



## SAW Components

### SAW Tx Filter

iDEN

<b>Series/Type:</b>	<b>B3836</b>
<b>Ordering code:</b>	<b>B39821-B3836-U410</b>
<b>Date:</b>	<b>Nov 10, 2005</b>
<b>Version:</b>	<b>1</b>

© EPCOS AG 2005. Reproduction, publication and dissemination of this data sheet, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.



SAW Components

B3836

Low-Loss Filter for Mobile Communication

815.50 MHz

Data Sheet

SMD

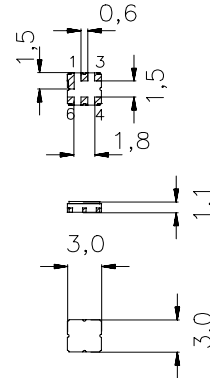
### Application

- Low-loss RF filter for iDEN systems, transmit path (TX)
- No matching required for operation at 50  $\Omega$
- Usable passband 19 MHz



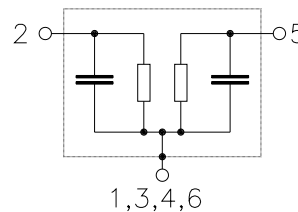
### Features

- Package size 3.0 x 1.1 x 3.0 mm<sup>3</sup>
- RoHS compliant
- Approx. weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals



### Pin configuration

- 2 Input, unbalanced
- 5 Output, unbalanced
- 1,3,4,6 To be grounded





Data Sheet



Characteristics

Operating temperature range:  $T = -30$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50\Omega$   
 Terminating load impedance:  $Z_L = 50\Omega$

		B3836 1)			
		min.	typ. @ 25°C	max.	
<b>Center frequency</b>	$f_C$	—	815.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
806.0 ... 825.0 MHz		—	2.7	3.7 2)	dB
<b>Group Delay ripple (p-p)</b>	$\Delta\tau$				
806.0 ... 825.0 MHz		—	25	50	ns
<b>Return loss (Input and Output)</b>					
806.0 ... 825.0 MHz		10.0	11.0	—	dB
<b>Attenuation</b>	$\alpha$				
851.0 ... 870.0 MHz		45	52	—	dB
935.0 ... 940.0 MHz		45	48	—	dB
960.65 ... 979.65 MHz		42	46	—	dB
1115.30 ... 1134.30 MHz		40	45	—	dB
1269.95 ... 1288.95 MHz		35	45	—	dB
1612.00 ... 1650.00 MHz		25	32	—	dB
1650.00 ... 2600.00 MHz		25	27	—	dB

1) Values in columns min, typ and max indicate the development status of the current version.

2) 3,0 dB max. at 25°C.



SAW Components

B3836

Low-Loss Filter for Mobile Communication

815.50 MHz

Data Sheet



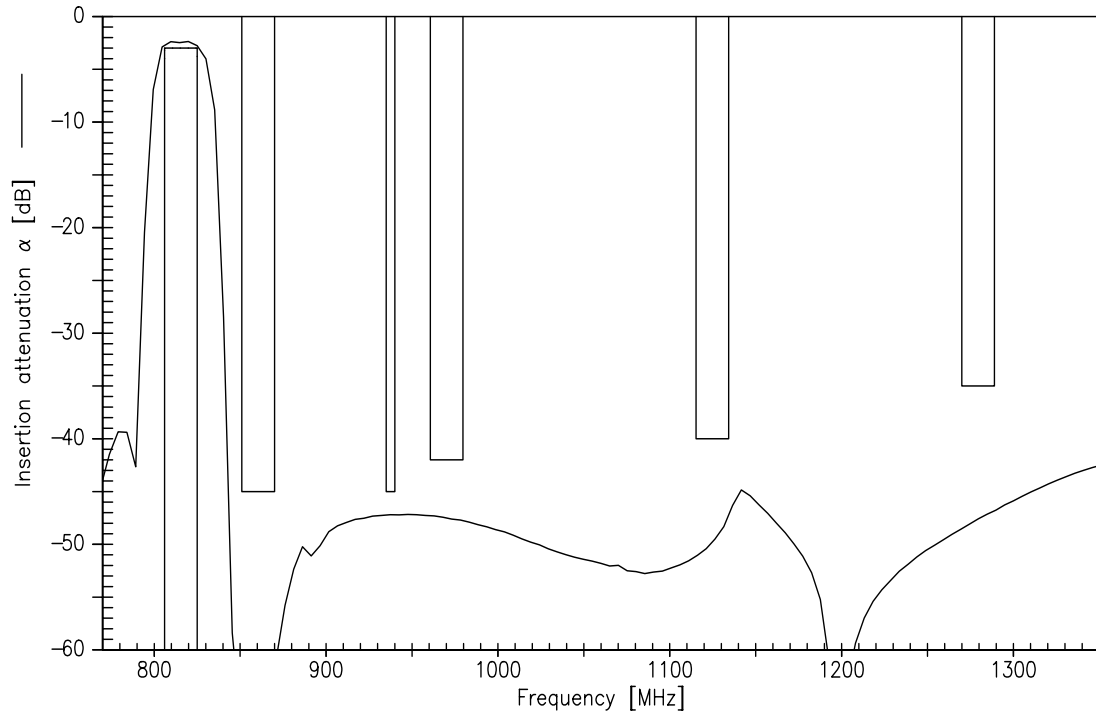
### Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 10 pulses
Input Power at iDEN Tx bands	P <sub>IN</sub>	7	dBm	continuous wave

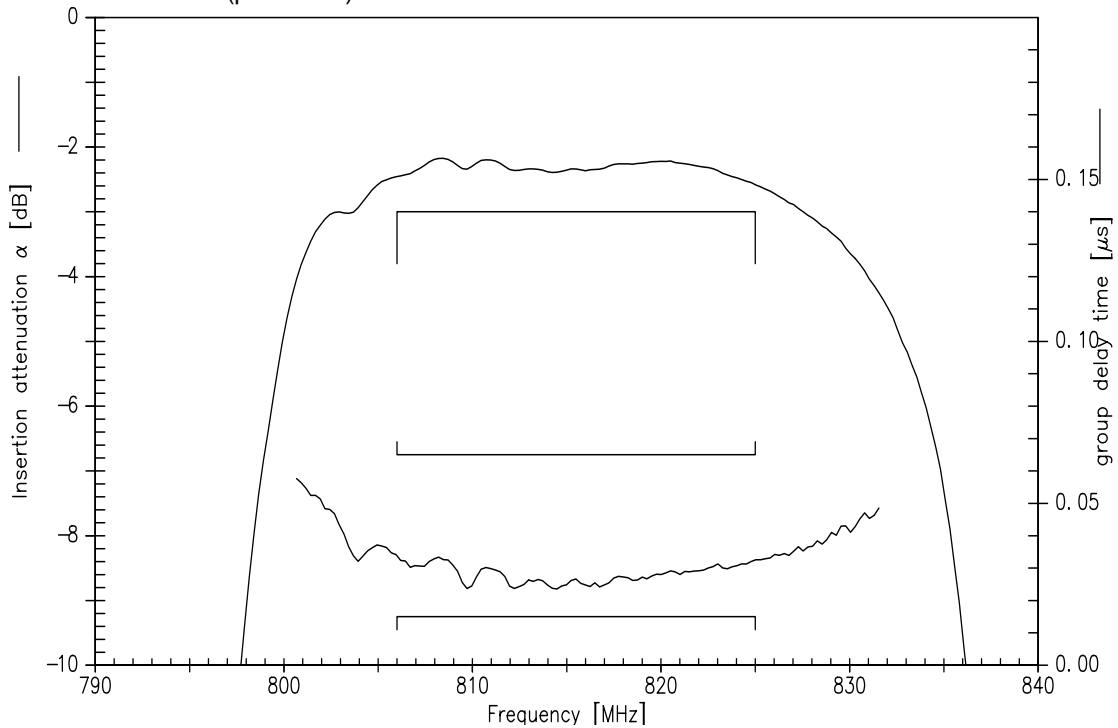
<sup>1)</sup> acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



Transfer function



Transfer function (passband)





SAW Components

B3836

Low-Loss Filter for Mobile Communication

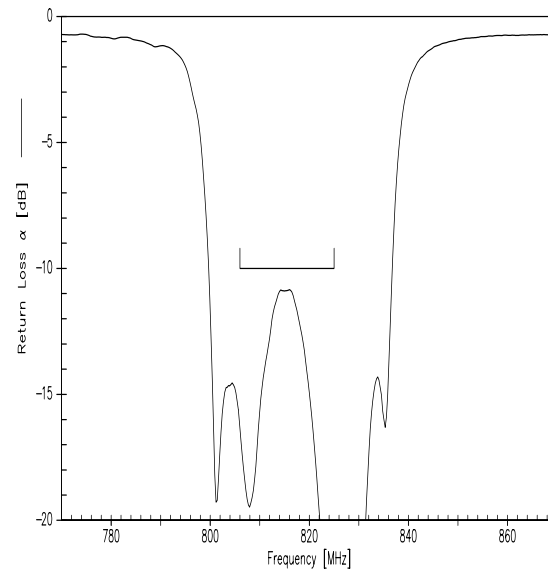
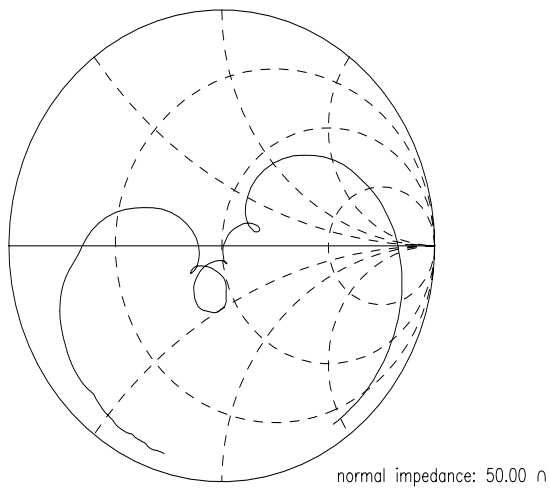
815.50 MHz

Data Sheet

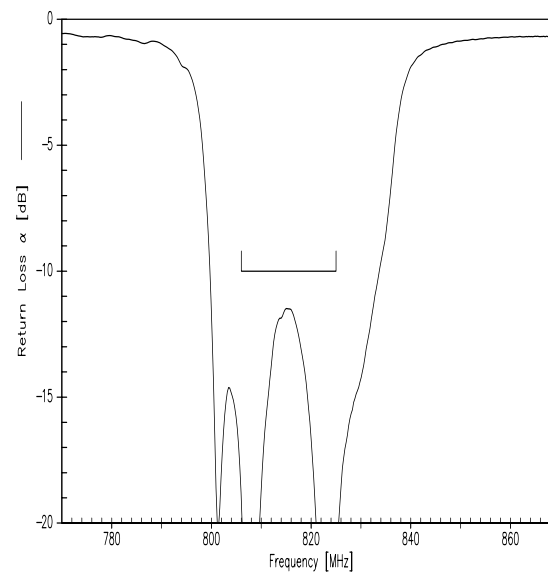
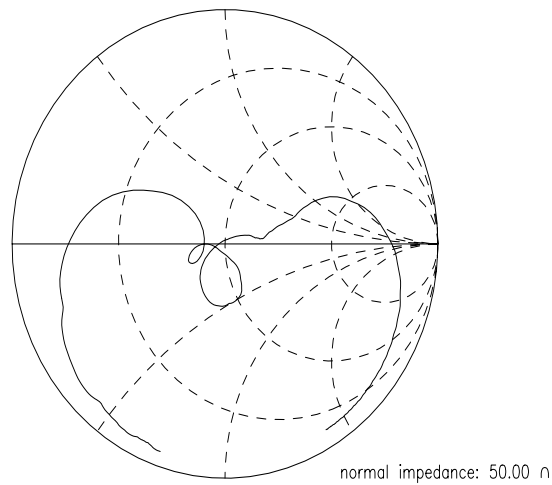


Smith chart

$S_{11}$  function



$S_{22}$  function





SAW Components

B3836

Low-Loss Filter for Mobile Communication

815.50 MHz

Data Sheet



Type	B3836	
Ordering code	B39821-B3836-U410	
Marking and Package	C61157-A7-A67	
Packaging	F61074-V8168-Z000	
Date Codes	L_1126	
S-Parameters	B3836_NB.s2p B3836_WB.s2p	
Soldering profile	S_6001	

For further information please contact your local EPCOS sales office or visit our webpage at [www.epcos.com](http://www.epcos.com) .

**Published by EPCOS AG**

**Surface Acoustic Wave Components Division**

**P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2005. Reproduction, publication and dissemination of this brochure 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.



## Important notes

The following applies to all products named in this publication:

1. 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 suitable 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 must 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](http://www.epcos.com/material)). Should you have any more detailed questions, please contact our sales offices.
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 specifications. Please check therefore to what extent product descriptions and specifications 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)**.
7. 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](http://www.epcos.com/trademarks).