



SAW Components

SAW RF filter

Short range devices

Series/type:	B3903
Ordering code:	B39871B3903U510
Date:	January 11, 2010
Version:	2.0



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B3903

SAW RF filter

869.0 MHz

Data sheet



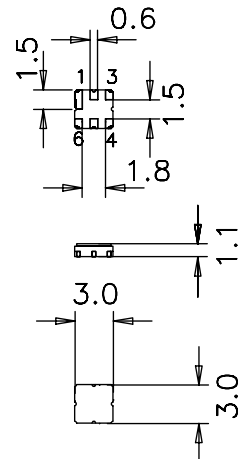
Application

- Low-loss RF filter for Short range devices
- Impedance transformation from 50 Ω to 200 Ω
- Unbalanced to balanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 2.0 MHz



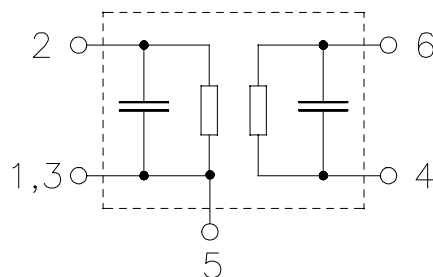
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6D
- 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 unbalanced
- 4,6 Output balanced
- 1,3,5 Case ground (to be grounded)





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Characteristics

Temperature range for specification: $T = -40\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 200\ \Omega$ (balanced)

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	869.0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
868.0 ... 870.0 MHz		—	1.4	1.9	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
868.0 ... 870.0 MHz		—	0.2	0.6	dB
Input VSWR					
868.0 ... 870.0 MHz		—	1.3	1.7	
Output VSWR					
868.0 ... 870.0 MHz		—	1.3	1.7	
Attenuation	α				
10.0 ... 828.3 MHz		35	40	—	dB
908.3 ... 1200.0 MHz		35	40	—	dB

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**Maximum ratings**

Operable temperature range	T	-45/+125	°C	
Storage temperature range	T _{stg}	-45/+125	°C	
DC voltage	V _{DC}	6	V	
Input power	P _{IN}	13	dBm	



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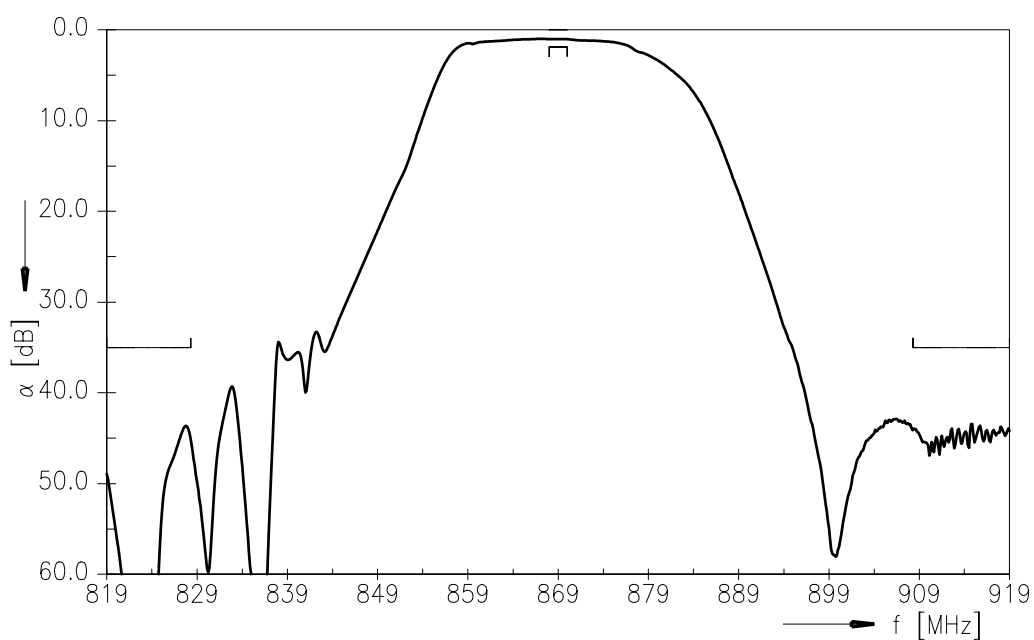
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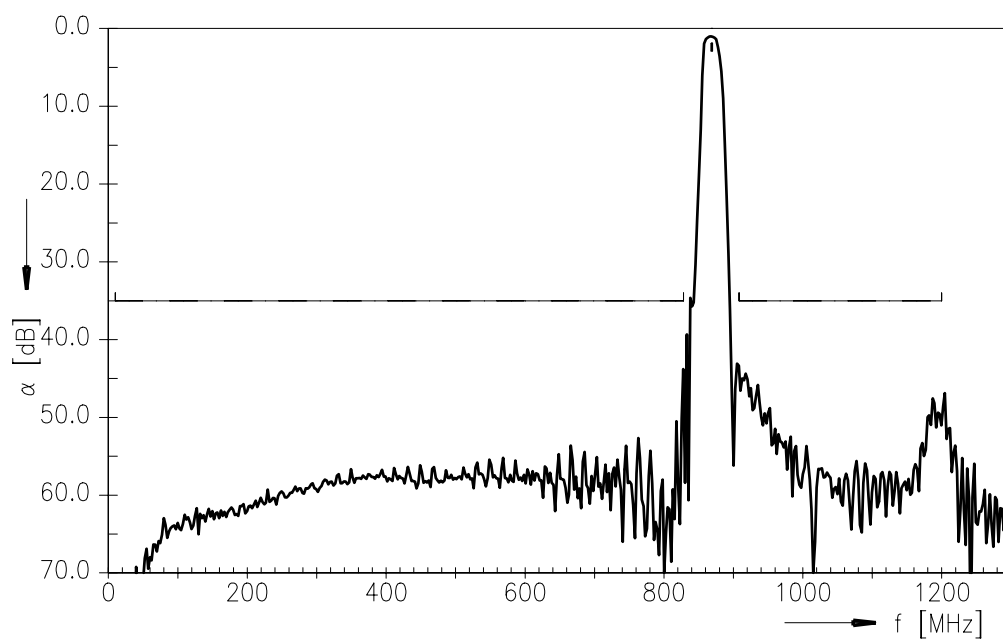
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Frequency response



Frequency response (wideband)



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

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Data sheet

**References**

Type	B3903
Ordering code	B39871B3903U510
Marking and package	C61157-A7-A68
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B3903_NB.s2p B3903_WB.s2p
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."

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

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Surface Acoustic Wave Components Division

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



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