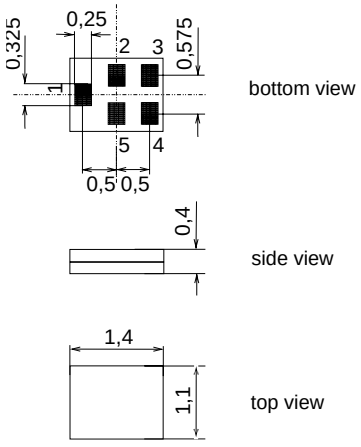
Application

- 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

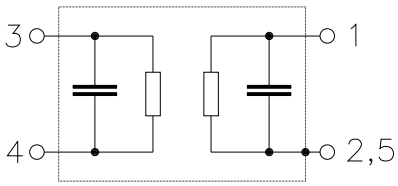
Features

- Package size 1.4 x1.1 x 0.4 mm³
- Package code QCS5U
- 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 SMD

Characteristics

Temperature range for specification: 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}				
1574.42 ... 1576.42 MHz		—	0.6	1.0[1)]	dB
					dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1574.42 ... 1576.42 MHz		—	0.0	0.3	dB
Input VSWR					
1574.42 ... 1576.42 MHz		—	1.2	1.6[2)]	
Output VSWR					
1574.42 ... 1576.42 MHz		—	1.2	1.6[3)]	
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

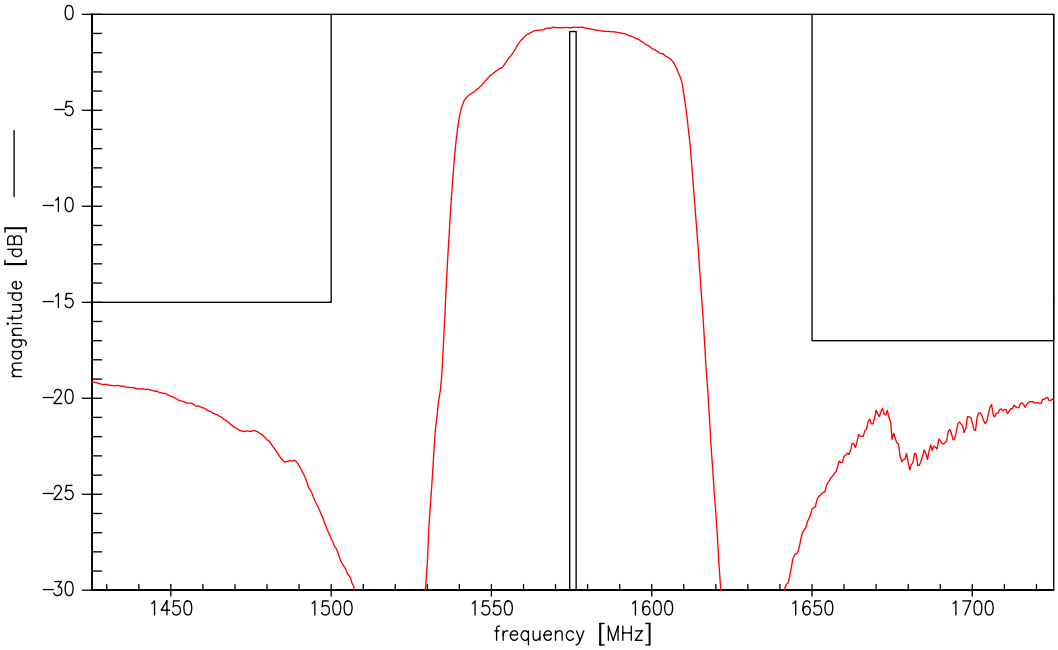
1) 0.9dB max. at -30 ˚C ... 75 ˚C
2) 1.5 max. at -30 ˚C ... 75 ˚C
3) 1.5 max. at -30 ˚C ... 75 ˚C

Maximum ratings

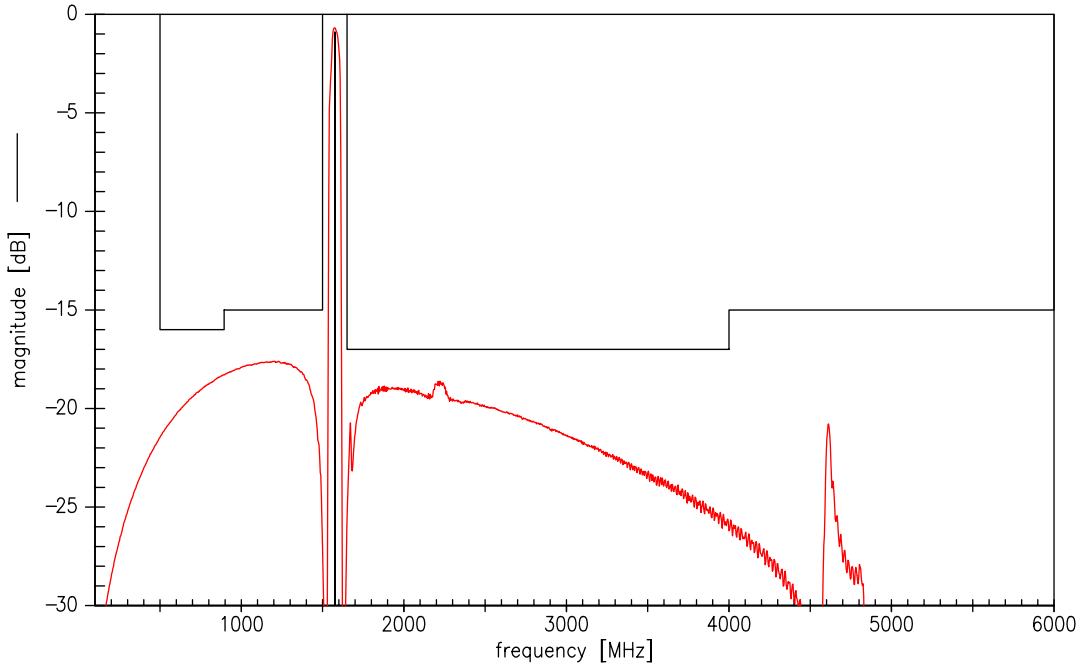
Operable temperature range	T	–40/+85	°C	
Storage temperature range	T_{stg}	–40/+85	°C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Input power at				source/load impedance 50Ω/50Ω
1574.42 ... 1576.42 MHz	P_{IN}	10	dBm	cw
2400 ... 2483.5 MHz	P_{IN}	20	dBm	cw
824...960, 1710...2170 MHz	P_{IN}	25	dBm	cw

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

Transfer function (narrow band)

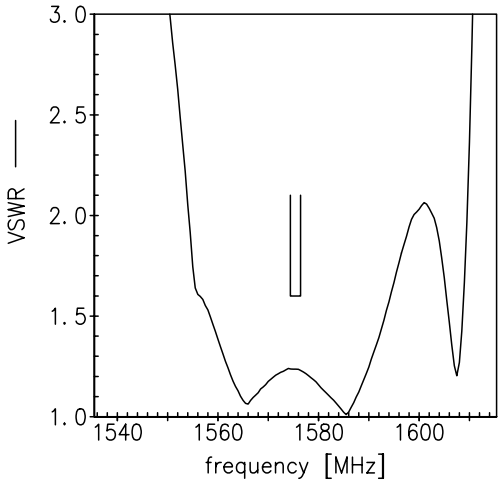


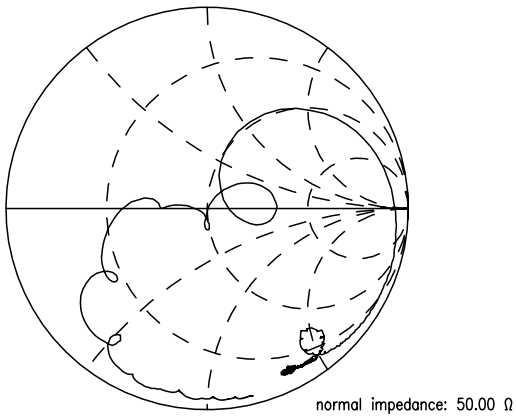
Transfer function (wide band)



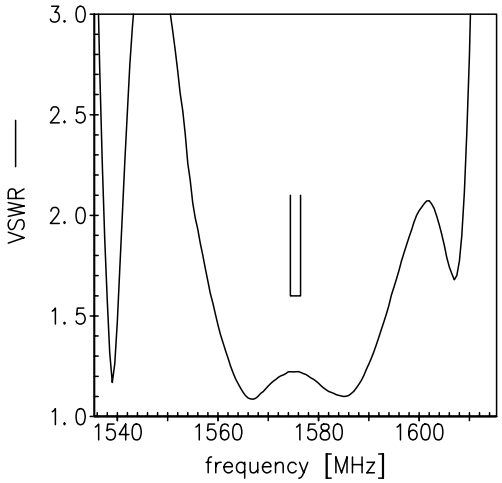
Smith charts

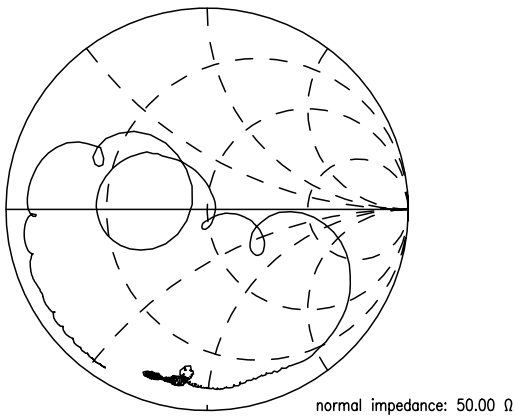
S_{11} function





S_{22} function





References

Type	B9415
Ordering code	B39162B9415K610
Marking and package	C61157-A8-A14
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9415_NB.s2p B9415_WB.s2p “See file header for port/pin assignment table“
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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.

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Published by EPCOS AG
Surface Acoustic Wave Components Division
P.O. Box 80 17 09, 81617 Munich, GERMANY

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