



SAW Filters for Mobile Communications

Series/Type: B9486

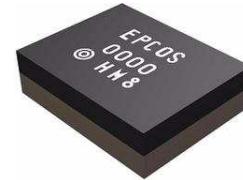
The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39202B9486P810		2013-07-19	2013-12-31	2014-02-28

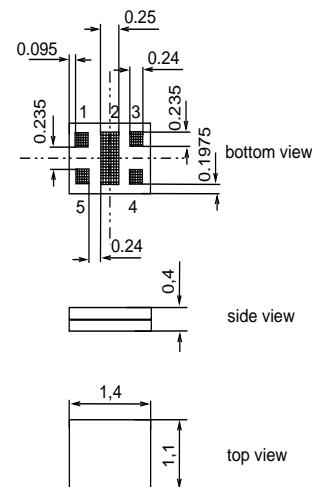
For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

Application

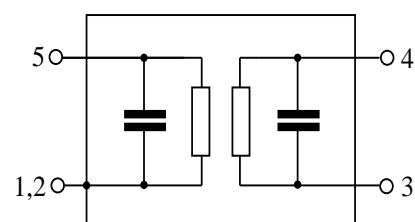
- Low-loss RF filter for mobile telephone
GSM 1900 systems, receive path (Rx)
- Low insertion attenuation
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 150Ω
- Suitable for GPRS class 1 to 12


Features

- Package size $1.4 \times 1.1 \times 0.4 \text{ mm}^3$
- RoHS compatible
- Approx. weight 0.003g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**

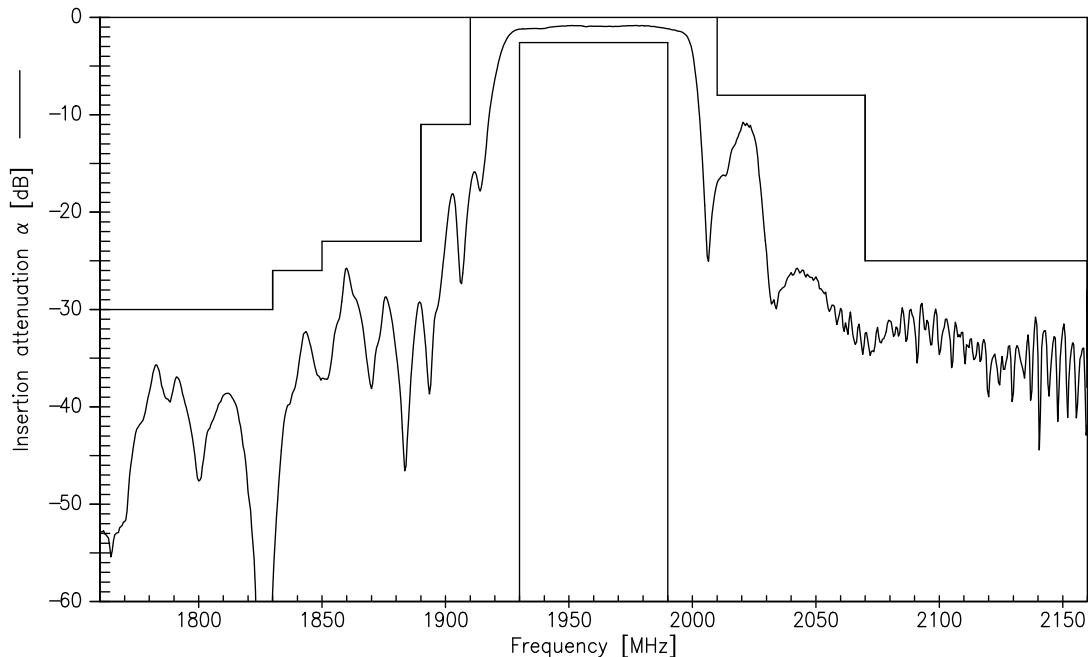
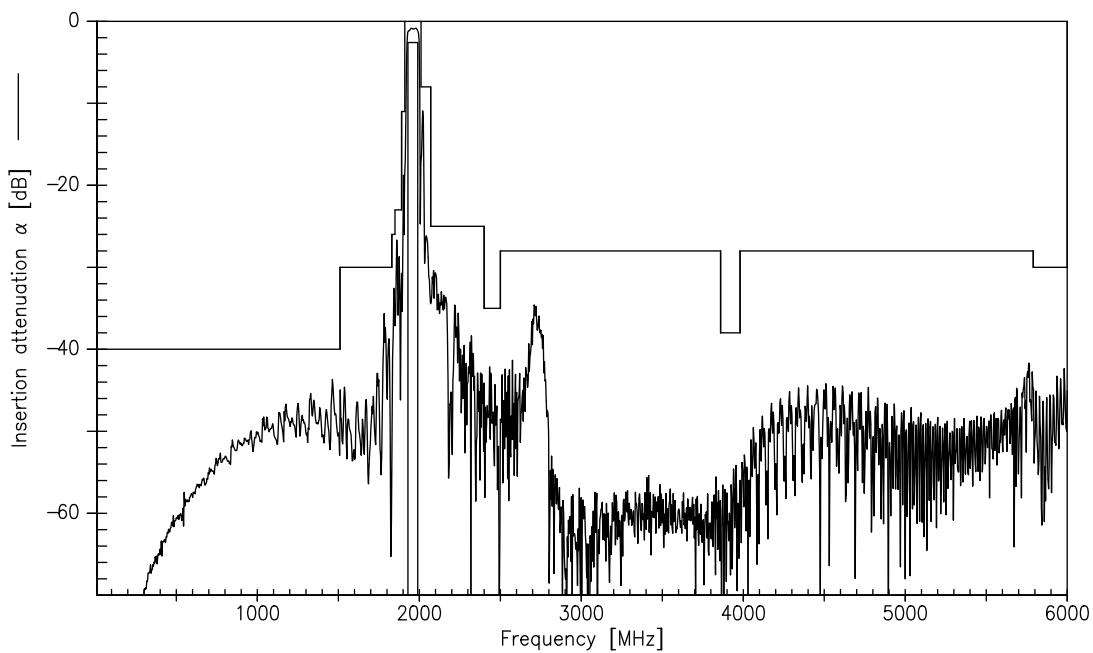

Pin configuration

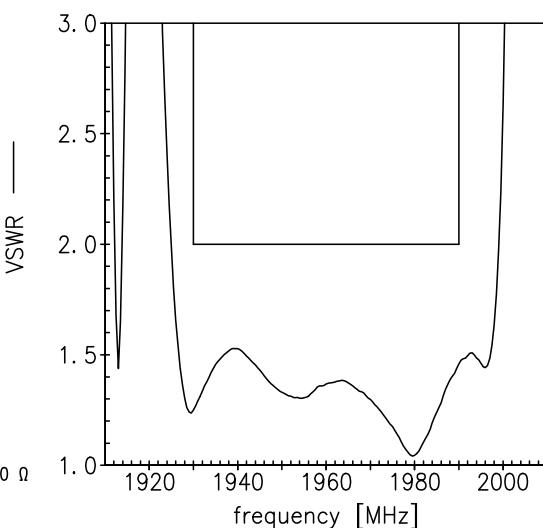
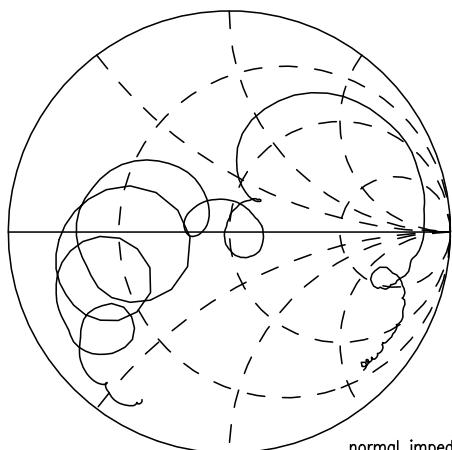
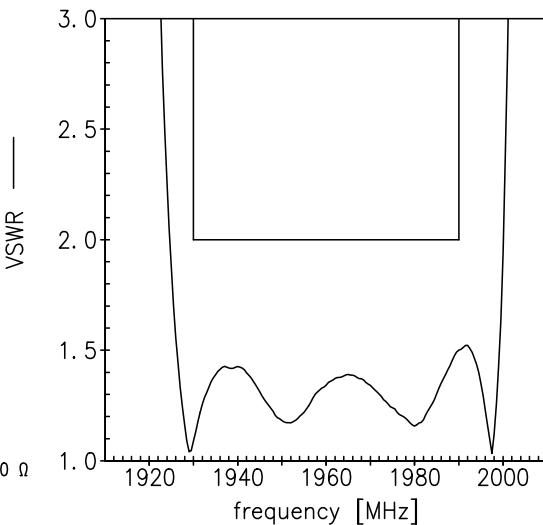
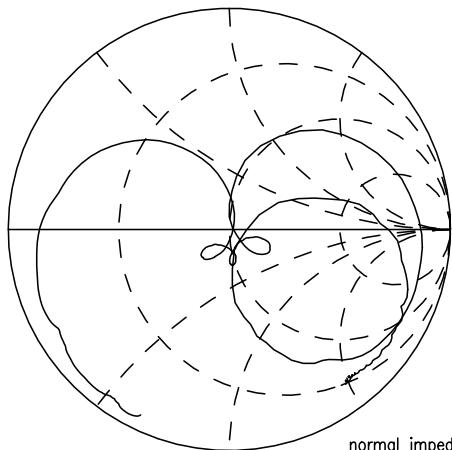
- 5 Input unbalanced
- 3,4 Output balanced
- 1,2 Case ground



**SAW Components****B9486****SAW Rx filter****1960.0 MHz****Data sheet****Characteristics**Temperature range for specification: $T = -20 \text{ }^{\circ}\text{C} \text{ to } +75 \text{ }^{\circ}\text{C}$ Terminating source impedance: $Z_S = 50 \text{ } \Omega$ Terminating load impedance: $Z_L = 150 \Omega \parallel 22 \text{ nH}$ (balanced)

			min.	typ. @ 25°C	max.	
Center frequency		f_C	—	1960.0	—	MHz
Maximum insertion attenuation		α_{\max}	—	1.4	2.6	dB
	1930.0 ... 1990.0	MHz	—	0.5	1.7	dB
Amplitude ripple (p-p)		$\Delta\alpha$	—	1.8	2.0	
	1930.0 ... 1990.0	MHz	—	1.7	2.0	
Input VSWR			—	1.7	2.0	
	1930.0 ... 1990.0	MHz	—	1.7	2.0	
Output VSWR			—	1.7	2.0	
CMRR (S₂₁-S₃₁ / S₂₁+S₃₁)			19	27	—	dB
	1930.0 ... 1990.0	MHz				
Attenuation		α				
	0.0 ... 1430.0	MHz	40	45	—	dB
	1430.0 ... 1510.0	MHz	38	43	—	dB
	1510.0 ... 1830.0	MHz	30	35	—	dB
	1830.0 ... 1850.0	MHz	26	32	—	dB
	1850.0 ... 1890.0	MHz	23	26	—	dB
	1890.0 ... 1910.0	MHz	11	15	—	dB
	2010.0 ... 2070.0	MHz	8	11	—	dB
	2070.0 ... 2400.0	MHz	25	28	—	dB
	2400.0 ... 2500.0	MHz	35	41	—	dB
	2500.0 ... 3860.0	MHz	28	34	—	dB
	3860.0 ... 3980.0	MHz	38	50	—	dB
	3980.0 ... 5790.0	MHz	28	42	—	dB
	5790.0 ... 6000.0	MHz	30	42	—	dB

Transfer function (narrowband)

Transfer function (wideband)




**SAW Components****B9486****SAW Rx filter****1960.0 MHz****Data sheet****Maximum ratings**

Operable temperature range	T	−30/+85	°C	
Storage temperature range	T _{stg}	−40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input power at				
GSM 850, GSM 900	P _{IN}	15	dBm	effective power in the on-state,
GSM 1800, GSM 1900	P _{IN}	15	dBm	duty cycle 4:8
Tx bands				

¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



SAW Components	B9486
SAW Rx filter	1960.0 MHz
Data sheet	

References

Type	B9486
Ordering code	B39202B9486P810
Marking and package	C61157-A8-A41
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9486_NB.s3p B9486_WB.s3p 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 http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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

Published by EPCOS AG

Systems, Acoustics, Waves Business Group
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.

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

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 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 an 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 an 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). 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. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
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, BAOKE, Alu-X, CeraDiode, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, FormFit, MiniBlue, MiniCell, MKD, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, 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.