



SAW Components

SAW Rx Filter

GPS

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



SAW Components

B7839

Low-Loss Filter for Mobile Communication

1575.42 MHz

Data Sheet



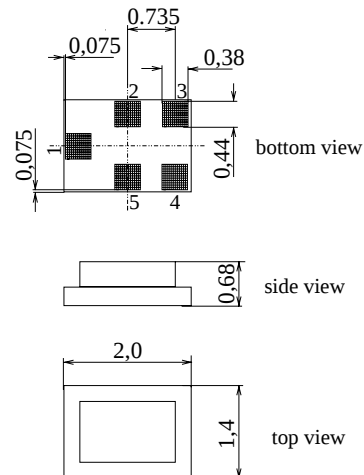
Application

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



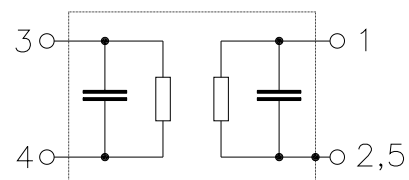
Features

- 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





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Characteristics

Operating temperature range:	T	=	−30 °C ... +85 °C
Terminating source impedance:	Z _S	=	50 Ω
Terminating load impedance:	Z _L	=	50 Ω

		B7839			
		min.	typ. @ 25 °C	max.	
Nominal frequency	f _N	—	1575.42	—	MHz
Maximum insertion attenuation	α _{max}				
1574.42 ... 1576.42 MHz		—	0.75	1.1	dB
1574.42 ... 1576.42 MHz		—	0.75	1.0	dB ¹⁾
Amplitude ripple in passband (p-p)	Δα				
1574.42 ... 1576.42 MHz		—	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					
1574.42 ... 1576.42 MHz		—	1.1	1.8	

¹⁾ 0 °C ... +55 °C

Maximum ratings

Operable temperature range	T	−40/+85	°C	machine model, 10 pulses
Storage temperature range	T _{stg}	−40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	source and load impedance 50 Ω continuous wave signal
Input Power at				
1574.42 ... 1576.42 MHz	P _{IN}	3	dBm	
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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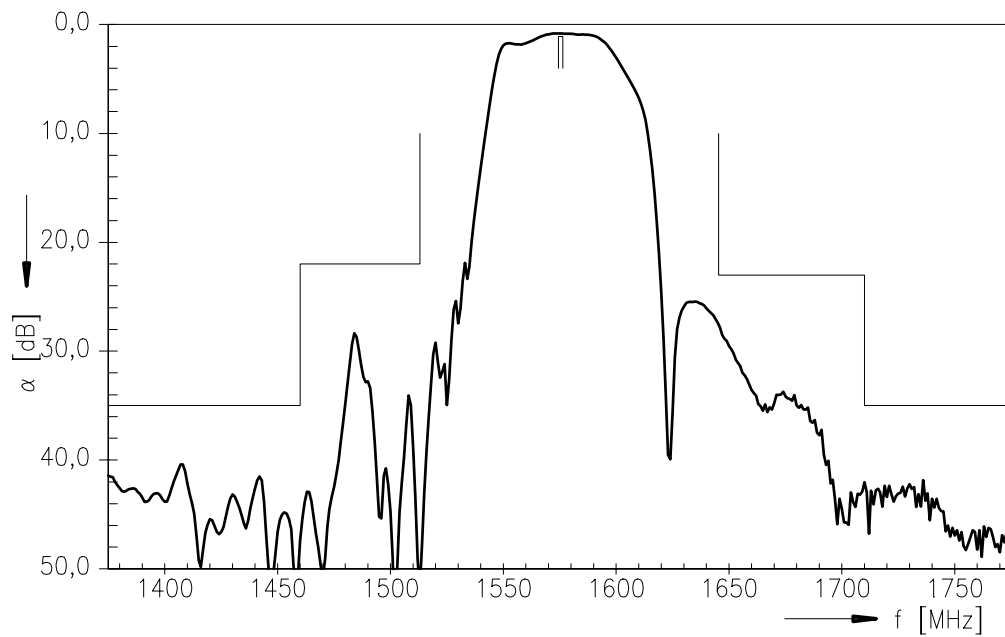
Low-Loss Filter for Mobile Communication

1575.42 MHz

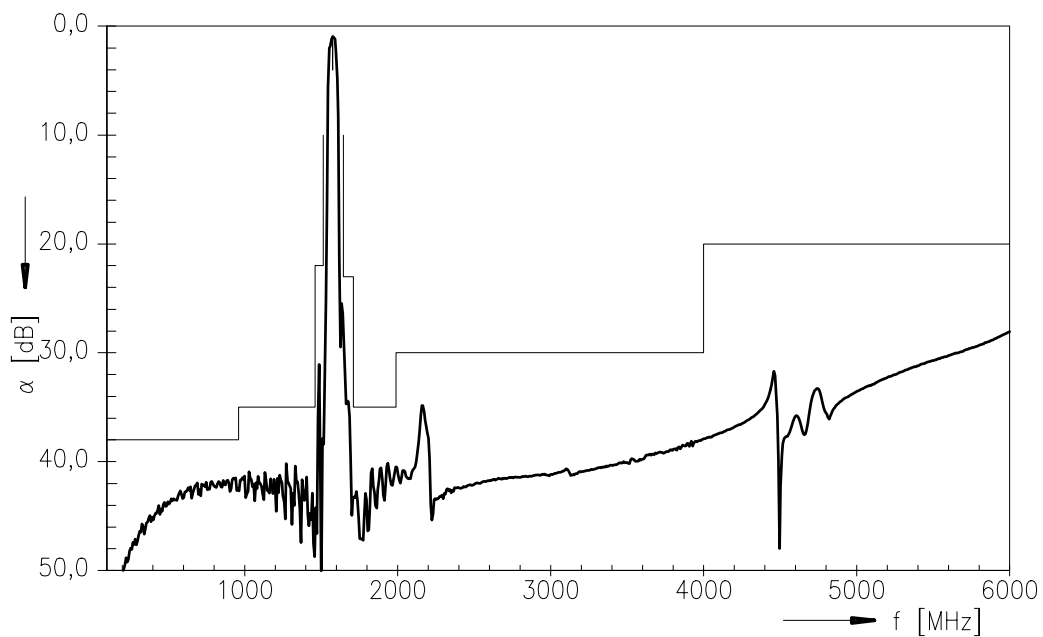
Data Sheet



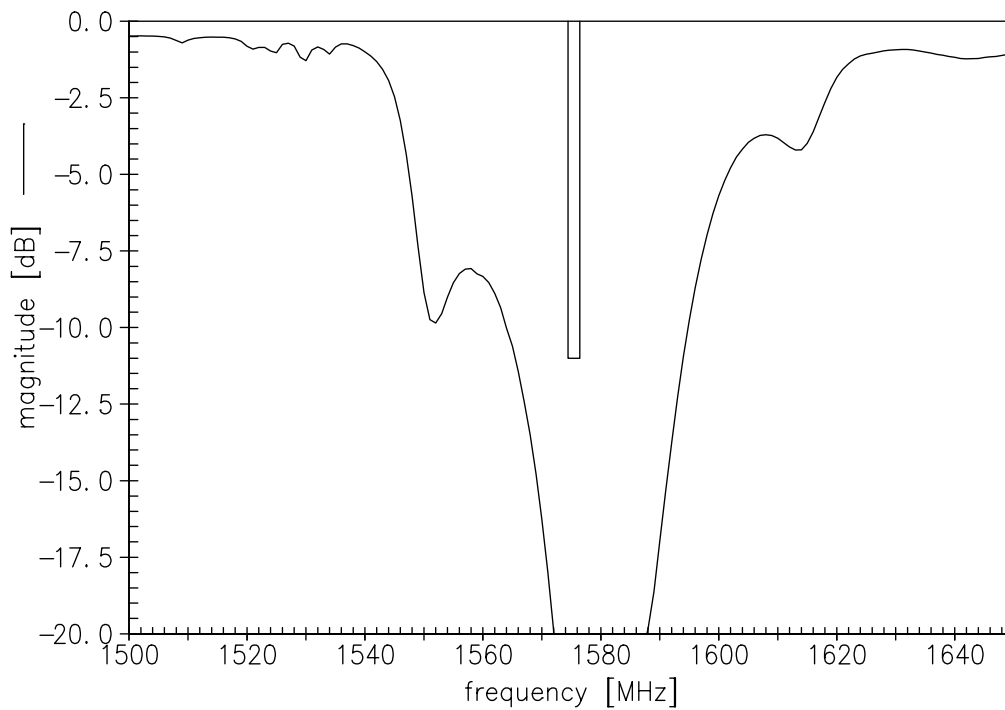
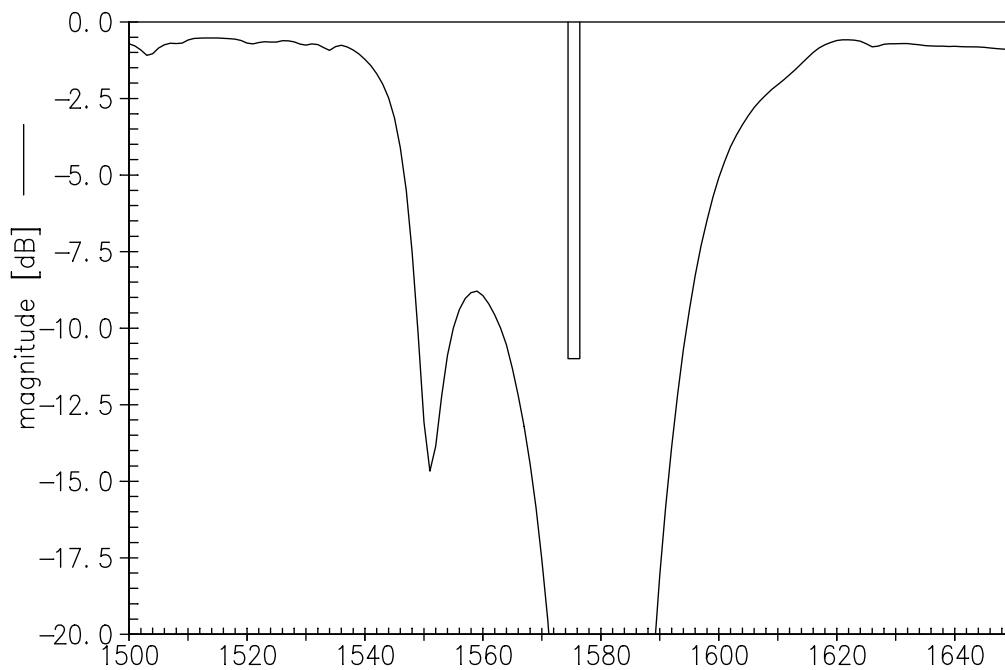
Transfer function



Transfer function (wideband)



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

**S₁₁ function****S₂₂ function**

**SAW Components****B7839****Low-Loss Filter for Mobile Communication****1575.42 MHz**

Data Sheet



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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P.O. Box 80 17 09, 81617 Munich, GERMANY

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