



SAW Components

Data Sheet B7835





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Low-Loss Filter for Mobile Communication

2140,0 MHz

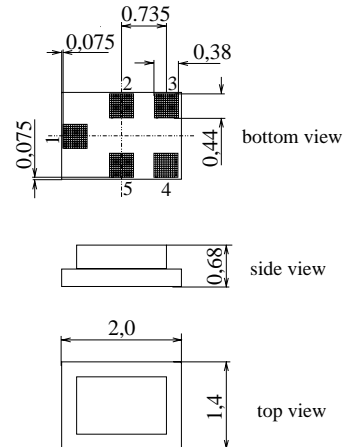
Data Sheet



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 **Surface Mounted Technology (SMT)**
- Chip Sized SAW Package (CSSP)



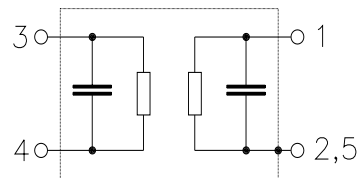
Terminals

- 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.	
Center frequency	f_C	—	2140,0	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,6	3,0	dB
2110,0 ... 2170,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,7	1,2	dB
2110,0 ... 2170,0 MHz					
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5\text{MHz}}$	—	0,3	0,6	dB
2110,0 ... 2170,0 MHz					
Input VSWR		—	1,5	2,0	
2110,0 ... 2170,0 MHz					
Output VSWR		—	1,7	2,1	
2110,0 ... 2170,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,6		1,6	dB
2110,0 ... 2170,0 MHz					
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^{\circ}$)		-12,0		12,0	degree
2110,0 ... 2170,0 MHz					
Attenuation	α				
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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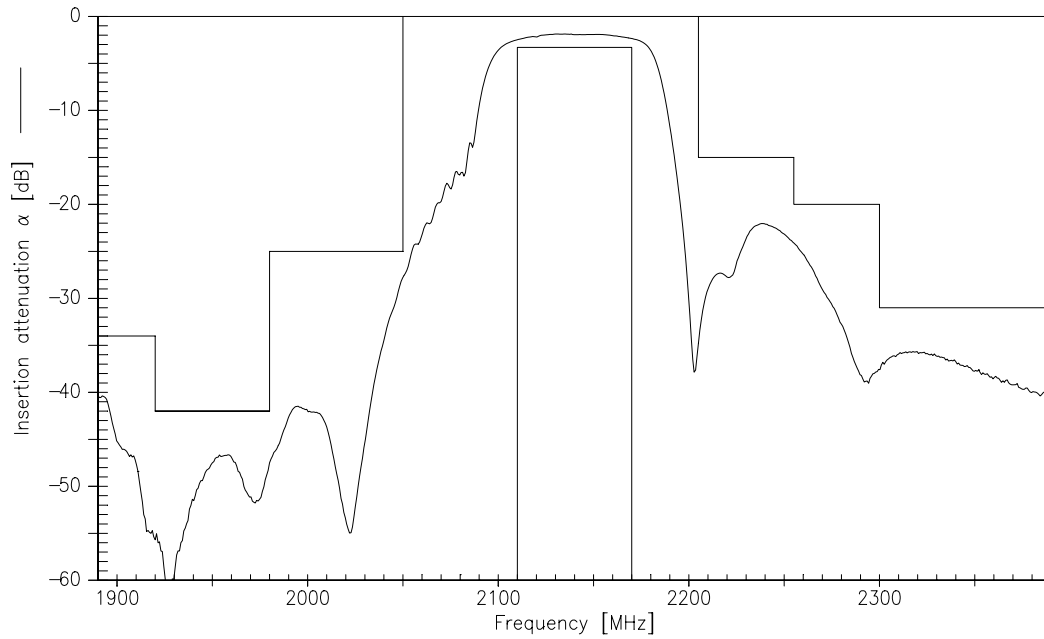
Characteristics

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

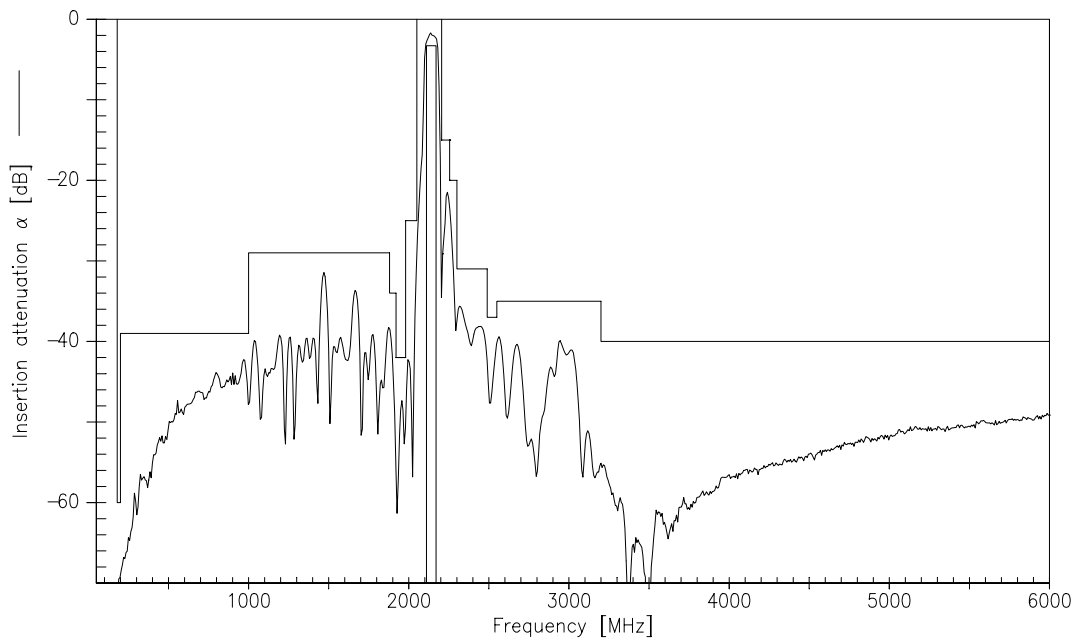
		min.	typ.	max.	
Center frequency	f_C	—	2140,0	—	MHz
Maximum insertion attenuation	α_{max}	—	2,8	3,3	dB
	2110,0 ... 2170,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,9	1,5	dB
	2110,0 ... 2170,0 MHz				
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5MHz}$	—	0,4	0,6	dB
	2110,0 ... 2170,0 MHz				
Input VSWR		—	1,6	2,0	
	2110,0 ... 2170,0 MHz				
Output VSWR		—	1,7	2,1	
	2110,0 ... 2170,0 MHz				
Output amplitude balance (S_{31}/S_{21})		-1,6		1,6	dB
	2110,0 ... 2170,0 MHz				
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)		-12,0		12,0	degree
	2110,0 ... 2170,0 MHz				
Attenuation	α				
	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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