



# SAW Components

Data Sheet B7835





**SAW Components**

**B7835**

**Low-Loss Filter for Mobile Communication**

**2140,0 MHz**

**Data Sheet**



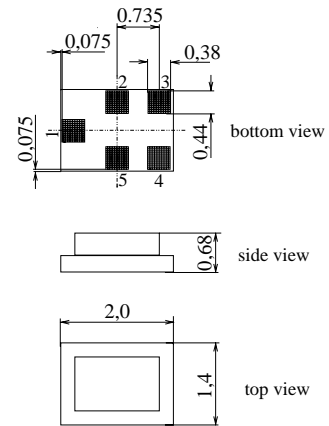
Chip sized SAW package QCS5C

**Features**

- Low-loss RF filter for mobile telephone W-CDMA system, receive path
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 200Ω
- Package for **S**urface **M**ounted **T**echnology (**SMT**)
- Chip Sized SAW Package (CSSP)

**Terminals**

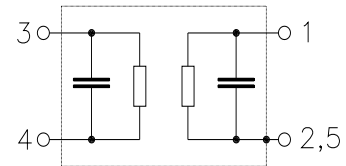
- Gold-plated Ni



Dimensions in mm, approx. weight 0,012 g

**Pin configuration**

- 1 Input, unbalanced
- 3, 4 Output, balanced
- 2, 5 To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B7835	B39212-B7835-C710	C61157-A7-A111	F61074-V8151-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operating temperature range	$T$	- 20/+ 85	°C	Machine Model, 10 pulses
Storage temperature range	$T_{stg}$	- 40/+ 85	°C	
DC voltage	$V_{DC}$	5	V	
ESD voltage	$V_{ESD}^*$	50	V	
Source power	$P_S$	10	dBm	

\* - acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses



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**Characteristics**

Operating temperature range:  $T = +25^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 200\ \Omega$  (balanced) || 22 nH

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	2140,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2,6	3,0	dB
	2110,0 ... 2170,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0,7	1,2	dB
	2110,0 ... 2170,0 MHz				
<b>Amplitude ripple per 5MHz channel (p-p)</b>	$\Delta\alpha_{5\text{MHz}}$	—	0,3	0,6	dB
	2110,0 ... 2170,0 MHz				
<b>Input VSWR</b>		—	1,5	2,0	
	2110,0 ... 2170,0 MHz				
<b>Output VSWR</b>		—	1,7	2,1	
	2110,0 ... 2170,0 MHz				
<b>Output amplitude balance (<math> S_{31}/S_{21} </math>)</b>		-1,6		1,6	dB
	2110,0 ... 2170,0 MHz				
<b>Output phase balance (<math>\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}</math>)</b>		-12,0		12,0	degree
	2110,0 ... 2170,0 MHz				
<b>Attenuation</b>	$\alpha$				
	180,0 ... 200,0 MHz	60	68	—	dB
	200,0 ... 1000,0 MHz	39	42	—	dB
	1000,0 ... 1880,0 MHz	29	32	—	dB
	1880,0 ... 1920,0 MHz	34	38	—	dB
	1920,0 ... 1980,0 MHz	42	46	—	dB
	1980,0 ... 2050,0 MHz	25	29	—	dB
	2205,0 ... 2255,0 MHz	15	22	—	dB
	2255,0 ... 2300,0 MHz	20	23	—	dB
	2300,0 ... 2490,0 MHz	31	35	—	dB
	2490,0 ... 2550,0 MHz	35	40	—	dB
	2550,0 ... 3200,0 MHz	35	39	—	dB
	3200,0 ... 6000,0 MHz	40	52	—	dB



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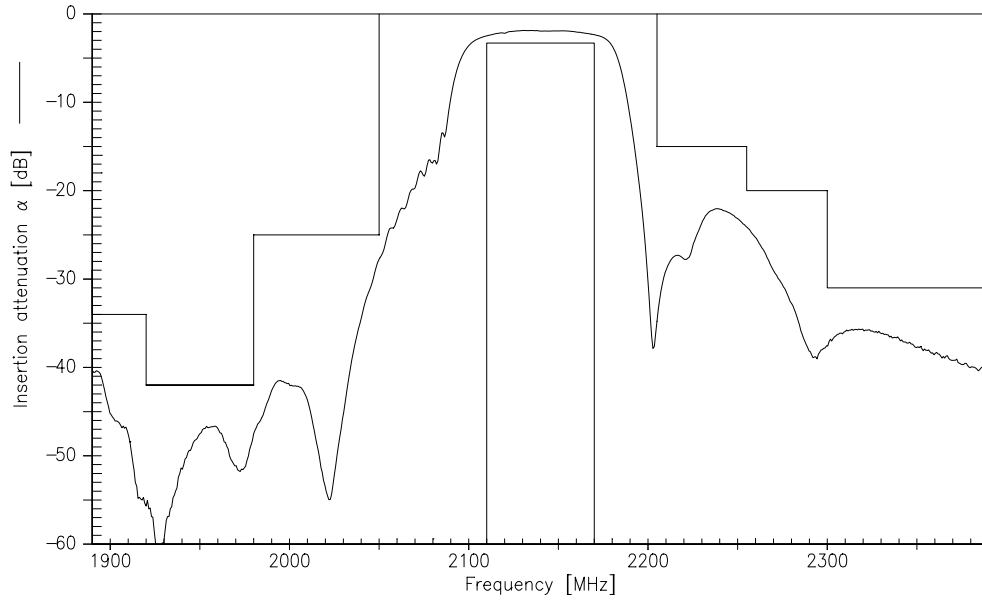
**Characteristics**

Operating temperature range:  $T = -20$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 200 \Omega$  (balanced) || 22 nH

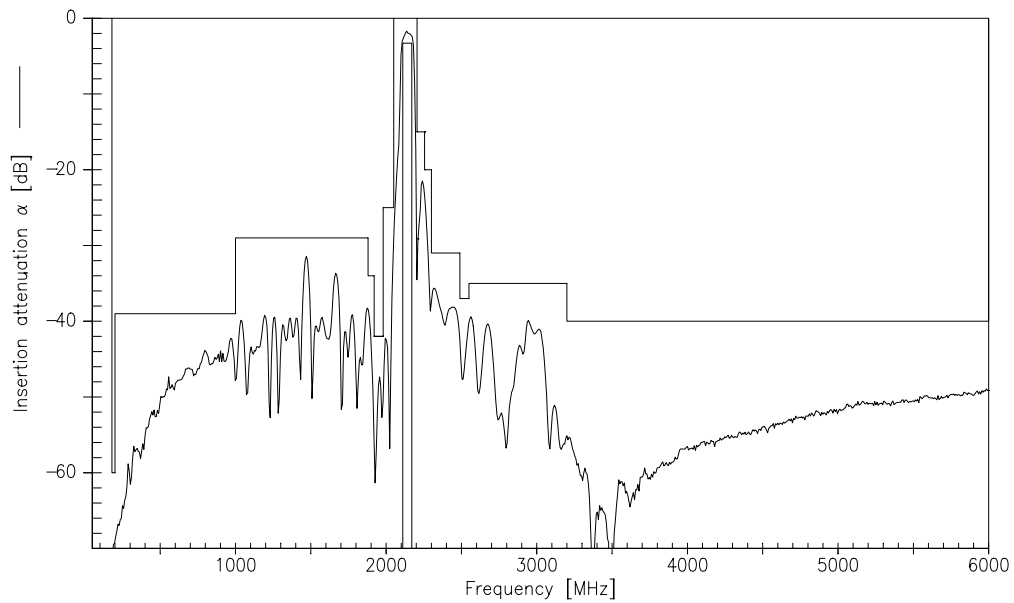
		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	2140,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	2,8	3,3	dB
	2110,0 ... 2170,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0,9	1,5	dB
	2110,0 ... 2170,0 MHz				
<b>Amplitude ripple per 5MHz channel (p-p)</b>	$\Delta\alpha_{5MHz}$	—	0,4	0,6	dB
	2110,0 ... 2170,0 MHz				
<b>Input VSWR</b>		—	1,6	2,0	
	2110,0 ... 2170,0 MHz				
<b>Output VSWR</b>		—	1,7	2,1	
	2110,0 ... 2170,0 MHz				
<b>Output amplitude balance (<math> S_{31}/S_{21} </math>)</b>		-1,6		1,6	dB
	2110,0 ... 2170,0 MHz				
<b>Output phase balance (<math>\phi(S_{31})-\phi(S_{21})+180^\circ</math>)</b>		-12,0		12,0	degree
	2110,0 ... 2170,0 MHz				
<b>Attenuation</b>	$\alpha$				
	180,0 ... 200,0 MHz	60	67	—	dB
	200,0 ... 1000,0 MHz	39	42	—	dB
	1000,0 ... 1880,0 MHz	29	32	—	dB
	1880,0 ... 1920,0 MHz	34	38	—	dB
	1920,0 ... 1980,0 MHz	42	46	—	dB
	1980,0 ... 2050,0 MHz	25	26	—	dB
	2205,0 ... 2255,0 MHz	15	22	—	dB
	2255,0 ... 2300,0 MHz	20	23	—	dB
	2300,0 ... 2490,0 MHz	31	35	—	dB
	2490,0 ... 2550,0 MHz	37	40	—	dB
	2550,0 ... 3200,0 MHz	35	39	—	dB
	3200,0 ... 6000,0 MHz	40	52	—	dB



Transfer function



Transfer function (wide band):





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