



# SAW Components

Data Sheet B7823





**SAW Components**

**B7823**

**Low-Loss Filter for Mobile Communication**

**1960,0 MHz**

**Preliminary Data**



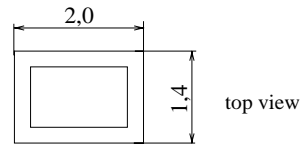
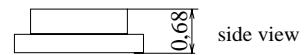
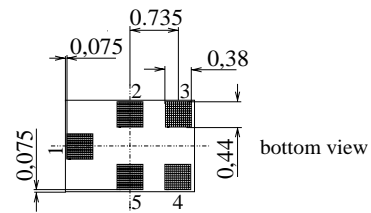
Chip sized SAW package QCS5C

**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**

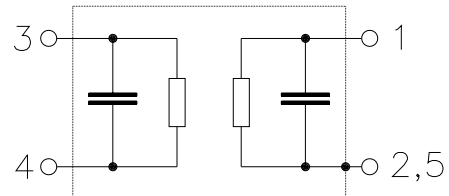
- Ni, gold-plated



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				



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**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.	
<b>Center frequency</b>	$f_C$	—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
	1930,0 ... 1990,0 MHz	—	2,3	2,8	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	1930,0 ... 1990,0 MHz	—	0,8	1,3	dB
<b>Input VSWR</b>					
	1930,0 ... 1990,0 MHz	—	1,7	1,9	
<b>Output VSWR</b>					
	1930,0 ... 1990,0 MHz	—	1,8	2,0	
<b>Attenuation</b>	$\alpha$				
	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



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<b>Low-Loss Filter for Mobile Communication</b>	<b>1960,0 MHz</b>

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**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.	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$		—	2,3	3,0	dB
		1930,0 ... 1990,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	0,8	1,5	dB
		1930,0 ... 1990,0 MHz				
<b>Input VSWR</b>			—	1,7	1,9	
		1930,0 ... 1990,0 MHz				
<b>Output VSWR</b>			—	1,8	2,0	
		1930,0 ... 1990,0 MHz				
<b>Attenuation</b>	$\alpha$					
		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



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**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)

			<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b>	$f_C$		—	1960,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	1930,0 ... 1990,0 MHz	—	2,6	3,3	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	1930,0 ... 1990,0 MHz	—	1,1	1,8	dB
<b>Input VSWR</b>		1930,0 ... 1990,0 MHz	—	1,9	2,1	
<b>Output VSWR</b>		1930,0 ... 1990,0 MHz	—	2,0	2,2	
<b>Attenuation</b>	$\alpha$					
		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  $+85^{\circ}\text{C}$



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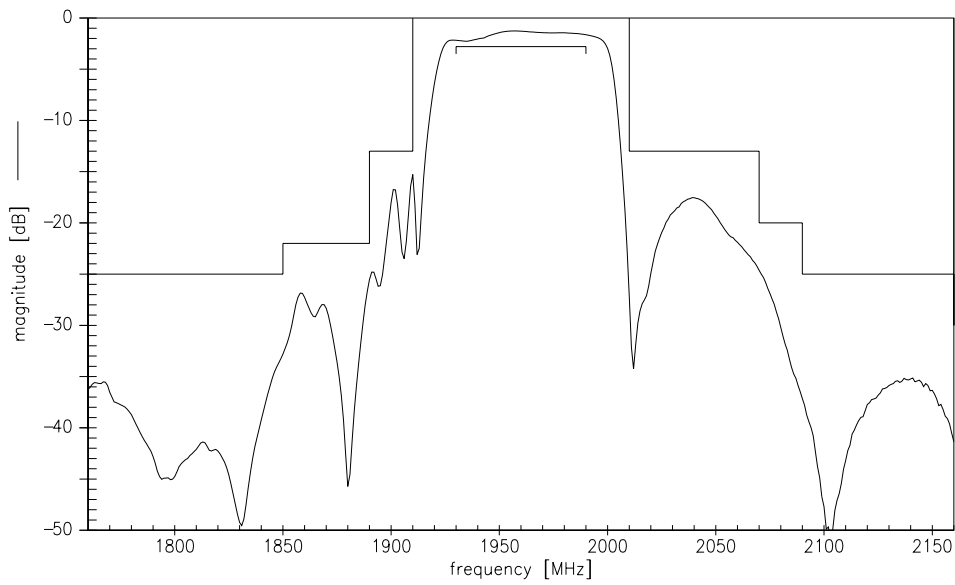
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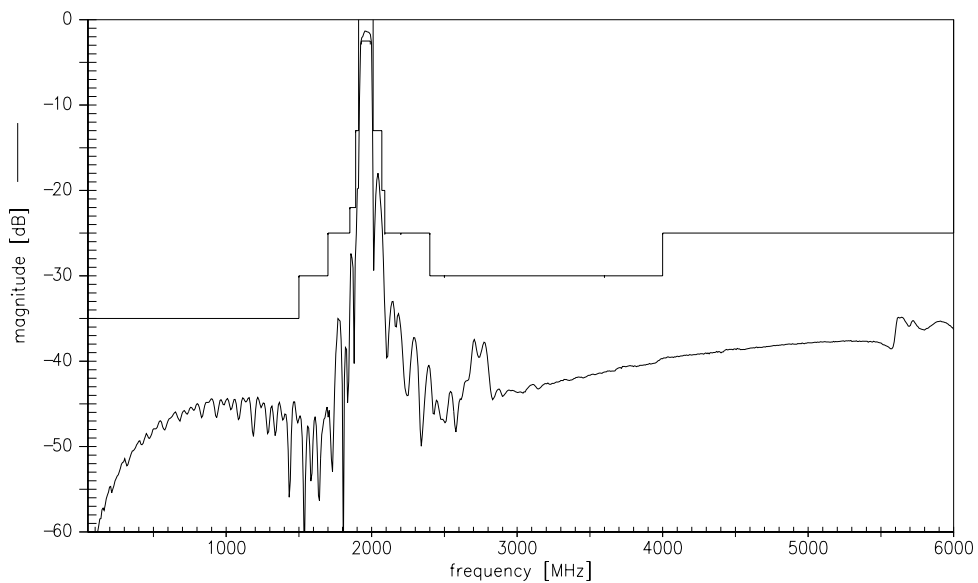
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Transfer function (spec for 25°C)



Transfer function (wideband)





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