



Siemens Matsushita Components

SAW Components Low-Loss Filter

B4841
440,00 MHz

Data Sheet

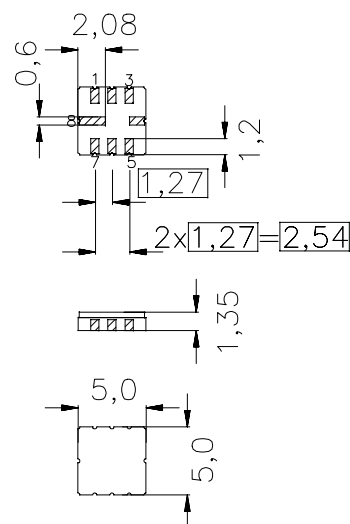
Features

- IF low-loss filter for mobile telephone
- Channel selection in GSM, PCN, PCS systems
- Package for **Surface Mounted Technology (SMT)**
- Ceramic package
- Balanced and unbalanced operation possible
- High stopband attenuation

Terminals

- Gold-plated Ni

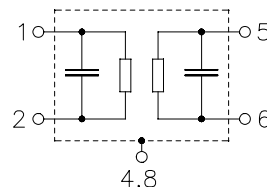
SMD ceramic package **QCC8C**



Dimensions in mm, approx. weight 0,07 g

Pin configuration

- | | |
|------|----------------------------------|
| 2 | Input or balanced input |
| 1 | Input-ground or balanced input |
| 6 | Output or balanced output |
| 5 | Output-ground or balanced output |
| 3, 7 | Not connected |
| 4, 8 | Case - Ground |



Type	Ordering code	Marking and Package according to	Packing according to
B4841	B39441-B4841-U310	C61157-A7-A56	F61074-V8070-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 20/+ 70	°C
Storage temperature range	T_{stg}	- 30/+ 85	°C
DC voltage	V_{DC}	3	V
Source power	P_s	10	dBm



Siemens Matsushita Components

SAW Components Low-Loss Filter

B4841
440,00 MHz

Data Sheet

Characteristics for balanced operation

Operating temperature range: $T = -20 \text{ to } 70 \text{ }^{\circ}\text{C}$
Terminating source impedance: $Z_S = 360 \text{ } \Omega \parallel -1,5 \text{ pF}$
Terminating load impedance: $Z_L = 340 \text{ } \Omega \parallel -1,7 \text{ pF}$

		min.	typ.	max.	
Nominal frequency	f_N	—	440,0	—	MHz
Minimum insertion attenuation	α_{\min}				
including losses in matching network		—	4,6	5,5	dB
including losses in matching network and balun		—	5,7	6,5	dB
Amplitude ripple in passband (p-p)	$\Delta\alpha$				
$f_N - 67,0 \text{ kHz} \dots f_N + 67,0 \text{ kHz}$		—	0,4	2,0	dB
$f_N - 80,0 \text{ kHz} \dots f_N + 80,0 \text{ kHz}$		—	0,5	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N - 80,0 \text{ kHz} \dots f_N + 80,0 \text{ kHz}$		—	0,6	1,5	μs
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N - 75,00 \text{ MHz} \dots f_N - 1,60 \text{ MHz}$		55	62	—	dB
$f_N - 1,60 \text{ MHz} \dots f_N - 0,80 \text{ MHz}$		38	46	—	dB
$f_N - 0,80 \text{ MHz} \dots f_N - 0,60 \text{ MHz}$		32	55	—	dB
$f_N - 0,60 \text{ MHz} \dots f_N - 0,40 \text{ MHz}$		18	33	—	dB
$f_N + 0,40 \text{ MHz} \dots f_N + 0,60 \text{ MHz}$		18	28	—	dB
$f_N + 0,60 \text{ MHz} \dots f_N + 0,80 \text{ MHz}$		32	40	—	dB
$f_N + 0,80 \text{ MHz} \dots f_N + 1,60 \text{ MHz}$		38	47	—	dB
$f_N + 1,60 \text{ MHz} \dots f_N + 75,00 \text{ MHz}$		55	60	—	dB
Impedance within the passband					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	$360 \parallel 1,5$	—	$\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	$340 \parallel 1,7$	—	$\Omega \parallel \text{pF}$
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	25	—	$^{\circ}\text{C}$

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



Siemens Matsushita Components

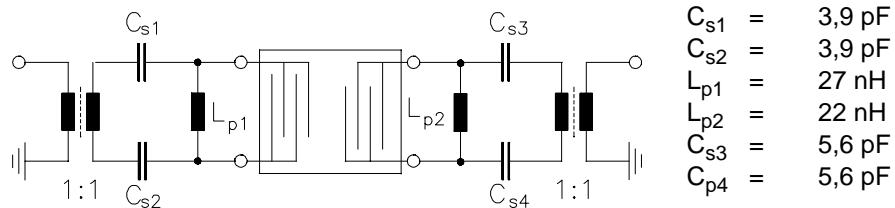
SAW Components

Low-Loss Filter

B4841
440,00 MHz

Data Sheet

Matching network to 50 Ω : (Element values depend on PCB layout)





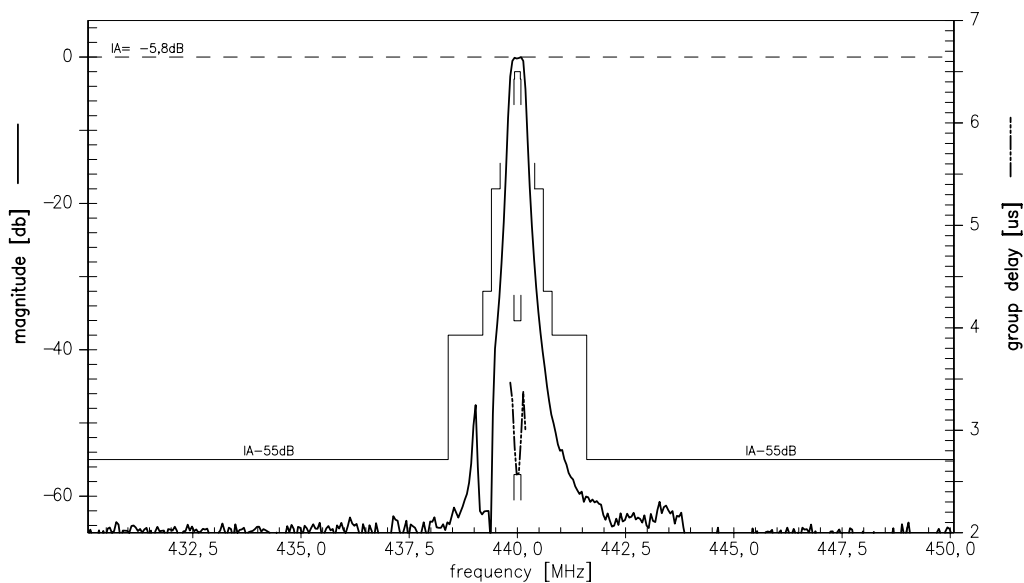
Siemens Matsushita Components

SAW Components Low-Loss Filter

B4841
440,00 MHz

Data Sheet

Transfer function:



Transfer function (pass band):

