



SAW filters for mobile communications

Series/Type: **B9429**

The following products presented in this data sheet are being withdrawn.

| Ordering Code | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B39252B9429K610 | B39252B9455M410 | 2009-07-31 | 2009-11-30 | 2010-02-28 |

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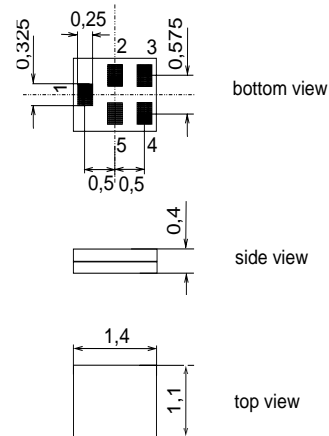
Data sheet


Application

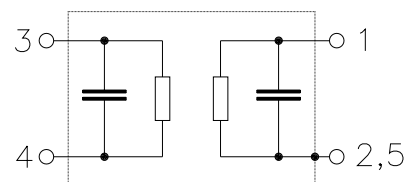
- Low-loss RF filter for WLAN
- Unbalanced to balanced operation
- Low insertion attenuation
- Usable passband 100 MHz


Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5F
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**


Pin configuration

- 1 Unbalanced input
- 3,4 Balanced output
- 2,5 To be grounded



Data sheet

Characteristics

Operating temperature range: $T = +25\text{ °C}$
 Terminating source impedance: $Z_S = 50\Omega - 2.0\text{ nH}$
 Terminating load impedance: $Z_L = 180\Omega \parallel 9.5\text{ nH}$

| | | | | min. | typ. @ 25 °C | max. | | |
|--------------------------------------|-----------------|-------------------|-----|------|-----------------|-------------------|--|-----|
| Center frequency | f_C | | | — | 2450.0 | — | | MHz |
| Maximum insertion attenuation | α_{\max} | | | — | 2.4 | 2.9 ¹⁾ | | dB |
| | | 2400.0 ... 2500.0 | MHz | | | | | |
| Amplitude ripple (p-p) | $\Delta\alpha$ | | | — | 0.7 | 1.5 | | dB |
| | | 2400.0 ... 2500.0 | MHz | | | | | |
| Input VSWR | | | | — | 1.7 | 2.0 | | |
| | | 2400.0 ... 2500.0 | MHz | | | | | |
| Output VSWR | | | | — | 1.7 | 2.0 | | |
| | | 2400.0 ... 2500.0 | MHz | | | | | |
| Attenuation | α | | | | | | | |
| | | 100.0 ... 960.0 | MHz | 55 | 59 | — | | dB |
| | | 960.0 ... 1800.0 | MHz | 40 | 44 | — | | dB |
| | | 1800.0 ... 2100.0 | MHz | 40 | 44 | — | | dB |
| | | 2100.0 ... 2170.0 | MHz | 40 | 44 | — | | dB |
| | | 2170.0 ... 2250.0 | MHz | 20 | 44 | — | | dB |
| | | 2650.0 ... 2800.0 | MHz | 20 | 31 | — | | dB |
| | | 2800.0 ... 4000.0 | MHz | 25 | 36 | — | | dB |
| | | 4000.0 ... 6000.0 | MHz | 30 | 50 | — | | dB |

1) including a pcb loss of 0.2dB

Data sheet

Characteristics

Operating temperature range: $T = -30\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\Omega - 2.0\text{ nH}$
 Terminating load impedance: $Z_L = 180\Omega \parallel 9.5\text{ nH}$

| | | | | min. | typ. @ 25 °C | max. | |
|--------------------------------------|-----------------|--|--|------|-----------------|-------------------|-----|
| Center frequency | f_C | | | — | 2450.0 | — | MHz |
| Maximum insertion attenuation | α_{\max} | | | — | 2.5 | 3.2 ¹⁾ | dB |
| 2400.0 ... 2500.0 MHz | | | | | | | |
| Amplitude ripple (p-p) | $\Delta\alpha$ | | | — | 1.0 | 1.6 | dB |
| 2400.0 ... 2500.0 MHz | | | | | | | |
| Input VSWR | | | | — | 1.7 | 2.0 | |
| 2400.0 ... 2500.0 MHz | | | | | | | |
| Output VSWR | | | | — | 1.7 | 2.0 | |
| 2400.0 ... 2500.0 MHz | | | | | | | |
| Attenuation | α | | | | | | |
| 100.0 ... 960.0 MHz | | | | 55 | 59 | — | dB |
| 960.0 ... 1800.0 MHz | | | | 40 | 44 | — | dB |
| 1800.0 ... 2100.0 MHz | | | | 40 | 44 | — | dB |
| 2100.0 ... 2170.0 MHz | | | | 40 | 44 | — | dB |
| 2170.0 ... 2250.0 MHz | | | | 20 | 44 | — | dB |
| 2650.0 ... 2800.0 MHz | | | | 20 | 31 | — | dB |
| 2800.0 ... 4000.0 MHz | | | | 25 | 36 | — | dB |
| 4000.0 ... 6000.0 MHz | | | | 30 | 50 | — | dB |

¹⁾ including a pcb loss of 0.2dB


Maximum ratings

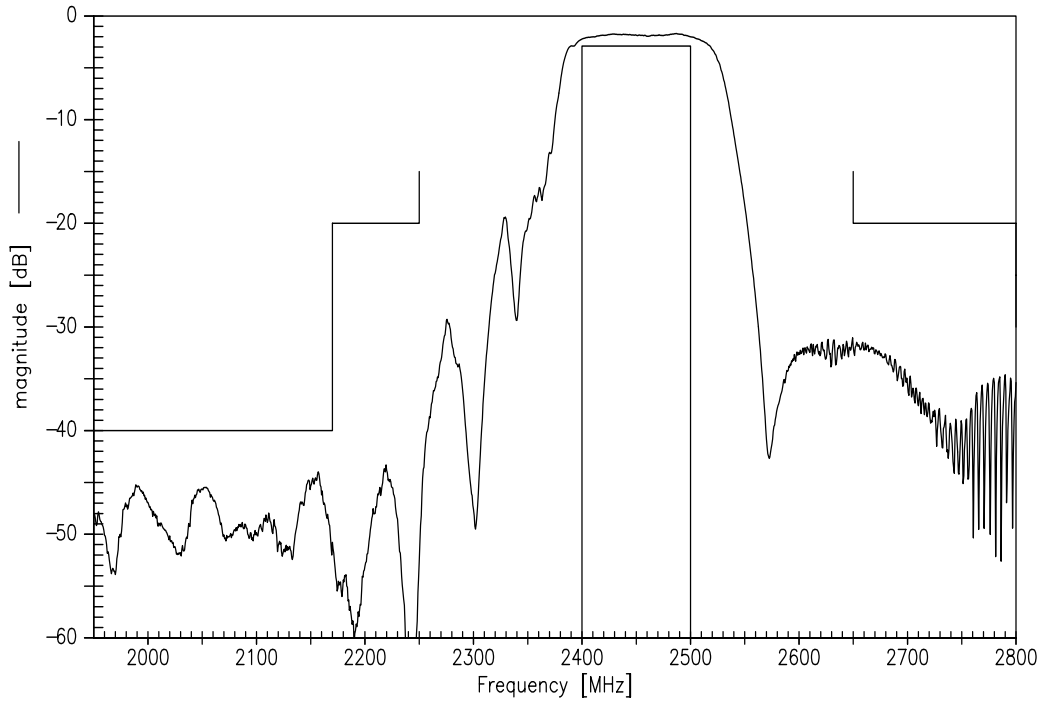
| | | | | |
|---------------------------------------|------------------|------------------|-----|--------------------------|
| Operable temperature range | T | -30/+85 | °C | |
| Storage temperature range | T _{stg} | -40/+85 | °C | |
| DC voltage | V _{DC} | 3 | V | |
| ESD voltage | V _{ESD} | 50 ¹⁾ | V | machine model, 10 pulses |
| Input power at UMTS band I Tx band | P _{IN} | 15 | dBm | CW, +65°C 2000hr |

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

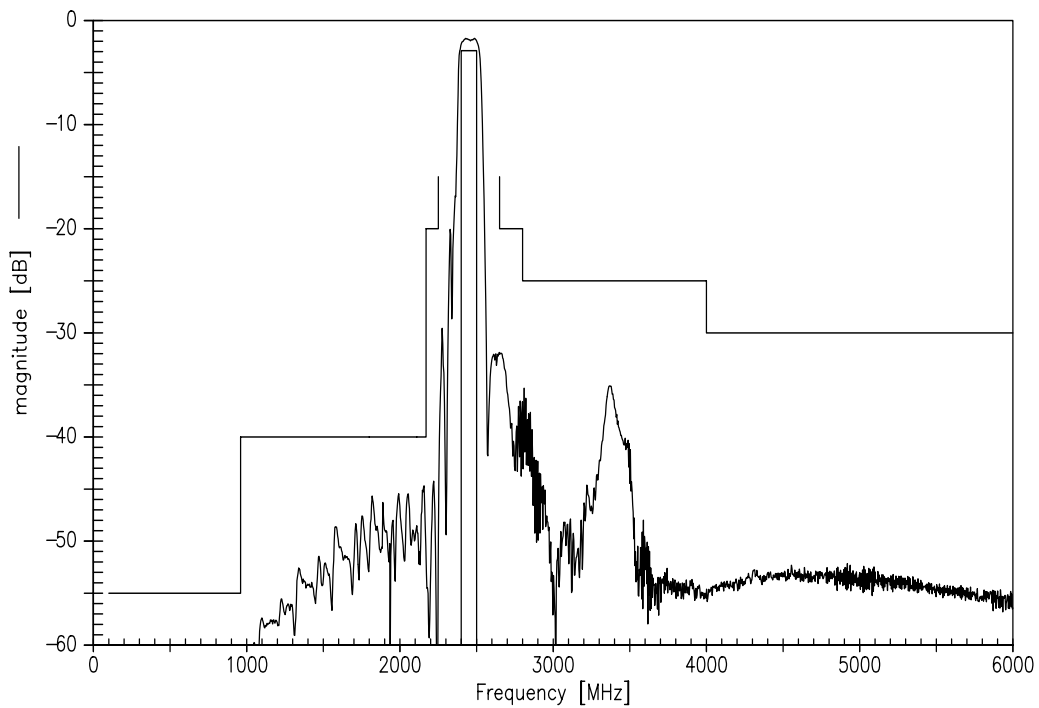
Data sheet



Transfer function



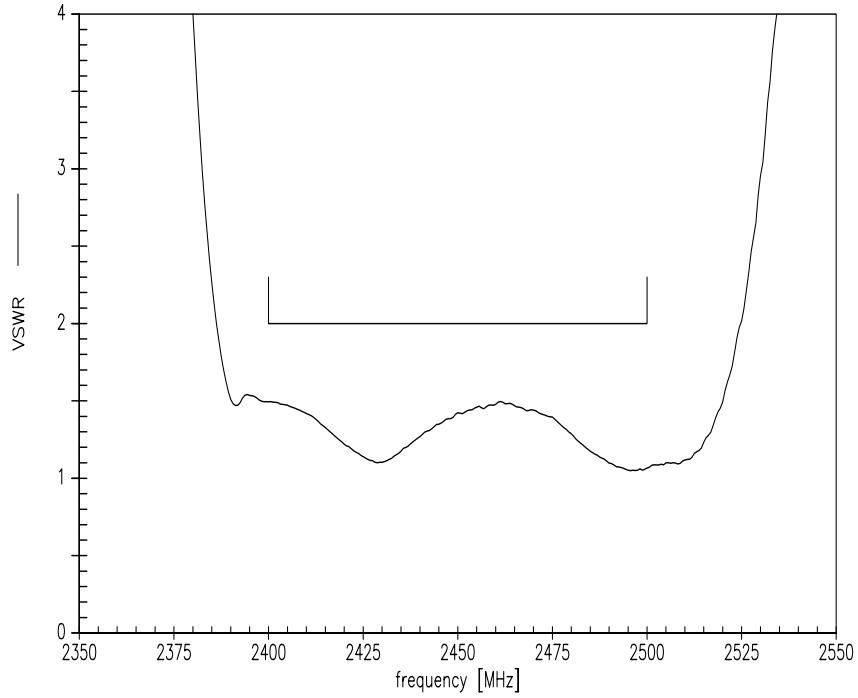
Transfer function (wideband)



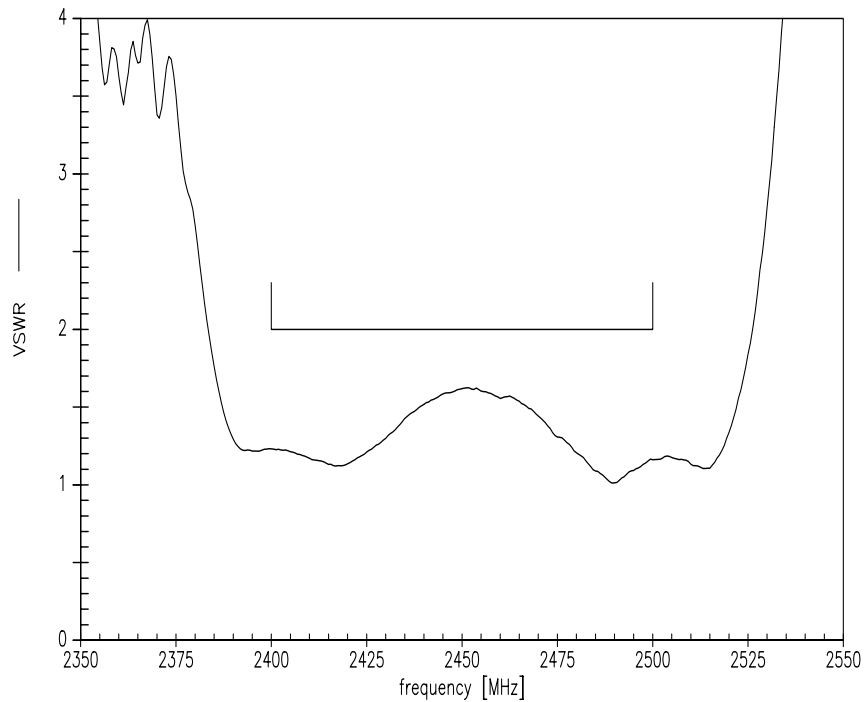
Data sheet



Input VSWR



Output VSWR



| | |
|------------------------|-------------------|
| SAW Components | B9429 |
| SAW WLAN filter | 2450.0 MHz |

Data sheet



References

| | |
|----------------------------|--|
| Type | B9429 |
| Ordering code | B39252B9429K610 |
| Marking and package | C61157-A8-A1 |
| Packaging | F61074-V8212-Z000 |
| Date codes | L_1126 |
| S-parameters | LK41A_NB.s3p LK41A_WB.s3p |
| 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 |

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

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