



SAW Components

SAW RF filter

Automotive telematics

Series/type:	B3913
Ordering code:	B39162B3913U410
Date:	September 16, 2011
Version:	2.0

Data sheet



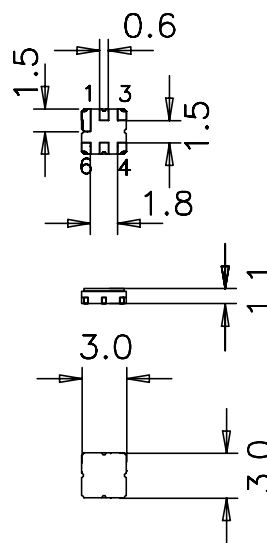
Application

- Low-loss RF filter for GPS/GLONASS/Galileo application
- Usable passband 56 MHz
- No matching network required for operation at 50 Ω



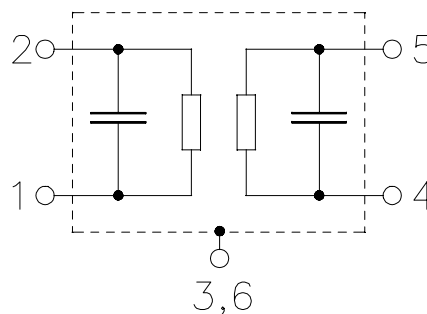
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 2 Input
- 5 Output
- 1,3,4,6 Case ground



Data sheet


Characteristics

Temperature range for specification: $T = -45\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1588.0	—	MHz
Maximum insertion attenuation	α_{\max}	—	2.0	3.0	dB
1560.00 ... 1616.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.8	2.1	dB
1560.00 ... 1616.00 MHz					
VSWR		—	2.1	2.5	
	1560.00 ... 1616.00 MHz				
Group delay ripple¹⁾ (p-p)		—	14	26	ns
1560.0 ... 1616.0 MHz					
	1597.0 ... 1616.0 MHz	—	7	15	ns
Attenuation	α				
	100.00 ... 1400.00 MHz	38	44	—	dB
	1400.00 ... 1525.00 MHz	25	30	—	
	1645.00 ... 1650.00 MHz	8	30	—	dB
	1650.00 ... 1840.00 MHz	30	34	—	
	1840.00 ... 2000.00 MHz	38	41	—	dB
	2000.00 ... 2500.00 MHz	32	35	—	

1) Averaged over 500 kHz



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1588.0 MHz

Data sheet



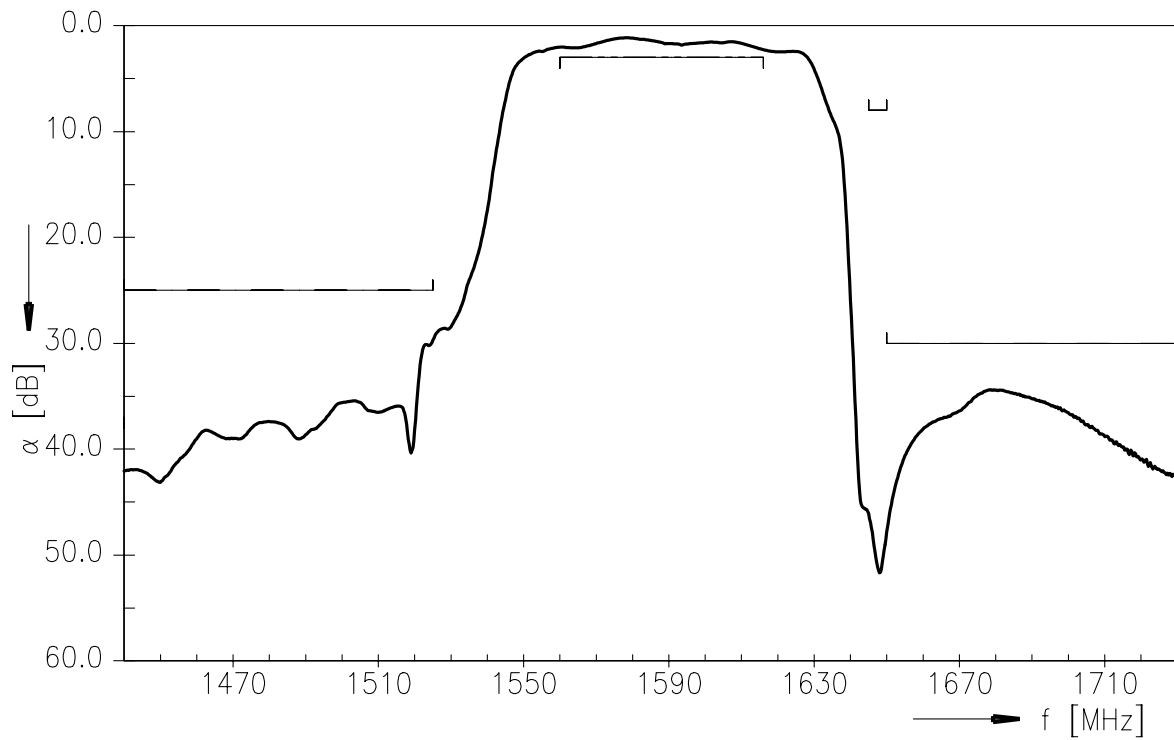
Maximum ratings

Operable temperature range	T	-45/+125	°C	
Storage temperature range	T _{stg}	-45/+125	°C	
DC voltage	V _{DC}	6	V	
Source power	P _S	10	dBm	source impedance 50 Ω

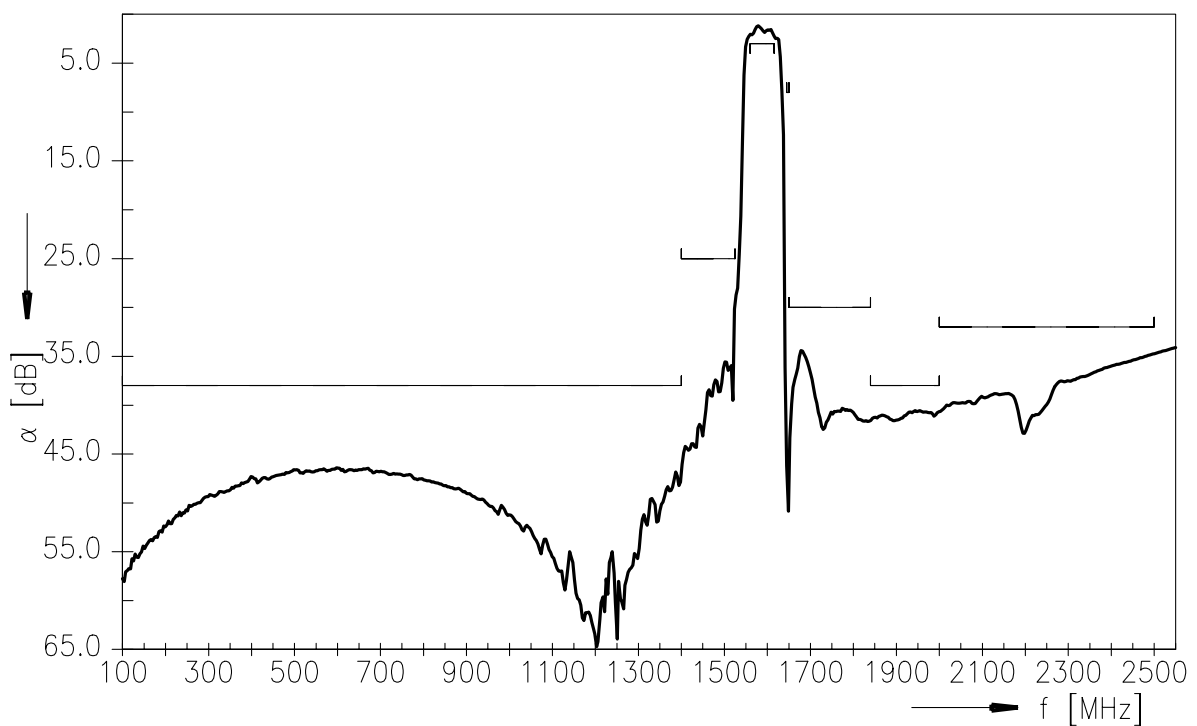
Data sheet



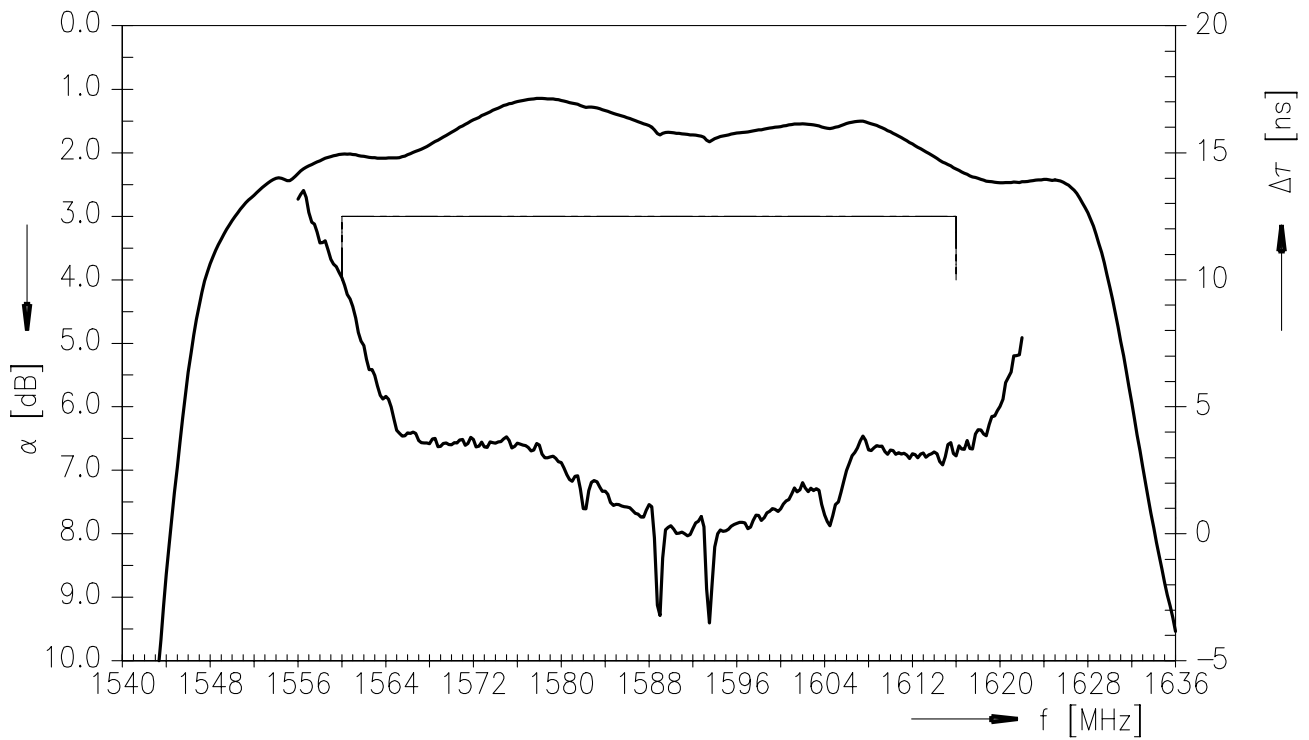
Transfer function



Transfer function (wideband)



Group delay time



References

Type	B3913
Ordering code	B39162B3913U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B3913_NB.s2p, B3913_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."
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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Published by EPCOS AG
Systems, Acoustics, Waves Business Group
P.O. Box 80 17 09, 81617 Munich, GERMANY

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