Siemens Matsushita Components

SAW Components
Low Loss Filter

B4835
336,0 MHz

Data Sheet

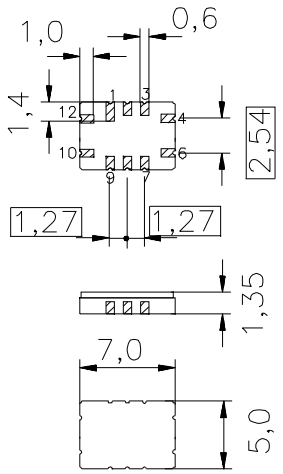
Ceramic package **QCC12B**

Features

- Low-loss IF filter for mobile telephone
- Channel selection in GSM systems
- Ceramic SMD package
- Balanced and unbalanced operation possible

Terminals

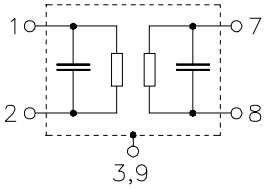
- Gold-plated Ni



Dimensions in mm, approx. weight 0,2 g

Pin configuration

2	Input
1	Input ground or balanced input
8	Output
7	Output ground or balanced output
3, 9	Case – ground
4, 6, 10, 12	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4835	B39341-B4835-Z910	C61157-A7-A52	F61074-V8038-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 25/+ 80	˚C	
Storage temperature range	T_{stg}	– 25/+ 85	˚C	
DC voltage	V_{DC}	5	V	
Source power	P_s	10	dBm	

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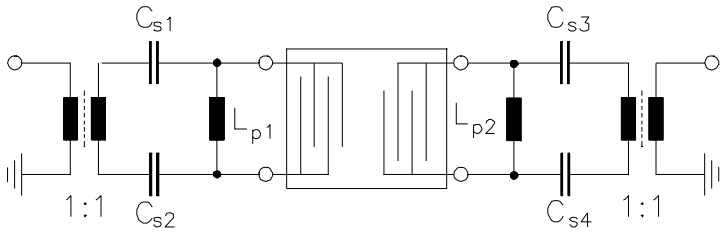
Characteristics

Operating temperature: T = -10 to +70 °C
Terminating source impedance: Z_S = 340 Ω || -3,2pF
Terminating load impedance: Z_L = 340 Ω || -3,2pF

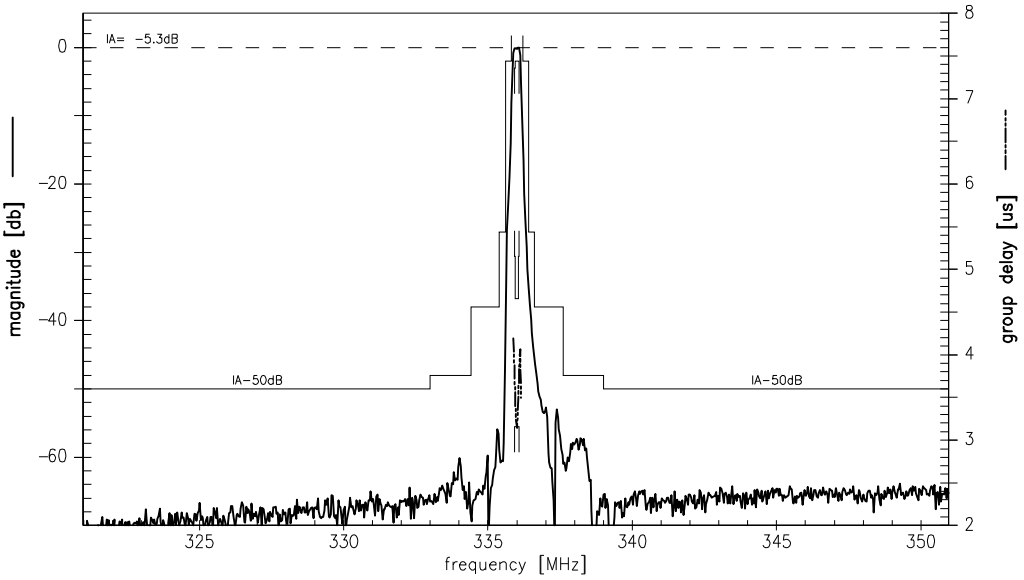
		min.	typ.	max.	
Nominal frequency	f_N	—	336,0	—	MHz
Minimum insertion attenuation	α_{min}				
including loss in matching elements		3,0	5,0	6,0	dB
excluding loss in matching elements		2,0	3,6	4,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N - 67,5 kHz ... f_N + 67,5 kHz		—	0,3	2,0	dB
f_N - 80,0 kHz ... f_N + 80,0 kHz		—	0,4	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 50,0 kHz ... f_N + 50,0 kHz		—	0,5	1,5	µs
f_N - 80,0 kHz ... f_N + 80,0 kHz		—	0,8	2,0	µs
Relative attenuation (relative to α_{min})	α_{rel}				
f_N - 15,00 MHz ... f_N - 3,00 MHz		50	70	—	dB
f_N - 3,00 MHz ... f_N - 1,60 MHz		48	60	—	dB
f_N - 1,60 MHz ... f_N - 0,60 MHz		38	52	—	dB
f_N - 0,60 MHz ... f_N - 0,40 MHz		27	46	—	dB
f_N - 0,40 MHz ... f_N - 0,20 MHz		2	11	—	dB
f_N + 0,20 MHz ... f_N + 0,40 MHz		2	11	—	dB
f_N + 0,40 MHz ... f_N + 0,60 MHz		27	34	—	dB
f_N + 0,60 MHz ... f_N + 1,60 MHz		38	45	—	dB
f_N + 1,60 MHz ... f_N + 3,00 MHz		48	58	—	dB
f_N + 3,00 MHz ... f_N + 15,00 MHz		50	70	—	dB
Impedance within the passband					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	340 || 3,2	—	Ω || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	340 || 3,2	—	Ω || pF
Temperature coefficient of frequency [1]	TC_f	—	-0,036	—	ppm/K²
Frequency inversion point	T_0	—	30	—	°C

[1] Temperature dependence of f_c: $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2)$



$C_{s1,s2}$ = 5,6 pF
L_{p1} = 33 nH
L_{p2} = 33 nH
$C_{s3,s4}$ = 5,6 pF

Transfer function:



Transfer function (pass band):