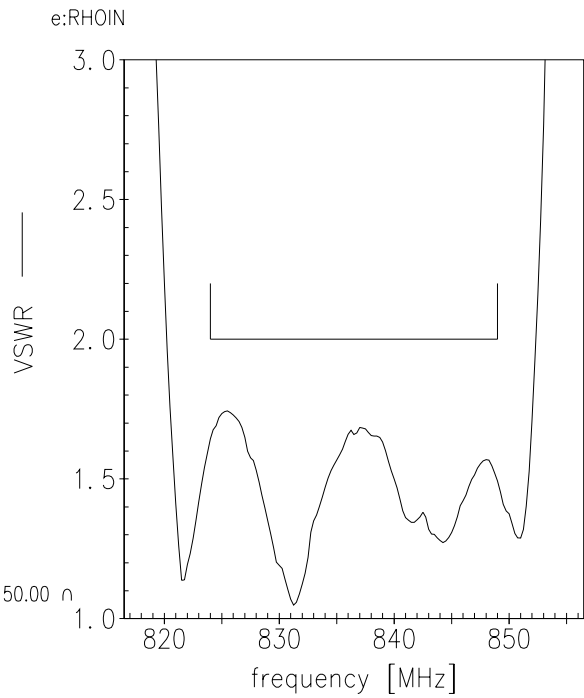
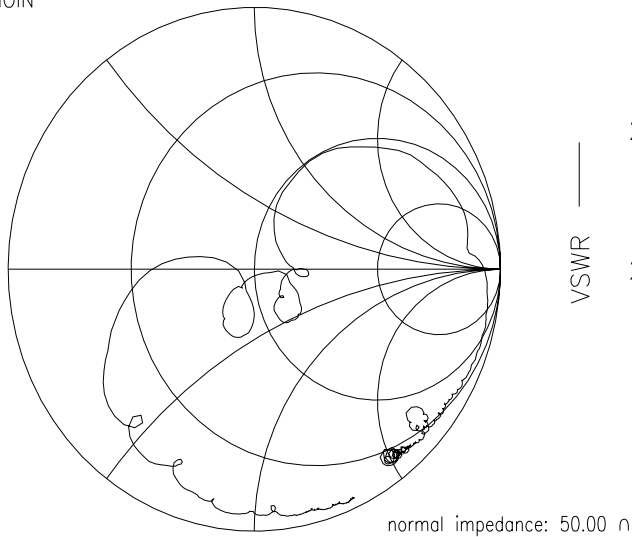
**Data Sheet**



**Smith charts**

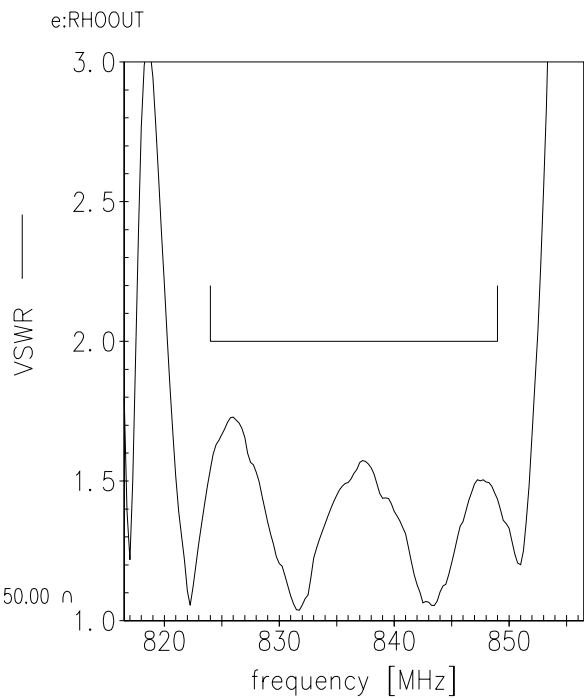
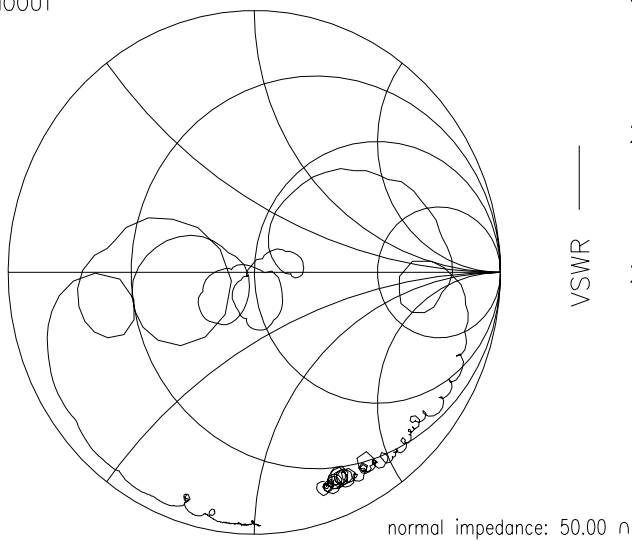
**S<sub>11</sub> function**

e:RHOIN



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

e:RHOOUT



<b>SAW Components</b>	<b>B9425</b>
<b>SAW Tx filter</b>	<b>836.5 MHz</b>

Data Sheet



## References

<b>Type</b>	B9425
<b>Ordering code</b>	B39841B9425M410
<b>Marking and package</b>	C61157-A8-A3
<b>Packaging</b>	F61074-V8212-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B9425_NB.s2p B9425_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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