



SAW Components

SAW filter

GPS

Series/type:	B9415
Ordering code:	B39162B9415K610
Date:	March 16, 2006
Version:	2.0



Data sheet



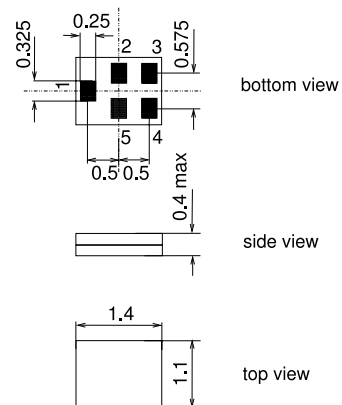
Application

- Low-loss RF filter for mobile telephone
GPS systems
- Filter impedance 50 Ω
- Unbalanced to unbalanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 2.0 MHz



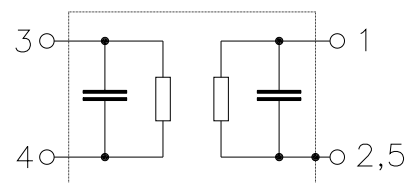
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- 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 Input unbalanced
- 4 Output unbalanced
- 2,3,5 To be grounded





Data sheet



Characteristics

Operating temperature range: T = -40 °C to +85 °C
 Terminating source impedance: Z_S = 50 Ω
 Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25 °C	max.	
Center frequency	f _C	—	1575.42	—	MHz
Maximum insertion attenuation	α _{max}	—	0.6	1.0 ¹⁾	dB
1574.42 ... 1576.42 MHz					
Amplitude ripple (p-p)	Δα	—	0.0	0.3	dB
1574.42 ... 1576.42 MHz					
Input VSWR		—	1.2	1.6 ²⁾	
1574.42 ... 1576.42 MHz					
Output VSWR		—	1.2	1.6 ³⁾	
1574.42 ... 1576.42 MHz					
Attenuation	α				
500.0 ... 894.0 MHz		16	18	—	dB
894.0 ... 1500.0 MHz		15	17	—	dB
1650.0 ... 4000.0 MHz		17	19	—	dB
4000.0 ... 6000.0 MHz		15	20	—	dB

1) 0.9dB max. at -30 °C ... 75 °C

2) 1.5 max. at -30 °C ... 75 °C

3) 1.5 max. at -30 °C ... 75 °C



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1575.42 MHz

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Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input power at				source/load impedance 50Ω/50Ω
1574.42 ... 1576.42 MHz	P _{IN}	10	dBm	cw
2400 ... 2483.5 MHz	P _{IN}	20	dBm	cw
824...849, 1710...2170 MHz	P _{IN}	25	dBm	cw

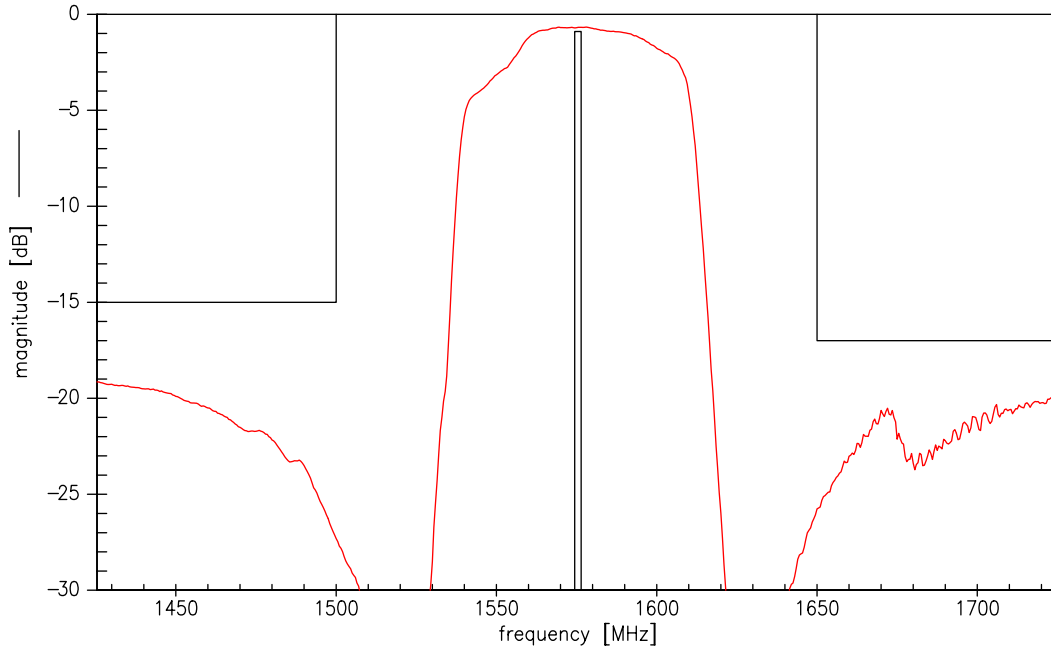
¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



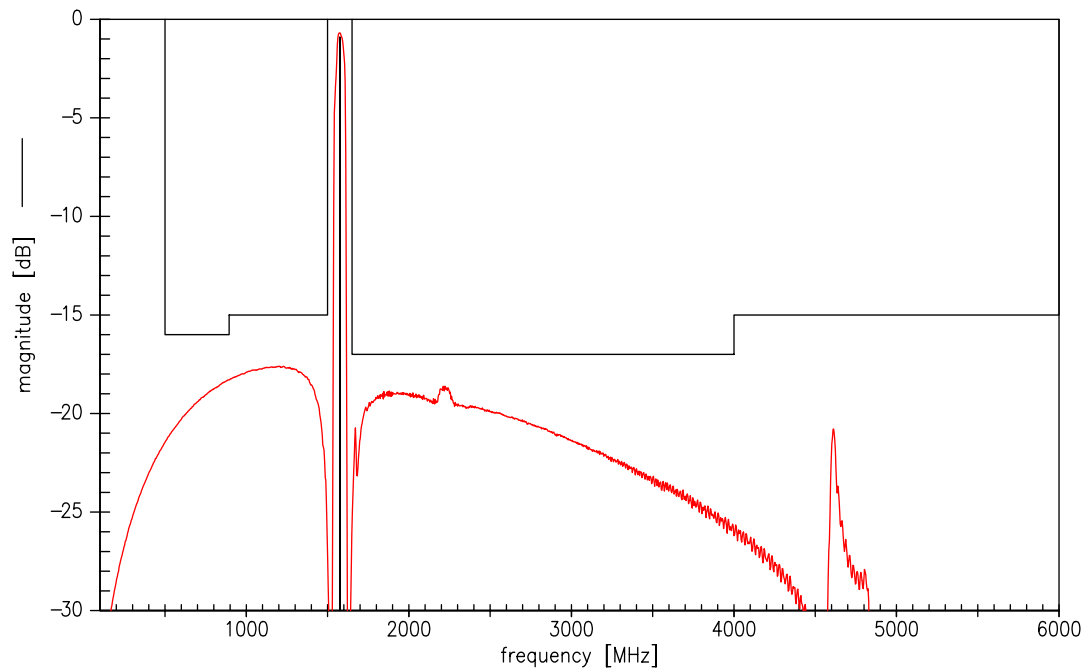
Data sheet



Transfer function (narrow band)



Transfer function (wide band)



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

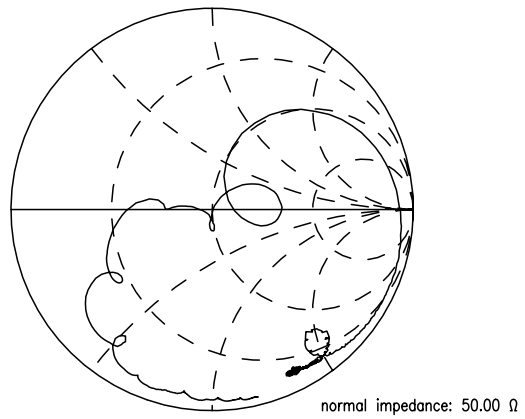
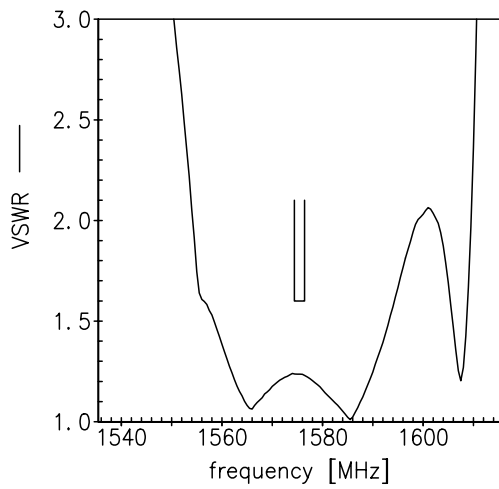


Data sheet

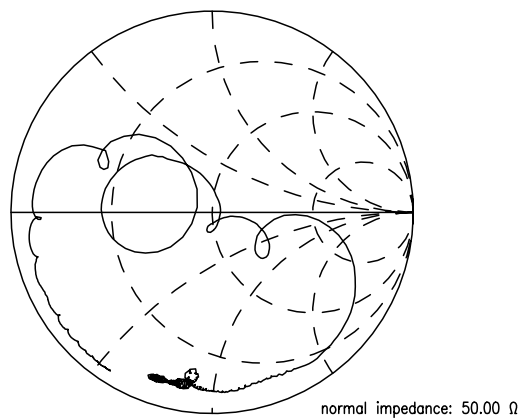
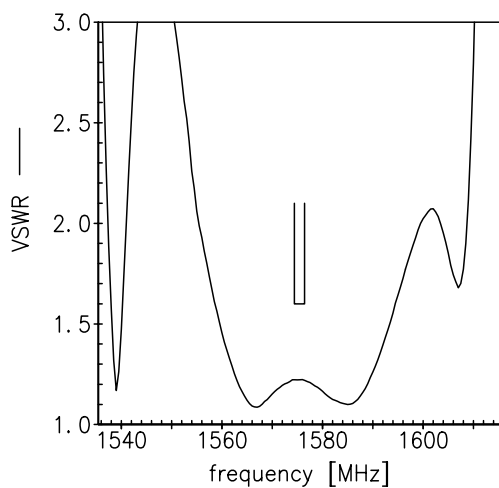


Smith charts

S₁₁ function



S₂₂ function





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References

Type	B9415
Ordering code	B39162B9415K610
Marking and package	C61157-A8-A1
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9415_NB.s2p B9415_WB.s2p
Soldering profile	S_6001
RoHS compatible	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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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



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