



SAW Filters for Mobile Communications

Series/Type: B9486

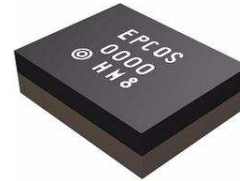
The following products presented in this data sheet are being withdrawn.

| 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.

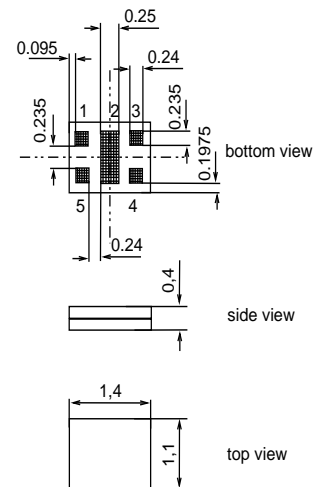
Application

- 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 50 Ω to 150 Ω
- Suitable for GPRS class 1 to 12



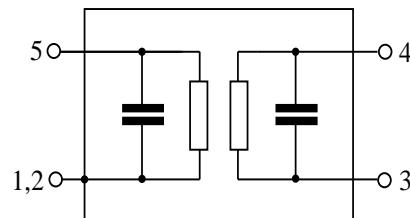
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- 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

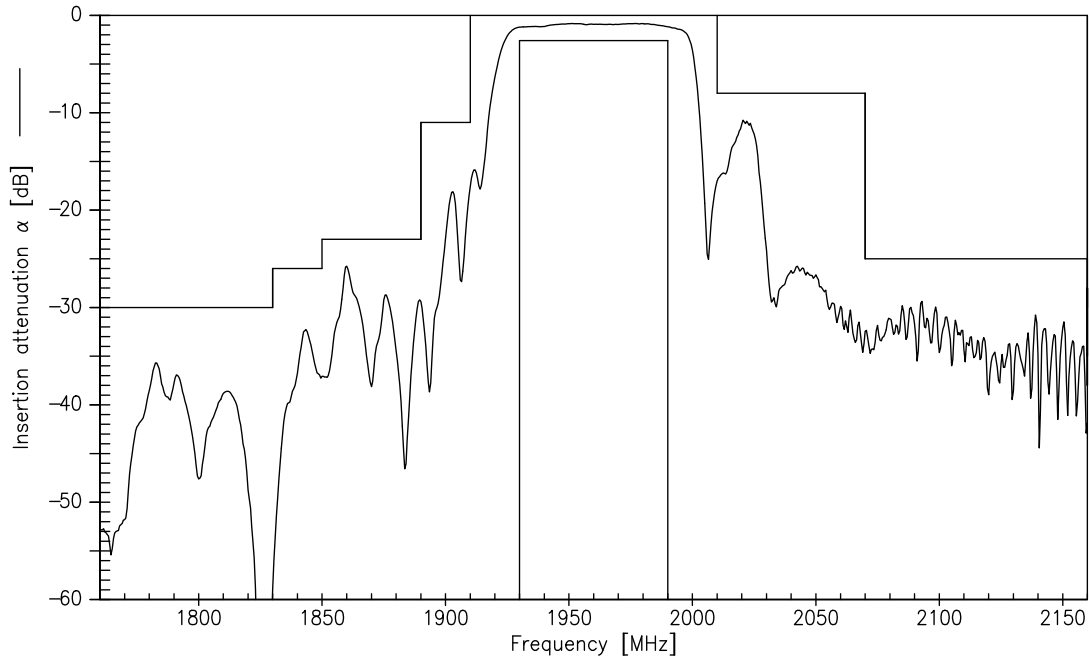


Characteristics

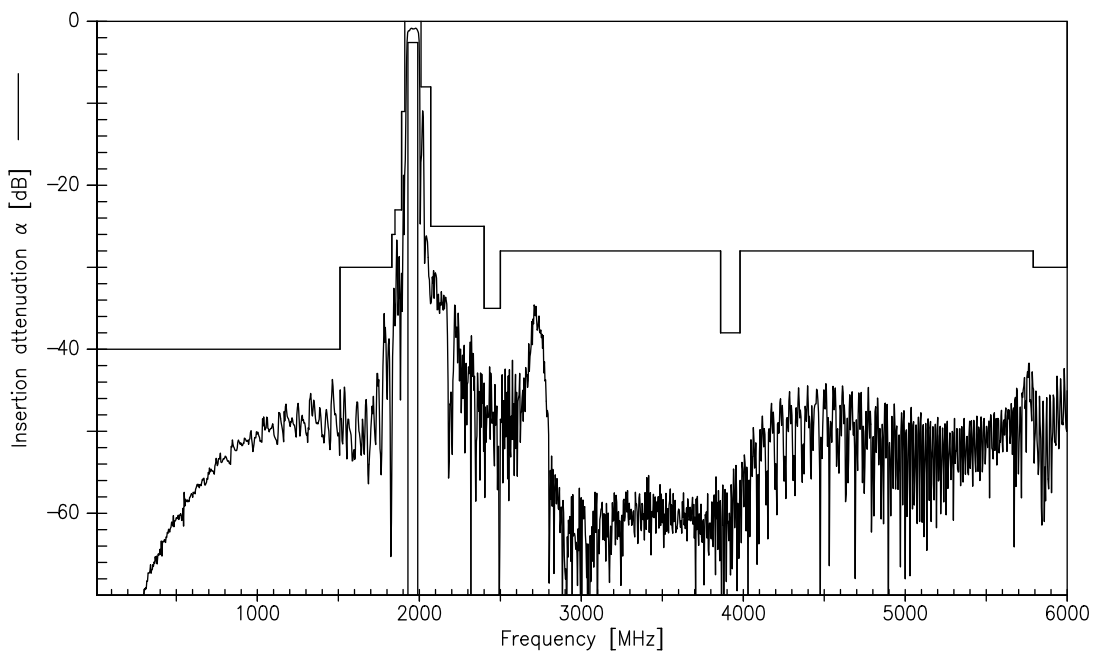
| | |
|--------------------------------------|--|
| Temperature range for specification: | T = -20 °C to +75 °C |
| Terminating source impedance: | Z_S = 50 Ω |
| Terminating load impedance: | Z_L = 150 Ω 22 nH (balanced) |

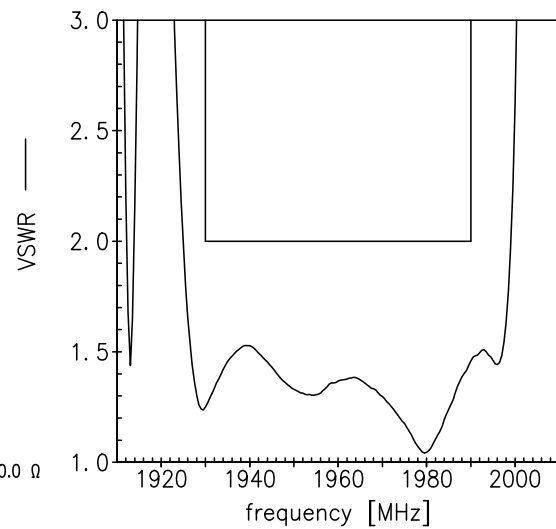
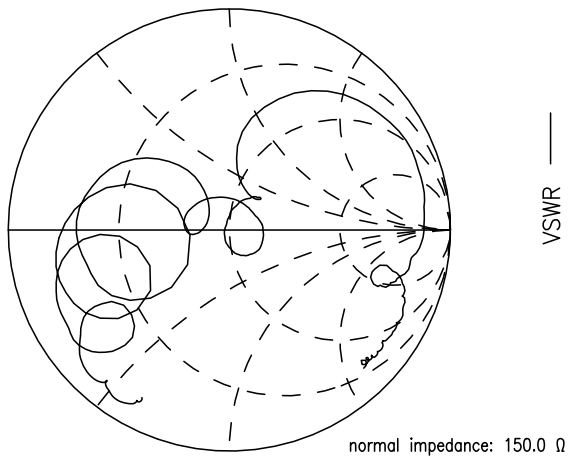
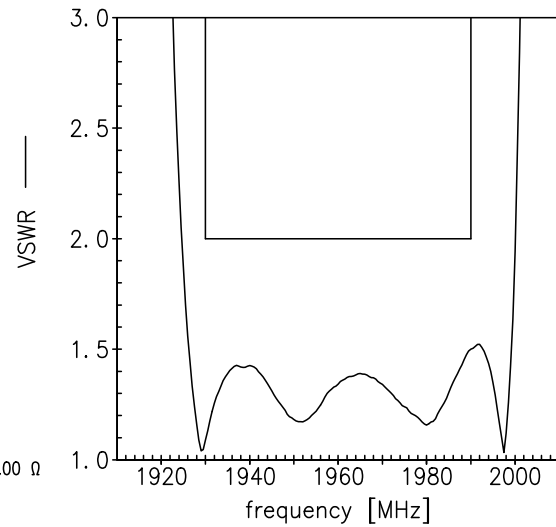
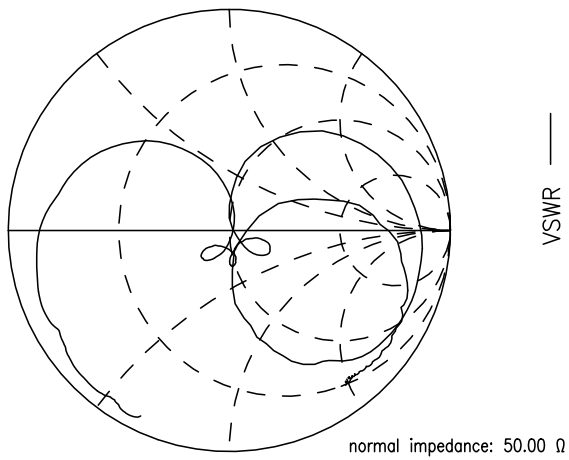
| | | min. | typ. @ 25°C | max. | |
|--|----------------|------|----------------|------|-----|
| Center frequency | f_c | — | 1960.0 | — | MHz |
| Maximum insertion attenuation | α_{max} | — | 1.4 | 2.6 | dB |
| 1930.0 ... 1990.0 MHz | | | | | |
| Amplitude ripple (p-p) | $\Delta\alpha$ | — | 0.5 | 1.7 | dB |
| 1930.0 ... 1990.0 MHz | | | | | |
| Input VSWR | | — | 1.8 | 2.0 | |
| 1930.0 ... 1990.0 MHz | | | | | |
| Output VSWR | | — | 1.7 | 2.0 | |
| 1930.0 ... 1990.0 MHz | | | | | |
| CMRR ($S_{21}-S_{31} / S_{21}+S_{31}$) | | 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 | SMD | |

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, duty cycle 4:8 |
| GSM 1800, GSM 1900 | P _{IN} | 15 | dBm | |
| Tx bands | | | | |

¹⁾ acc. to JEDEC22-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. |

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