SAW Components

SAW filter

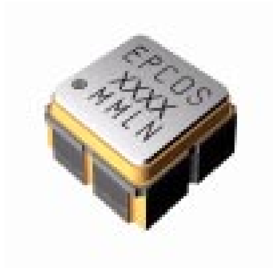
Automotive telematics

Series/type: **B3912**
Ordering code: **B39242B3912U410**

Date: April 07, 2011
Version: 2.1

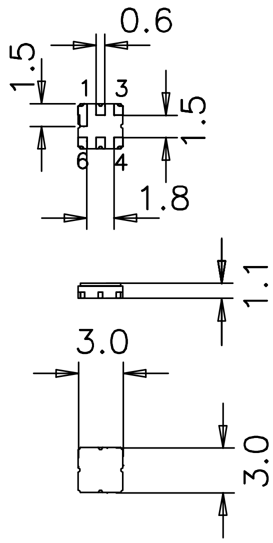
Application

- Low-loss RF filter for automotive telematics



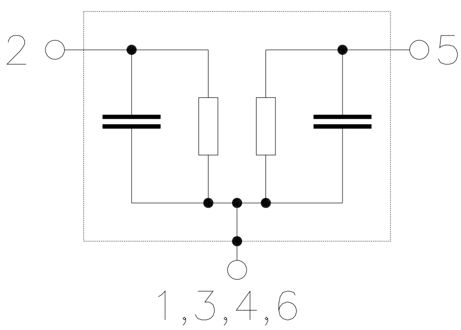
Features

- Package size 3.0 x 3.0 x 1.1 mm^3
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- AEC-Q200 qualified component family
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Characteristics

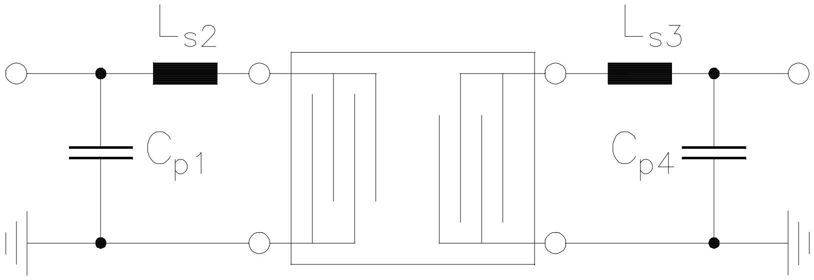
Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	2448.50	—	MHz
Maximum insertion attenuation	α_{max}				
2400.00 ... 2497.00 MHz		—	1.7	3.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2400.00 ... 2497.00 MHz		—	0.7	2.0	dB
VSWR					
Input 2400.00 ... 2497.00 MHz		—	1.5	2.0	
Output 2400.00 ... 2497.00 MHz		—	1.5	2.0	
Attenuation	α				
50.00 ... 2300.00 MHz		20	24	—	dB
2600.00 ... 3500.00 MHz		22	26	—	dB
3500.00 ... 5000.00 MHz		25	33	—	dB

Maximum ratings

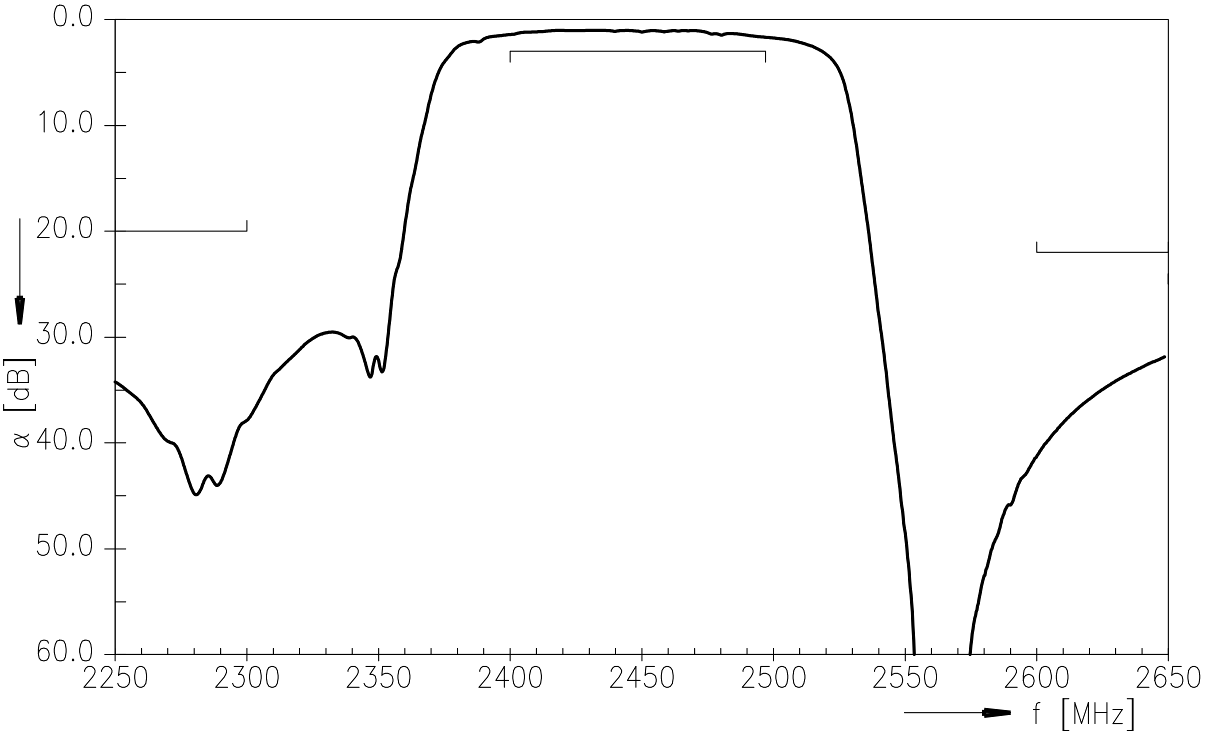
Operable temperature range	T	–45/+125	˚C	
Storage temperature range	T_{stg}	–45/+125	˚C	
DC voltage	V_{DC}	6	V	
Source power	P_S	20	dBm	source impedance 50 Ω

Matching network to 50 Ω (element values depend on pcb layout and equivalent circuit)

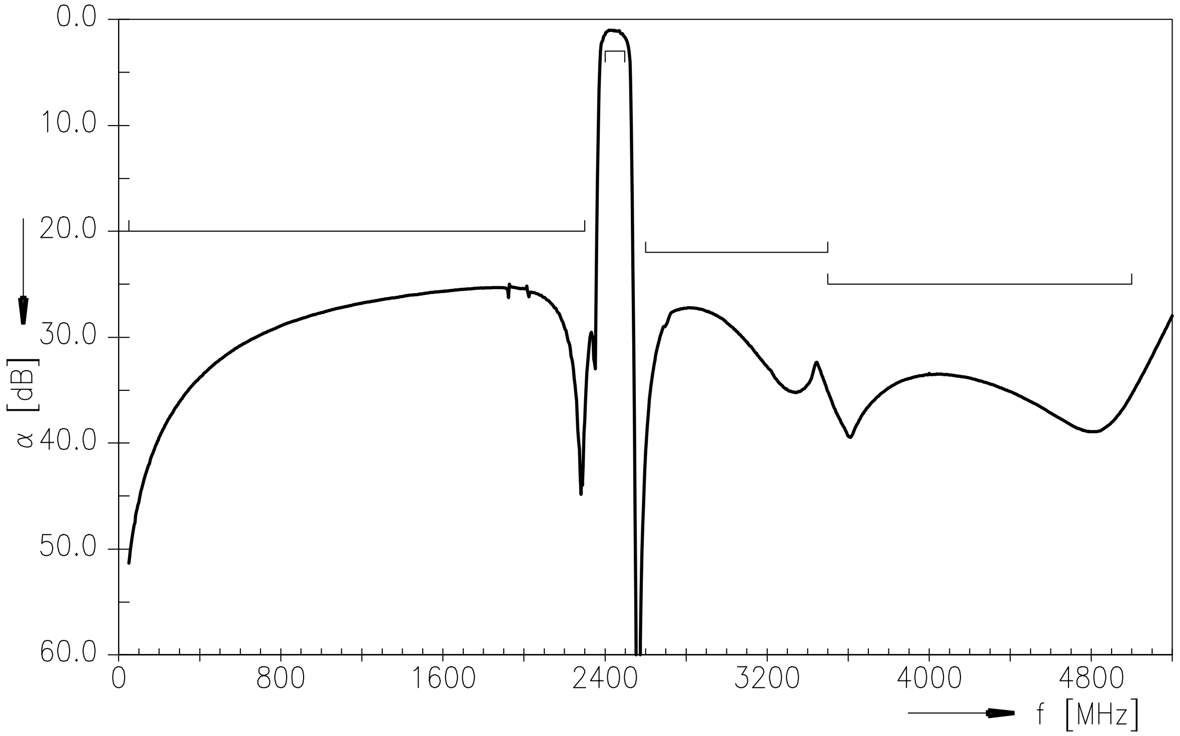


C_{p1} = 1.0 pF
L_{s2} = 2.7 nH
L_{s3} = 2.7 nH
C_{p4} = 1.0 pF

Transfer function



Transfer function (wideband)



References

Type	B3912
Ordering code	B39242B3912U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B3912_NB.s2p, B3912_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.
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

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

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