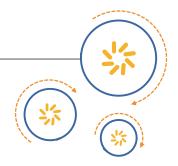


# RF360 Europe GmbH

## A Qualcomm - TDK Joint Venture



# **SAW Components**

### Low-Loss Filter

Data Sheet B1610

Series/type: B1610

Ordering code:

Date: Jul 03, 2003

Version:

RF360 products mentioned within this document are offered by RF360 Europe GmbH and other subsidiaries of RF360 Holdings Singapore Pte. Ltd. (collectively, the "RF360 Subsidiaries"). RF360 Holdings Singapore Pte. Ltd. is a joint venture of Qualcomm Global Trading Pte. Ltd. and EPCOS AG. References in this documentation to EPCOS AG should properly reference, and shall be read to reference, the RF360 Subsidiaries.

RF360 Europe GmbH, Anzinger Str. 13, München, Germany

© 2016 RF360 Europe GmbH and/or its affiliated companies. All rights reserved.

These materials, including the information contained herein, may be used only for informational purposes by the customer. The RF360 Subsidiaries assume no responsibility for errors or omissions in these materials or the information contained herein. The RF360 Subsidiaries reserve the right to make changes to the product(s) or information contained herein without notice. The materials and information are provided on an AS IS basis, and the RF360 Subsidiaries assume no liability and make no warranty or representation, either expressed or implied, with respect to the materials, or any output or results based on the use, application, or evaluation of such materials, including, without limitation, with respect to the non-infringement of trademarks, patents, copyrights or any other intellectual property rights or other rights of third parties.

No use of this documentation or any information contained herein grants any license, whether express, implied, by estoppel or otherwise, to any intellectual property rights, including, without limitation, to any patents owned by QUALCOMM Incorporated or any of its subsidiaries.

Not to be used, copied, reproduced, or modified in whole or in part, nor its contents revealed in any manner to others without the express written permission of RF360 Europe GmbH.

Qualcomm and Qualcomm RF360 are trademarks of Qualcomm Incorporated, registered in the United States and other countries. RF360 is a trademark of Qualcomm Incorporated. Other product and brand names may be trademarks or registered trademarks of their respective owners.

This technical data may be subject to U.S. and international export, re-export, or transfer ("export") laws. Diversion contrary to U.S. and international law is strictly prohibited.



# **SAW Components**

Data Sheet B1610

© EPCOS AG 2015. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.



SAW Components	B1610
Low-Loss Filter	1220,00 MHz

**Data Sheet** 

#### $\leq$ MD

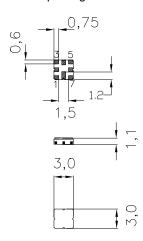
#### SMD ceramic package QCC8D

#### **Features**

- Low loss RF filter for dual conversion
- Usable passband 8 MHz
- No matching network required for operation at 200  $\Omega$
- Balanced to balanced operation
- Low group delay ripple
- Package for **S**urface **M**ounted Technology (SMT)

#### **Terminals**

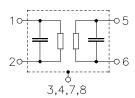
■ Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

#### Pin configuration

- Input 2 Input 5 Output 6 Output 3,7 To be grounded
- 4,8 Case - ground



Туре	Ordering code	Marking and Package according to	Packing according to		
B1610	B39122-B1610-U810	C61157-A7-A72	F61074-V8168-Z000		

Electrostatic Sensitive Device (ESD)

#### **Maximum ratings**

Operable temperature range	T	-40/+85	°C	
Storage temperature range	$T_{ m stg}$	-40/+85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_{S}$	0	dBm	source and load impedance 200 $\Omega$



SAW Components B1610
Low-Loss Filter 1220,00 MHz

Data Sheet

Characteristics

Operating temperature range:  $T = -40 \,^{\circ}\text{C} \dots +85 \,^{\circ}\text{C}$ 

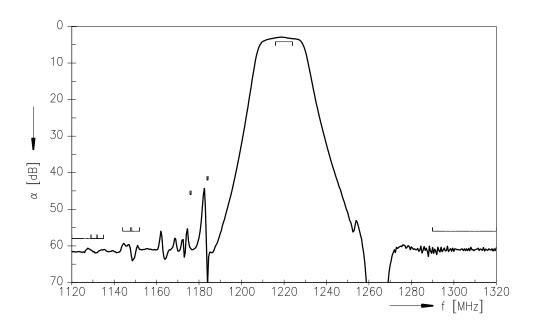
Terminating source impedance:  $Z_{\rm S} = 200~\Omega$ Terminating load impedance:  $Z_{\rm L} = 200~\Omega$ 

		min.	typ.	max.	
Nominal frequency	$f_{N}$	_	1220,00	_	MHz
Maximum insertion attenuation	$\alpha_{\text{max}}$				
1216,00 1224,00 MHz		_	3,6	4,2	dB
Amplitude ripple in passband (p-p)	Δα				
1216,00 1224,00 MHz		_	0,6	1,2	dB
Attenuation	α				
500,00 f <sub>N</sub> -91,00 MHz		58,0	62,0	_	dB
f <sub>N</sub> -91,00 f <sub>N</sub> -85,00 MHz		58,0	62,0	_	dB
f <sub>N</sub> -76,00 f <sub>N</sub> -68,00 MHz		56,0	60,0	_	dB
6 00 00 MU-		50.0	00.0		-ID
f <sub>N</sub> -88,00 MHz		58,0	62,0	_	dB
f <sub>N</sub> -72,00 MHz		56,0	60,0	_	dB
f <sub>N</sub> -44,00 MHz		46,0	54,0	_	dB
f <sub>N</sub> -36,00 MHz		42,0	44,0	_	dB
f <sub>N</sub> +70,00 2000,00 MHz		56,0	62,0		dB
. <sub>N</sub> . 70,00 2000,00 MH2		00,0	02,0		
Group delay ripple (p-p)	$\Delta  au$				
1216,00 1224,00 MHz		_	15	_	ns

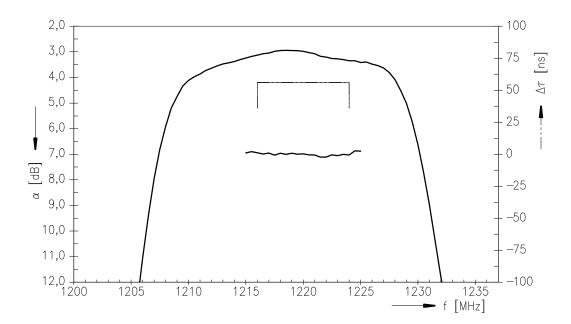




#### **Transfer function**



#### Transfer function (passband)





SAW Components

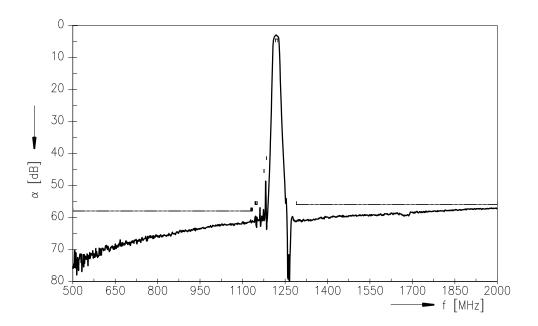
Low-Loss Filter

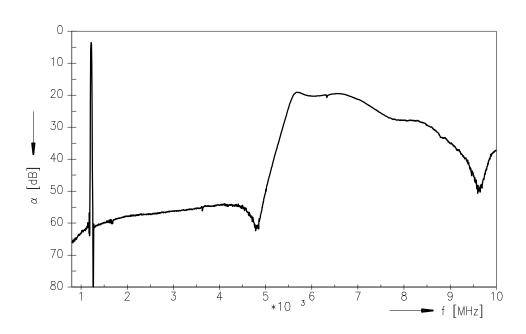
Data Sheet

B1610

1220,00 MHz

Transfer function (wideband)







SAW Components	B1610
Low-Loss Filter	1220,00 MHz

=MD

**Data Sheet** 

#### Published by EPCOS AG Surface Acoustic Wave Components Division, SAWCE MM PD P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2003. Reproduction, publication and dissemination of this data sheet, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.