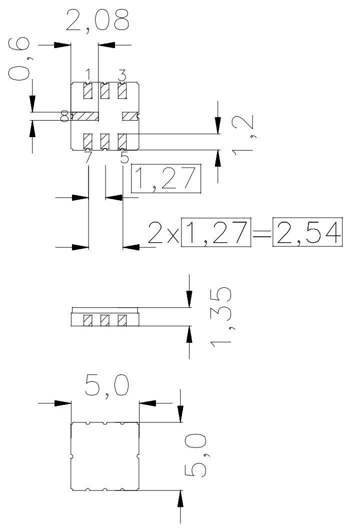
Siemens Matsushita Components

SAW Components
Low Loss Filter

B4839
282,00 MHz

Data Sheet

Ceramic package **QCC8C**



Dimensions in mm, approx. weight 0,10 g

Features

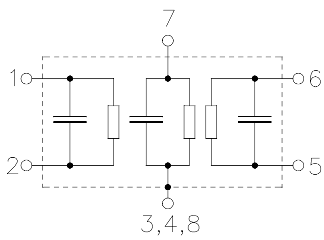
- Low-loss IF filter for mobile telephone
- Channel selection in GSM, PCN, PCS systems
- Ceramic SMD package
- Very small size

Terminals

- Gold-plated Ni

Pin configuration

1,2	Input, balanced
5,6	Output, balanced
7	External coil
3,4,8	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4839	B39281-B4839-U310	C61157-A7-A56	F61074-V8070-Z000

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

Maximum ratings

Operable temperature range	T	-20 / +75	˚C	
Storage temperature range	T_{stg}	-35 / +85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	

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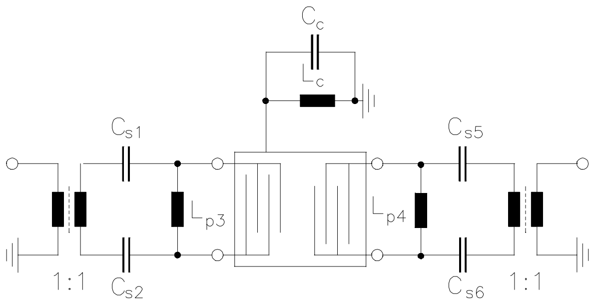
Characteristics

Operating temperature: T = -20 to +75˚C
Terminating source impedance: Z_S = 1000 Ω || -1,1 pF
Terminating load impedance: Z_L = 1000 Ω || -1,1 pF

		min.	typ.	max.	
Nominal frequency	f_N	—	282,00	—	MHz
Minimum insertion attenuation (Including losses in baluns and matching network)	α_{min}	4,0	5,2	6,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N - 67,5 kHz ... f_N + 67,5 kHz		—	0,3	1,5	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 80,0 kHz ... f_N + 80,0 kHz		—	0,8	1,8	µs
Relative attenuation (relative to α_{min})	α_{rel}				
f_N - 20,00 MHz ... f_N - 5,00 MHz		45	47	—	dB
f_N - 5,00 MHz ... f_N - 1,60 MHz		40	47	—	dB
f_N - 1,60 MHz ... f_N - 0,80 MHz		35	45	—	dB
f_N - 0,80 MHz ... f_N - 0,60 MHz		35	45	—	dB
f_N - 0,60 MHz ... f_N - 0,40 MHz		18	38	—	dB
f_N + 0,40 MHz ... f_N + 0,60 MHz		18	29	—	dB
f_N + 0,60 MHz ... f_N + 0,80 MHz		35	37	—	dB
f_N + 0,80 MHz ... f_N + 1,60 MHz		35	39	—	dB
f_N + 1,60 MHz ... f_N + 5,00 MHz		40	50	—	dB
f_N + 5,00 MHz ... f_N + 20,00 MHz		45	53	—	dB
Impedance within the passband					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1000 ‖ 1,1	—	Ω ‖ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1000 ‖ 1,1	—	Ω ‖ pF
Temperature coefficient of frequency [1]	TC_f	—	0,031	—	ppm/K^2
Frequency inversion point	T_0	—	25	—	˚C

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

Test matching network to 50 Ω (element values depend on PCB layout):



C_{s1} = C_{s6} = 3,9pF
C_{s2} = C_{s5} = 5,6pF
L_{p3} = L_{p4} = 68nH

L_c = 68nH || 1,5pF

Transfer function (normalized)