



SAW filters for infrastructure systems

Series/Type: **B7823**

The following products presented in this data sheet are being withdrawn.

| Ordering Code | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B39202B7823C710 | B39202B9007E610 | 2010-06-25 | 2011-06-30 | 2011-09-30 |

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.

Preliminary Data

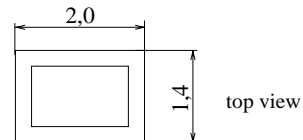
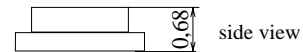
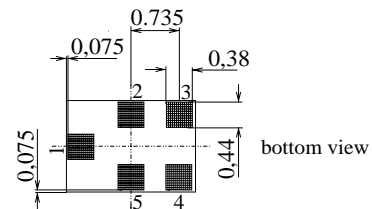

Chip sized SAW package QCS5C

Features

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to unbalanced operation
- Package for **Surface Mount Technology (SMT)**

Terminals

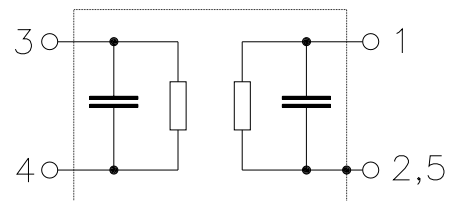
- Ni, gold-plated



Dimensions in mm, approx. weight 0,007 g

Pin configuration

- | | |
|-----|--------------------|
| 1 | Input, unbalanced |
| 4 | Output, unbalanced |
| 2,5 | Case ground |
| 3 | to be grounded |



| Type | Ordering code | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| B7823 | B39202-B7823-C710 | C61157-A7-A111 | F61074-V8151-Z000 |

Electrostatic Sensitive Device (ESD)
Maximum ratings

| | | | | |
|----------------------------|-----------|-------------|-----|--|
| Operable temperature range | T | - 30 / + 85 | °C | peak power of GSM signal, duty cycle 4:8 |
| Storage temperature range | T_{stg} | - 40 / + 85 | °C | |
| Input Power at | | | | |
| GSM850, GSM900 | P_{IN} | 15 | dBm | |
| GSM1800, GSM1900 | P_{IN} | 12 | dBm | |
| Tx bands | | | | |

Preliminary Data

Characteristics

| | |
|-------------------------------|--|
| Operating Temperature Range: | $T = +25 \pm 2 \text{ }^\circ\text{C}$ |
| Terminating source impedance: | $Z_S = 50\Omega$ (unbalanced) |
| Terminating load impedance: | $Z_L = 50\Omega$ (unbalanced) |

| | | | min. | typ. | max. | |
|--------------------------------------|-----------------|-----------------------|-------------|-------------|-------------|-----|
| Center frequency | f_C | | — | 1960,0 | — | MHz |
| Maximum insertion attenuation | α_{\max} | 1930,0 ... 1990,0 MHz | — | 2,3 | 2,8 | dB |
| Amplitude ripple (p-p) | $\Delta\alpha$ | 1930,0 ... 1990,0 MHz | — | 0,8 | 1,3 | dB |
| Input VSWR | | 1930,0 ... 1990,0 MHz | — | 1,7 | 1,9 | |
| Output VSWR | | 1930,0 ... 1990,0 MHz | — | 1,8 | 2,0 | |
| Attenuation | α | | | | | |
| | | 0,0 ... 1500,0 MHz | 35 | 42 | — | dB |
| | | 1500,0 ... 1700,0 MHz | 30 | 38 | — | dB |
| | | 1700,0 ... 1850,0 MHz | 25 | 30 | — | dB |
| | | 1850,0 ... 1890,0 MHz | 22 | 25 | — | dB |
| | | 1890,0 ... 1910,0 MHz | 13 | 16 | — | dB |
| | | 2010,0 ... 2070,0 MHz | 13 | 16 | — | dB |
| | | 2070,0 ... 2090,0 MHz | 20 | 24 | — | dB |
| | | 2090,0 ... 2200,0 MHz | 25 | 28 | — | dB |
| | | 2200,0 ... 2400,0 MHz | 25 | 32 | — | dB |
| | | 2400,0 ... 2500,0 MHz | 30 | 35 | — | dB |
| | | 2500,0 ... 3600,0 MHz | 30 | 35 | — | dB |
| | | 3600,0 ... 4000,0 MHz | 30 | 38 | — | dB |
| | | 4000,0 ... 6000,0 MHz | 25 | 35 | — | dB |

Preliminary Data

Characteristics

| | |
|-------------------------------|------------------------------------|
| Operating Temperature Range: | $T = -10$ to $+80^{\circ}\text{C}$ |
| Terminating source impedance: | $Z_S = 50\Omega$ (unbalanced) |
| Terminating load impedance: | $Z_L = 50\Omega$ (unbalanced) |

| | | | min. | typ. | max. | |
|--------------------------------------|-----------------|--|-------------|-------------|-------------|-----|
| Center frequency | f_C | | — | 1960,0 | — | MHz |
| Maximum insertion attenuation | α_{\max} | | — | 2,3 | 3,0 | dB |
| 1930,0 ... 1990,0 MHz | | | | | | |
| Amplitude ripple (p-p) | $\Delta\alpha$ | | — | 0,8 | 1,5 | dB |
| 1930,0 ... 1990,0 MHz | | | | | | |
| Input VSWR | | | — | 1,7 | 1,9 | |
| 1930,0 ... 1990,0 MHz | | | | | | |
| Output VSWR | | | — | 1,8 | 2,0 | |
| 1930,0 ... 1990,0 MHz | | | | | | |
| Attenuation | α | | | | | |
| 0,0 ... 1500,0 MHz | | | 35 | 42 | — | dB |
| 1500,0 ... 1700,0 MHz | | | 30 | 38 | — | dB |
| 1700,0 ... 1850,0 MHz | | | 25 | 30 | — | dB |
| 1850,0 ... 1890,0 MHz | | | 20 | 24 | — | dB |
| 1890,0 ... 1910,0 MHz | | | 9 | 13 | — | dB |
| 2010,0 ... 2070,0 MHz | | | 9 | 13 | — | dB |
| 2070,0 ... 2090,0 MHz | | | 18 | 23 | — | dB |
| 2090,0 ... 2200,0 MHz | | | 25 | 28 | — | dB |
| 2200,0 ... 2400,0 MHz | | | 25 | 32 | — | dB |
| 2400,0 ... 2500,0 MHz | | | 30 | 35 | — | dB |
| 2500,0 ... 3600,0 MHz | | | 30 | 35 | — | dB |
| 3600,0 ... 4000,0 MHz | | | 30 | 38 | — | dB |
| 4000,0 ... 6000,0 MHz | | | 25 | 35 | — | dB |

Preliminary Data

Characteristics

| | |
|-------------------------------|------------------------------------|
| Operating Temperature Range: | $T = -30$ to $+85^{\circ}\text{C}$ |
| Terminating source impedance: | $Z_S = 50\Omega$ (unbalanced) |
| Terminating load impedance: | $Z_L = 50\Omega$ (unbalanced) |

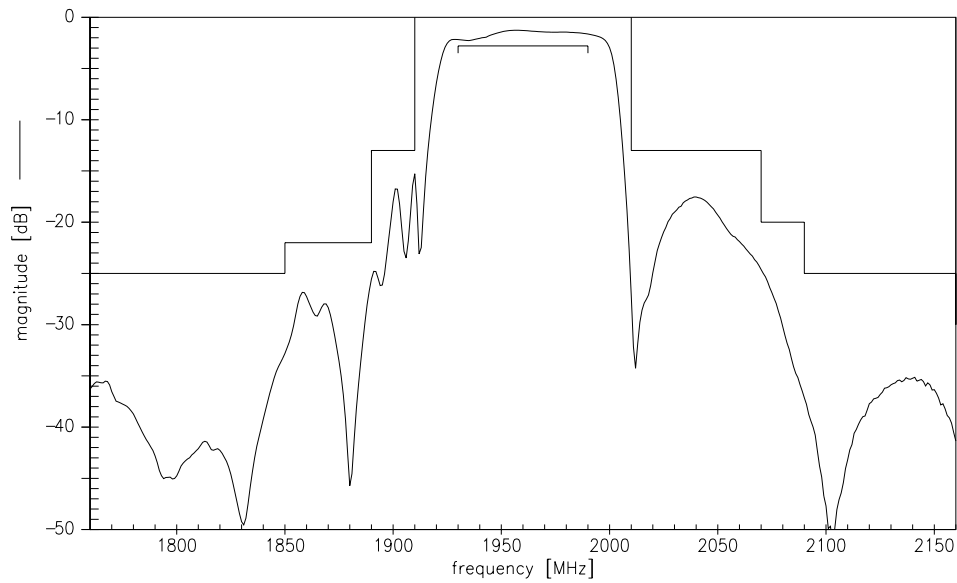
| | | min. | typ. | max. | |
|--------------------------------------|-----------------|------|--------|------|-----|
| Center frequency | f_C | — | 1960,0 | — | MHz |
| Maximum insertion attenuation | α_{\max} | | | | |
| 1930,0 ... 1990,0 MHz | | — | 2,6 | 3,3 | dB |
| Amplitude ripple (p-p) | $\Delta\alpha$ | | | | |
| 1930,0 ... 1990,0 MHz | | — | 1,1 | 1,8 | dB |
| Input VSWR | | | | | |
| 1930,0 ... 1990,0 MHz | | — | 1,9 | 2,1 | |
| Output VSWR | | | | | |
| 1930,0 ... 1990,0 MHz | | — | 2,0 | 2,2 | |
| Attenuation | α | | | | |
| 0,0 ... 1500,0 MHz | | 35 | 42 | — | dB |
| 1500,0 ... 1700,0 MHz | | 30 | 38 | — | dB |
| 1700,0 ... 1850,0 MHz | | 25 | 30 | — | dB |
| 1850,0 ... 1890,0 MHz | | 20 | 24 | — | dB |
| 1890,0 ... 1910,0 MHz | | 8 | 12 | — | dB |
| 2010,0 ... 2070,0 MHz | | 6* | 10* | — | dB |
| 2070,0 ... 2090,0 MHz | | 18 | 23 | — | dB |
| 2090,0 ... 2200,0 MHz | | 25 | 28 | — | dB |
| 2200,0 ... 2400,0 MHz | | 25 | 32 | — | dB |
| 2400,0 ... 2500,0 MHz | | 30 | 35 | — | dB |
| 2500,0 ... 3600,0 MHz | | 30 | 35 | — | dB |
| 3600,0 ... 4000,0 MHz | | 30 | 38 | — | dB |
| 4000,0 ... 6000,0 MHz | | 25 | 35 | — | dB |

* 7dB (min.) (11dB typ.) for $T = -20$ to $+85^{\circ}\text{C}$

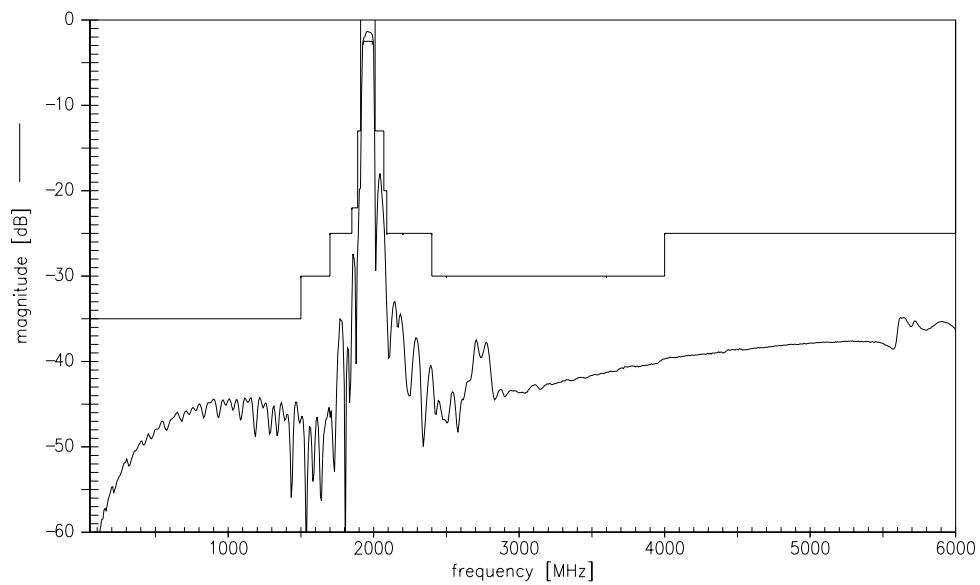
Preliminary Data



Transfer function (spec for 25°C)



Transfer function (wideband)



**Published by EPCOS AG****Surface Acoustic Wave Components Division, SAW MC WT****P.O. Box 80 17 09, D-81617 München**

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