



SAW Components

Data Sheet B4841





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Low-Loss Filter for Mobile Communication

440,00 MHz

Data Sheet



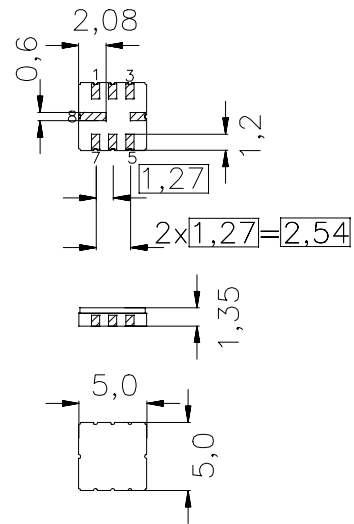
SMD ceramic package QCC8C

Features

- IF low-loss filter for mobile telephone
- Channel selection in GSM, PCN, PCS systems
- Package for **S**urface **M**ounted **T**echnology (**SMT**)
- Ceramic package
- Balanced and unbalanced operation possible
- High stopband attenuation

Terminals

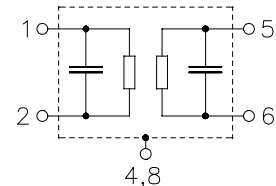
- Gold-plated Ni



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



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Characteristics for balanced operation

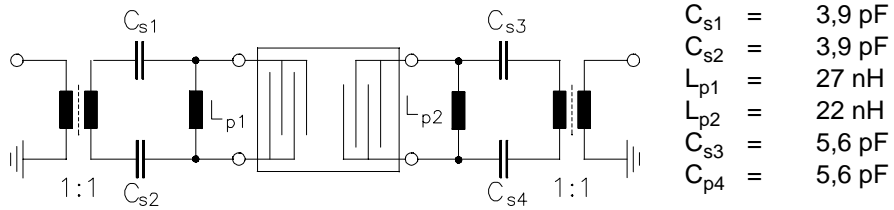
Operating temperature range: $T = -20$ to 70 °C
 Terminating source impedance: $Z_S = 360 \Omega \parallel -1,5$ pF
 Terminating load impedance: $Z_L = 340 \Omega \parallel -1,7$ pF

		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)	$\Delta\alpha$				
$f_N - 67,0$ kHz ... $f_N + 67,0$ kHz		—	0,4	2,0	dB
$f_N - 80,0$ kHz ... $f_N + 80,0$ kHz		—	0,5	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N - 80,0$ kHz ... $f_N + 80,0$ kHz		—	0,6	1,5	μ s
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N - 75,00$ MHz ... $f_N - 1,60$ MHz		55	62	—	dB
$f_N - 1,60$ MHz ... $f_N - 0,80$ MHz		38	46	—	dB
$f_N - 0,80$ MHz ... $f_N - 0,60$ MHz		32	55	—	dB
$f_N - 0,60$ MHz ... $f_N - 0,40$ MHz		18	33	—	dB
$f_N + 0,40$ MHz ... $f_N + 0,60$ MHz		18	28	—	dB
$f_N + 0,60$ MHz ... $f_N + 0,80$ MHz		32	40	—	dB
$f_N + 0,80$ MHz ... $f_N + 1,60$ MHz		38	47	—	dB
$f_N + 1,60$ MHz ... $f_N + 75,00$ MHz		55	60	—	dB
Impedance within the passband					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	$360 \parallel 1,5$	—	$\Omega \parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	$340 \parallel 1,7$	—	$\Omega \parallel$ pF
Temperature coefficient of frequency 1)	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	25	—	°C

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

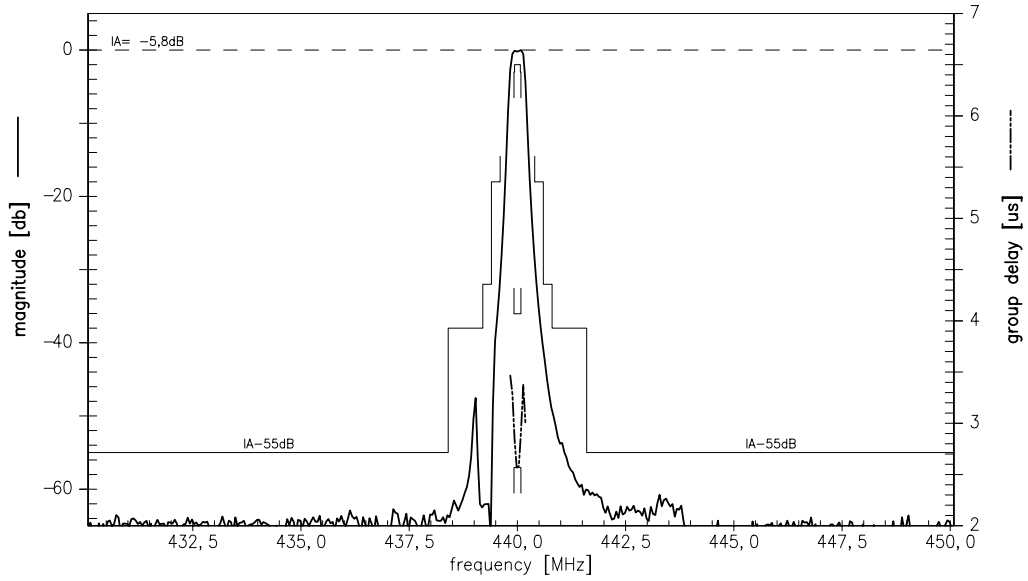


Matching network to 50 Ω: (Element values depend on PCB layout)

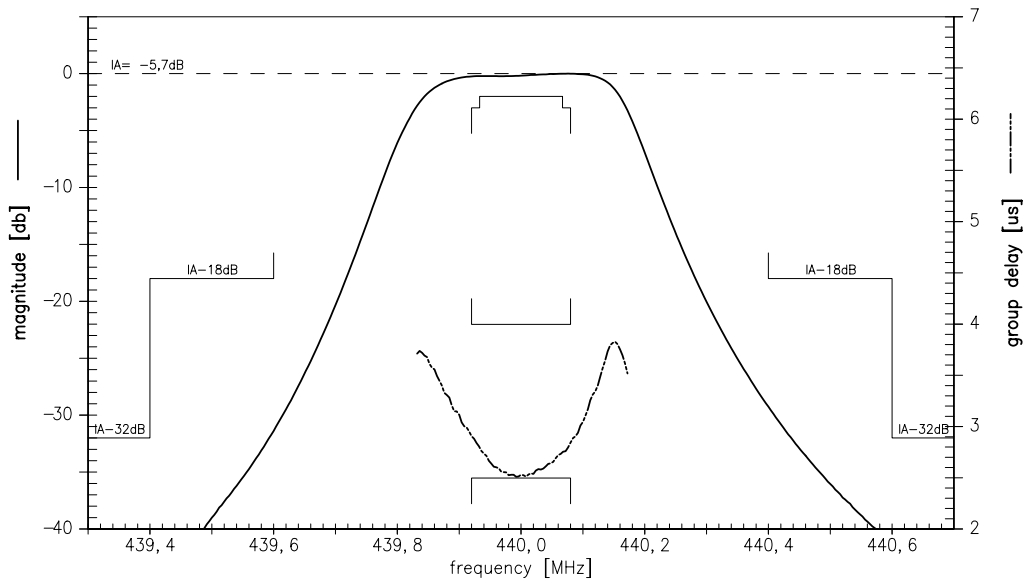




Transfer function:



Transfer function (pass band):





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