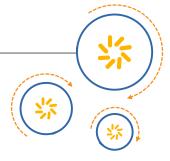


RF360 Europe GmbH

A Qualcomm - TDK Joint Venture



SAW Components

SAW filter

Double conversion

Series/type: B1619

Ordering code: B39172 B1619 U810

Date: February 11, 2011

Version: 2.1

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

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

SAW filter

Double conversion

Series/type: B1619

Ordering code: B39172-B1619-U810

Date: February 11, 2011

Version: 2.1

EPCOS AG is a TDK Group Company.

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



SAW Components B1619
SAW filter 1690.00 MHz

Data sheet



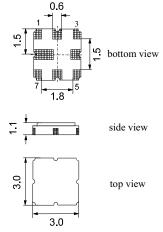
Application

- Low-loss RF filter
- Balanced to balanced operation
- Low group delay ripple



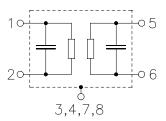
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code QCC8D
- RoHS compatible
- Approximate weight 0.037 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostactic Sensitive Device (ESD)



Pin configuration

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





SAW Components B1619
SAW filter 1690.00 MHz

Data sheet

Characteristics

Operating temperature range: $T = 0 \,^{\circ}C \text{ to } +70 \,^{\circ}C$

Terminating source impedance: $Z_S = 190 \Omega$ Terminating load impedance: $Z_L = 190 \Omega$

		min.	typ.	max.	
			@ 25 °C		
Center frequency	f _C	_	1690.00	_	MHz
Maximum insertion attenuation 1681.20 1698.80 MHz	α_{max}	_	4.00	4.50	dB
Amplitude ripple in any 6.5 MHz band 1681.20 1698.80 MHz		_	0.50	1.00	dB
Pass bandwidth $ \begin{aligned} \alpha_{\text{rel}} &\leq 3 \text{ dB} \\ \alpha_{\text{rel}} &\leq 10 \text{ dB} \end{aligned} $		<u> </u>	33.00 40.00	_	MHz MHz
Attenuation 1577.00 1626.00 MHz	α	50.00	53.00	_	dB
Group delay ripple (p-p) 1681.20 1698.80 MHz		_	15.00	_	ns

Maximum ratings

Operable temperature range	Т	-4 5/+85	°C	
oporable temperature range	•	10, 100	•	
Storage temperature range	Т.	-4 5/+85	°C	
Otorage temperature range	' stg		0	
DC voltage	W	l 0	W	
DC Vollage	V_{DC}	0	\ V	
Source power	Ps	۸ ا	dBm	source impedance 190 Ω
Source power	ГS	0	ubili	



SAW Components

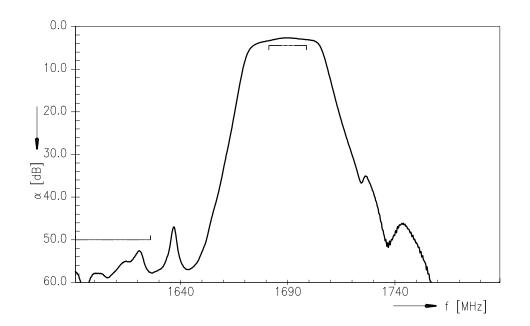
B1619

SAW filter

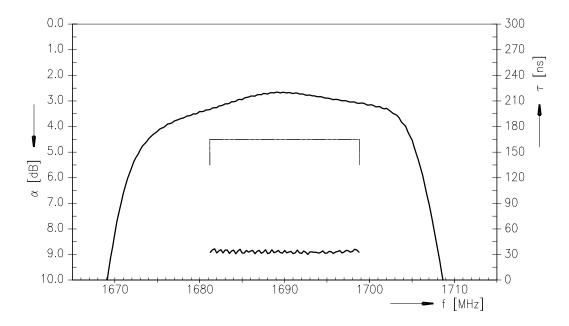
1690.00 MHz

Data sheet

Transfer function



Transfer function





SAW Components		B1619
SAW filter		1690.00 MHz
Data sheet	SMD	

References

Туре	B1619
Ordering code	B39172-B1619-U810
Marking and package	C61157-A7-A72
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B1619_NB_UN.s4p B1619_WB_UN.s4p
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 maxi- mum 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 .

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

© EPCOS AG 2011. 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.



Important notes

The following applies to all products named in this publication:

- Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitalle for use in a particular customer application.
- 2. We also point out that in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.
- 3. The warnings, cautions and product-specific notes ust be observed.
- 4. In order to satisfy certain technical requirements, some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as "hazardous"). Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales office.
- 5. We constantly strive to improve our products. Consequently, the products described in this publication may change from time to time. The same is true of the corresponding product specification. Please check therefore to what extent product descriptions and specification contained in this publication are still applicable before or when you place an order. We also reserve the right to discontinue production and delivery of products. Consequently, we cannot guarantee that all products named in this publication will always be available.
- 6. Unless otherwise agreed in individual contracts, all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI).
- The trade names EPCOS, CeraDiode, CSSP, PhaseCap, PhaseMod, SIFI, SIKOREL, Silver-Cap, SIMID, SIOV, SIP5D, SIP5K, TOPcap, UltraCap, WindCap are trademarks registered or pending in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.