



# SAW filters for mobile communications

## Series/Type: **B9429**

The following products presented in this data sheet are being withdrawn.

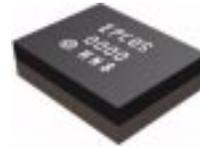
Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39252B9429K610	B39252B9455M410	2009-07-31	2009-11-30	2010-02-28

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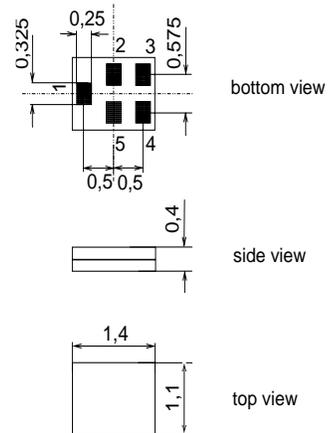
Data sheet


**Application**

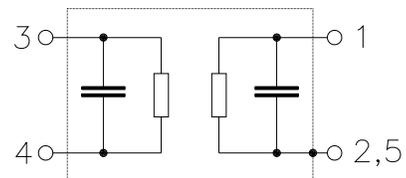
- Low-loss RF filter for WLAN
- Unbalanced to balanced operation
- Low insertion attenuation
- Usable passband 100 MHz


**Features**

- Package size 1.4 x 1.1 x 0.4 mm<sup>3</sup>
- Package code QCS5F
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**


**Pin configuration**

- 1 Unbalanced input
- 3,4 Balanced output
- 2,5 To be grounded



**Data sheet**

**Characteristics**

Operating temperature range:  $T = +25\text{ }^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\Omega - 2.0\text{ nH}$   
 Terminating load impedance:  $Z_L = 180\Omega \parallel 9.5\text{ nH}$

				min.	typ. @ 25 °C	max.		
<b>Center frequency</b>	$f_C$			—	2450.0	—		MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$			—	2.4	2.9 <sup>1)</sup>		dB
2400.0 ... 2500.0	MHz							
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$			—	0.7	1.5		dB
2400.0 ... 2500.0	MHz							
<b>Input VSWR</b>				—	1.7	2.0		
2400.0 ... 2500.0	MHz							
<b>Output VSWR</b>				—	1.7	2.0		
2400.0 ... 2500.0	MHz							
<b>Attenuation</b>	$\alpha$							
100.0 ... 960.0	MHz			55	59	—		dB
960.0 ... 1800.0	MHz			40	44	—		
1800.0 ... 2100.0	MHz			40	44	—		dB
2100.0 ... 2170.0	MHz			40	44	—		
2170.0 ... 2250.0	MHz			20	44	—		dB
2650.0 ... 2800.0	MHz			20	31	—		
2800.0 ... 4000.0	MHz			25	36	—		dB
4000.0 ... 6000.0	MHz			30	50	—		

<sup>1)</sup> including a pcb loss of 0.2dB

**Data sheet**

**Characteristics**

Operating temperature range:  $T = -30\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\Omega - 2.0\text{ nH}$   
 Terminating load impedance:  $Z_L = 180\Omega \parallel 9.5\text{ nH}$

				min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$			—	2450.0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$			—	2.5	3.2 <sup>1)</sup>	dB
2400.0 ... 2500.0 MHz							
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$			—	1.0	1.6	dB
2400.0 ... 2500.0 MHz							
<b>Input VSWR</b>				—	1.7	2.0	
2400.0 ... 2500.0 MHz							
<b>Output VSWR</b>				—	1.7	2.0	
2400.0 ... 2500.0 MHz							
<b>Attenuation</b>	$\alpha$						
100.0 ... 960.0 MHz				55	59	—	dB
960.0 ... 1800.0 MHz				40	44	—	dB
1800.0 ... 2100.0 MHz				40	44	—	dB
2100.0 ... 2170.0 MHz				40	44	—	dB
2170.0 ... 2250.0 MHz				20	44	—	dB
2650.0 ... 2800.0 MHz				20	31	—	dB
2800.0 ... 4000.0 MHz				25	36	—	dB
4000.0 ... 6000.0 MHz				30	50	—	dB

<sup>1)</sup> including a pcb loss of 0.2dB


**Maximum ratings**

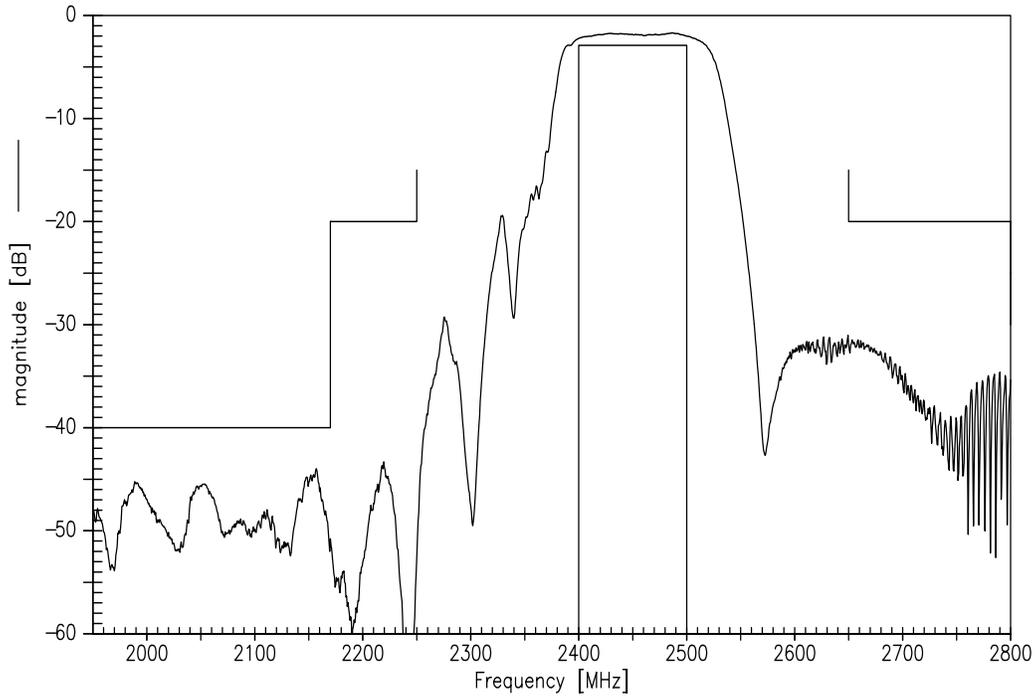
Operable temperature range	T	-30/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	3	V	
ESD voltage	V <sub>ESD</sub>	50 <sup>1)</sup>	V	machine model, 10 pulses
Input power at UMTS band I Tx band	P <sub>IN</sub>	15	dBm	CW, +65°C 2000hr

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

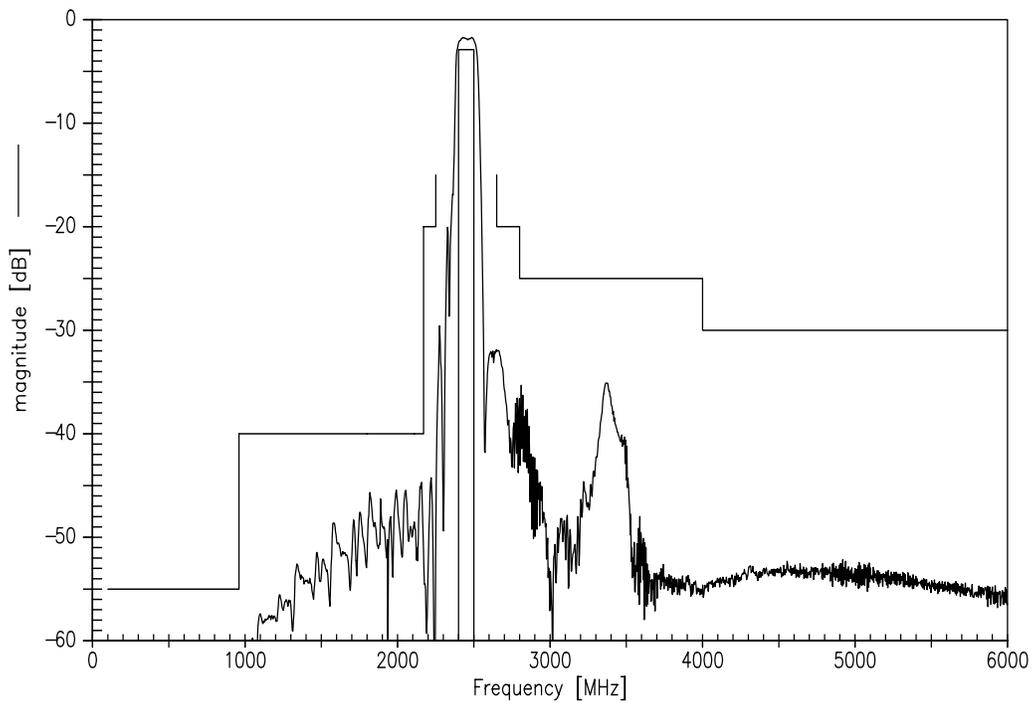
Data sheet



**Transfer function**



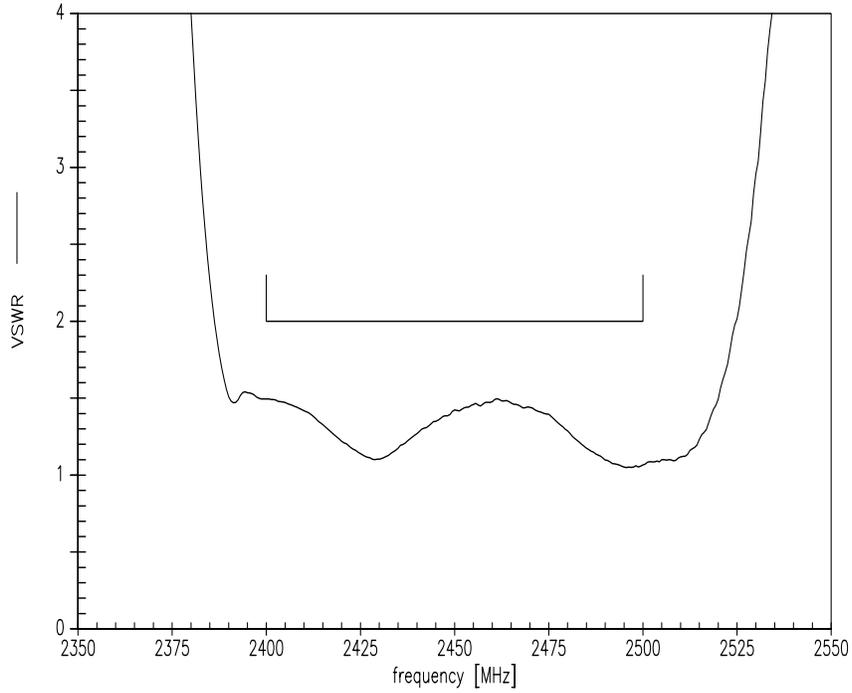
**Transfer function (wideband)**



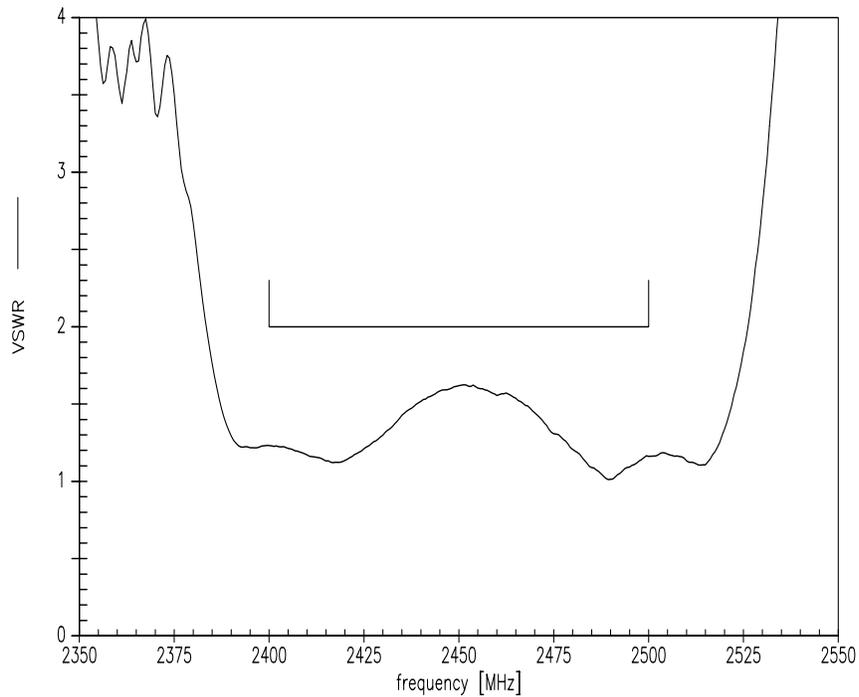
Data sheet



**Input VSWR**



**Output VSWR**



<b>SAW Components</b>	<b>B9429</b>
<b>SAW WLAN filter</b>	<b>2450.0 MHz</b>

Data sheet



## References

<b>Type</b>	B9429
<b>Ordering code</b>	B39252B9429K610
<b>Marking and package</b>	C61157-A8-A1
<b>Packaging</b>	F61074-V8212-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	LK41A_NB.s3p LK41A_WB.s3p
<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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