



SAW Components

SAW filter

Automotive telematics

Series/type:	B3912
Ordering code:	B39242B3912U410
Date:	April 07, 2011
Version:	2.1

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Data sheet

Characteristics

Temperature range for specification: $T = -40\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ and matching network
 Terminating load impedance: $Z_L = 50\ \Omega$ and matching network

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	2448.50	—	MHz
Maximum insertion attenuation	α_{\max}	—	1.7	3.0	dB
2400.00 ... 2497.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.7	2.0	dB
2400.00 ... 2497.00 MHz					
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



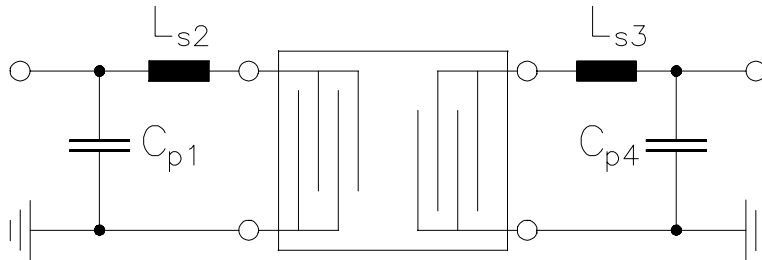
Maximum ratings

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

Data sheet



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



$$C_{p1} = 1.0 \text{ pF}$$

$$L_{s2} = 2.7 \text{ nH}$$

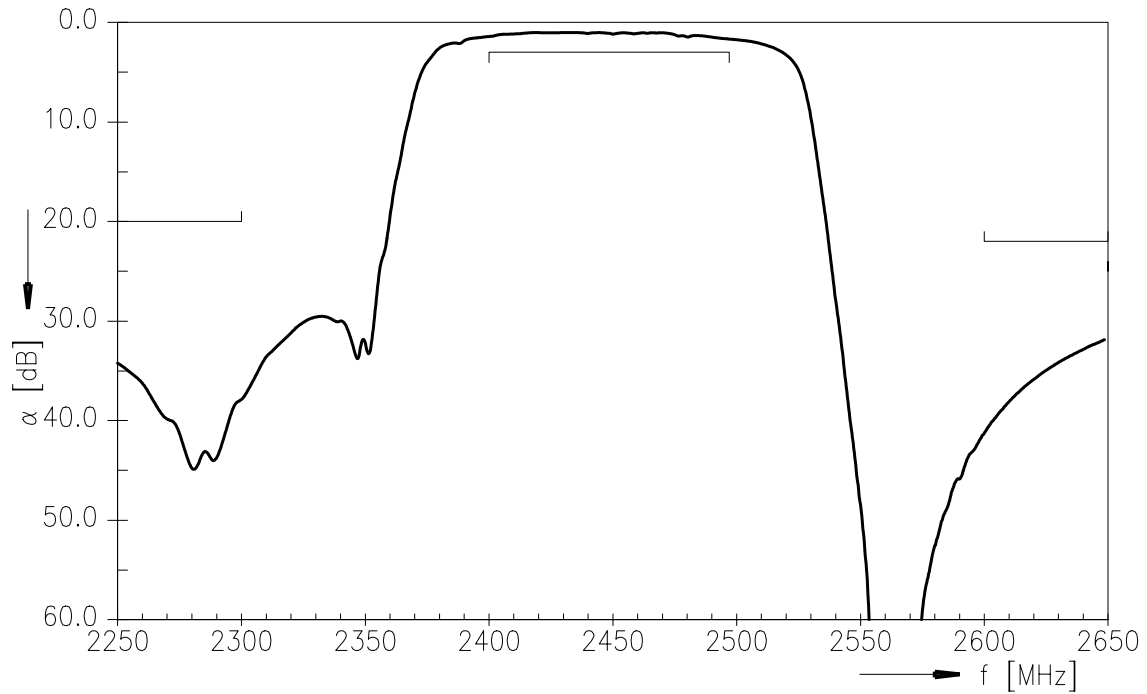
$$L_{s3} = 2.7 \text{ nH}$$

$$C_{p4} = 1.0 \text{ pF}$$

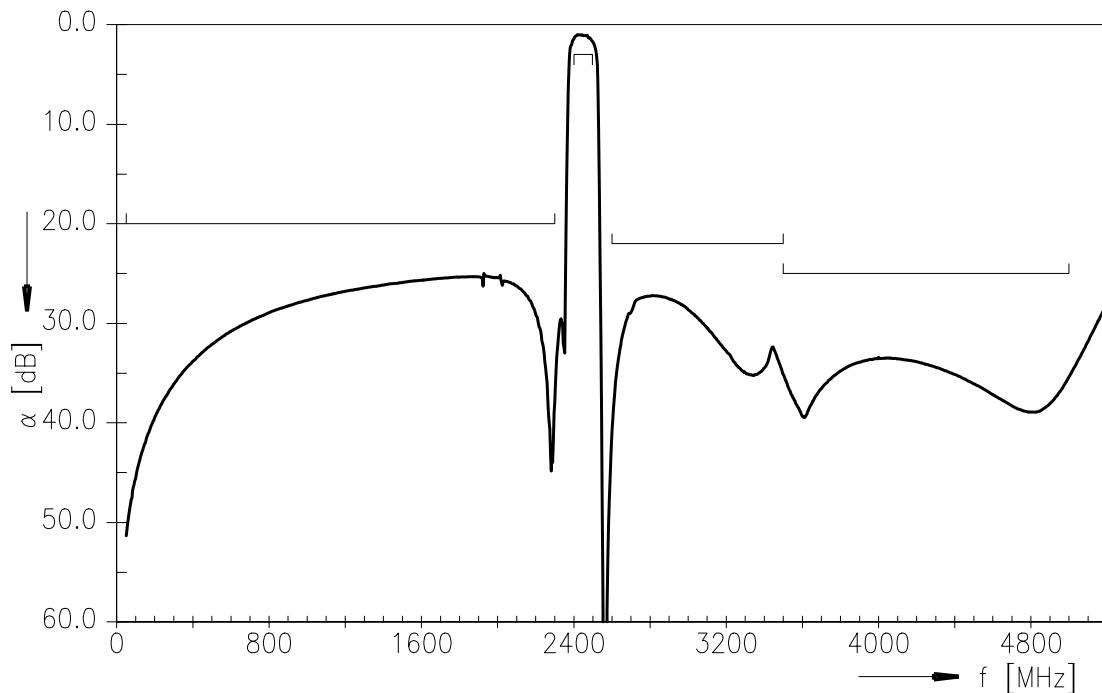
Data sheet



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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