



SAW Components

SAW Rx Filter

GPS

Series/Type:	B7839
Ordering code:	B39162-B7839-K410
Date:	Nov 16, 2005
Version:	2.1

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SAW Components

B7839

Low-Loss Filter for Mobile Communication

1575.42 MHz

Data Sheet

SMD

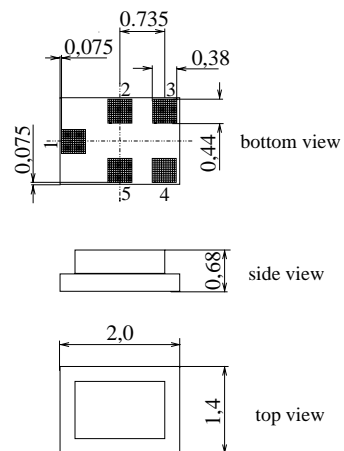
Application

- Low-loss RF filter for GPS
- Unbalanced to unbalanced operation
- Very low insertion attenuation



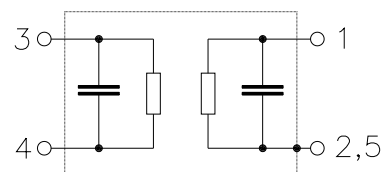
Features

- Package size 2.0 x 1.4 x 0.68 mm³
- Package code QCS5E
- RoHS compliant
- Approx. weight 0.007 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals



Pin configuration

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



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



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Characteristics

Operating temperature range: $T = -30\text{ °C} \dots +85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		B7839			
		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	1575.42	—	MHz
Maximum insertion attenuation	α_{\max}	1574.42 ... 1576.42MHz	—	0.75	1.1 dB
		1574.42 ... 1576.42MHz	—	0.75	1.0 dB ¹⁾
Amplitude ripple in passband (p-p)	$\Delta\alpha$	—	0.05	0.3	dB
Attenuation	α	0.1 ... 960.0 MHz	38	41	— dB
		960.0 ... 1460.0 MHz	35	40	— dB
		1460.0 ... 1513.0 MHz	22	29	— dB
		1645.4 ... 1710.0 MHz	23	28	— dB
		1710.0 ... 1990.0 MHz	35	40	— dB
		1990.0 ... 4000.0 MHz	30	35	— dB
		4000.0 ... 6000.0 MHz	20	28	— dB
VSWR		—	1.1	1.8	

1) 0 °C ... +55 °C

Maximum ratings

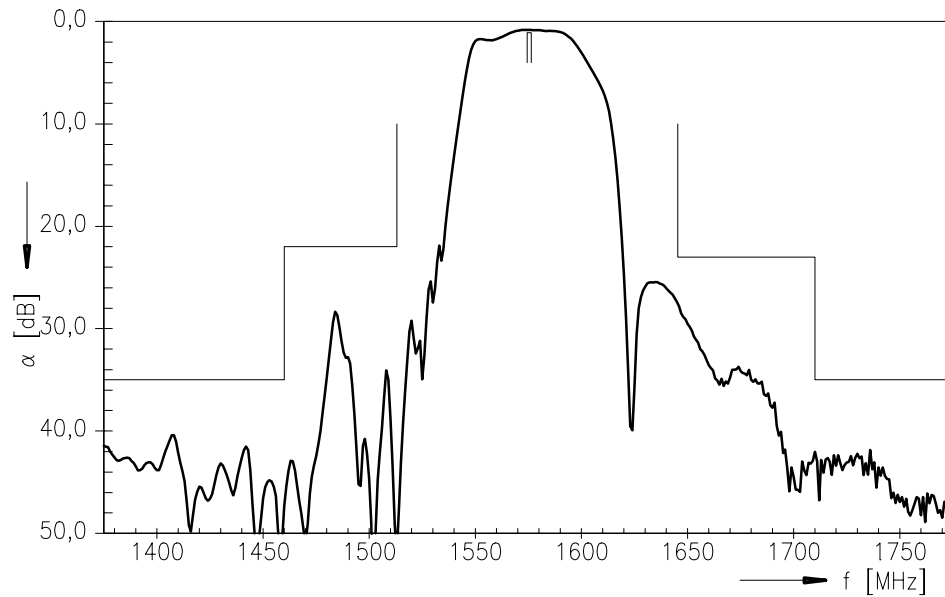
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input Power at				
1574.42 ... 1576.42 MHz	P _{IN}	3	dBm	source and load impedance 50 Ω continuous wave signal
50.0...1460 and				
1710 ... 4000 MHz	P _{IN}	25	dBm	

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

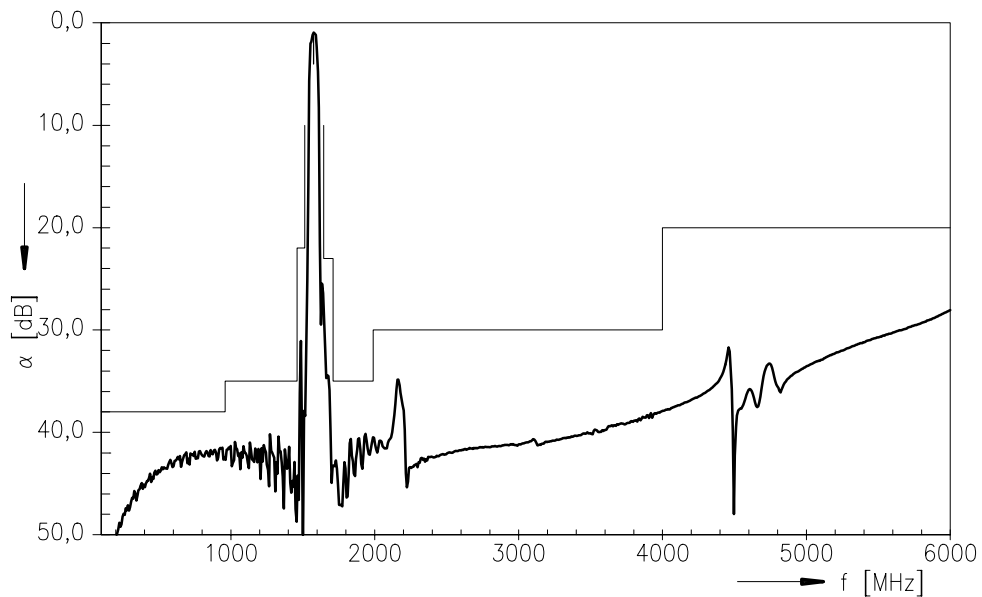
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Transfer function



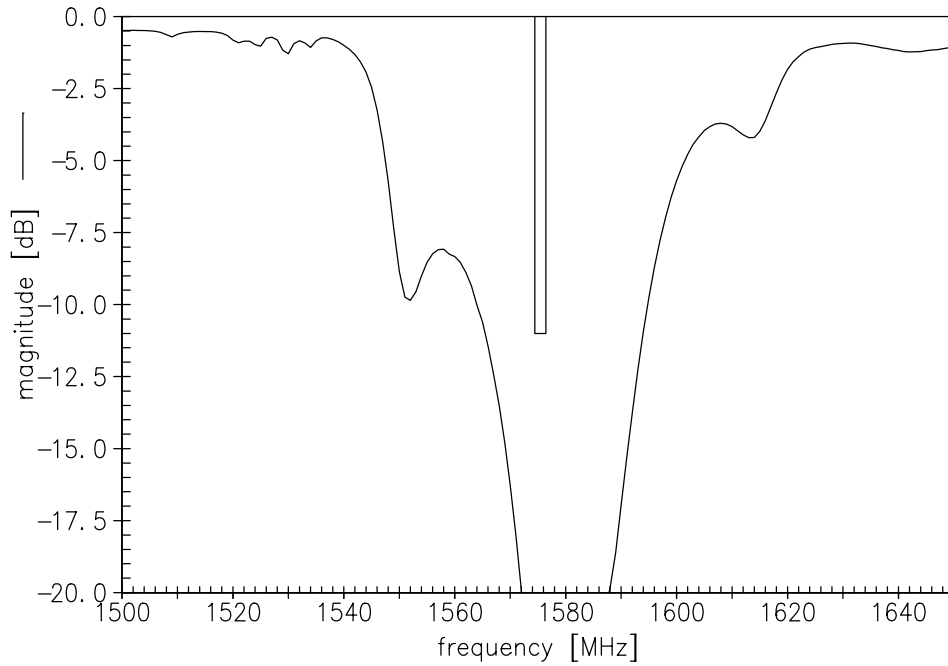
Transfer function (wideband)



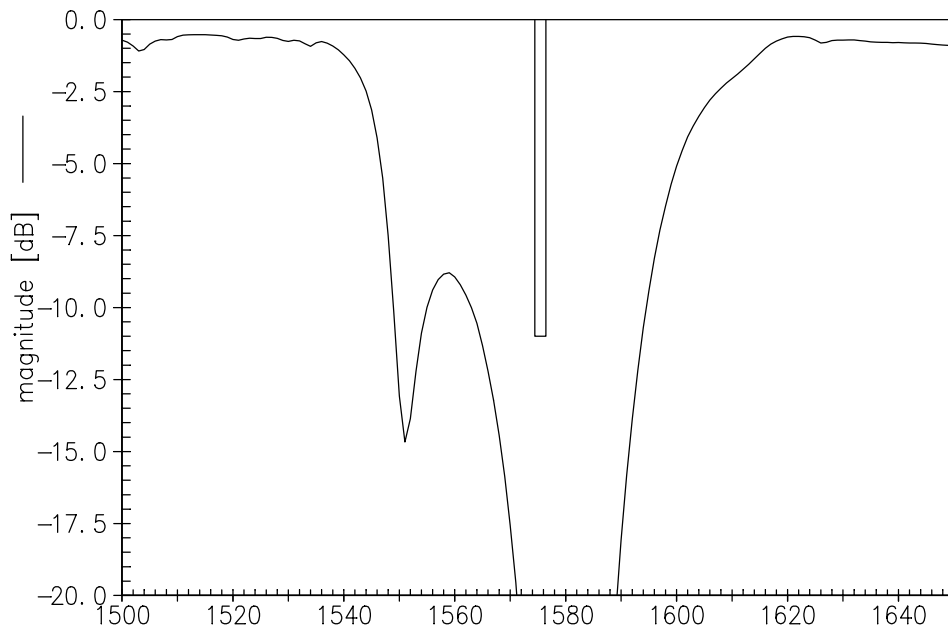
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S₁₁ function



S₂₂ function



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Type	B7839	
Ordering code	B39162-B7839-K410	
Marking and Package	C61157-A7-A131	
Packaging	F61074-V8151-Z000	
Date Codes	L_1126	
S-Parameters	B7839_NB.s3p B7839_WB.s3p	
Soldering profile	S_6001	

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

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