



# SAW Components

Data Sheet B4841





SAW Components

B4841

Low-Loss Filter for Mobile Communication

440,00 MHz

Data Sheet



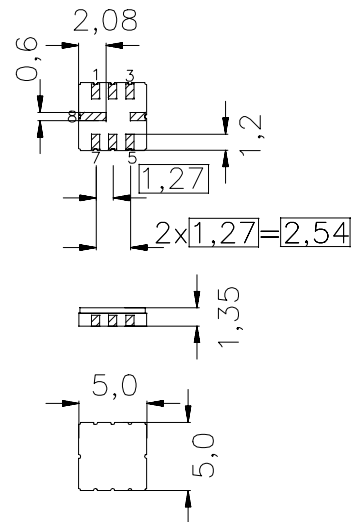
SMD ceramic package QCC8C

**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**

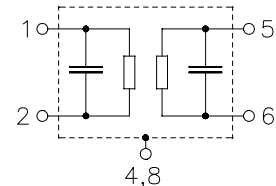
- Gold-plated Ni



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



**SAW Components**

**B4841**

**Low-Loss Filter for Mobile Communication**

**440,00 MHz**

**Data Sheet**



**Characteristics** for balanced operation

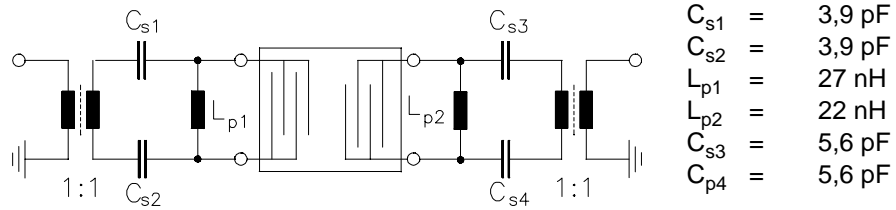
Operating temperature range:  $T = -20$  to  $70$  °C  
 Terminating source impedance:  $Z_S = 360 \Omega \parallel -1,5$  pF  
 Terminating load impedance:  $Z_L = 340 \Omega \parallel -1,7$  pF

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	440,0	—	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{min}$				
including losses in matching network		—	4,6	5,5	dB
including losses in matching network and balun		—	5,7	6,5	dB
<b>Amplitude ripple in passband (p-p)</b>	$\Delta\alpha$				
$f_N - 67,0$ 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
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
$f_N - 80,0$ kHz ... $f_N + 80,0$ kHz		—	0,6	1,5	$\mu$ s
<b>Relative attenuation</b> (relative to $\alpha_{min}$ )	$\alpha_{rel}$				
$f_N - 75,00$ 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
<b>Impedance</b> 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
<b>Temperature coefficient of frequency</b> 1)	$TC_f$	—	-0,036	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	$T_0$	—	25	—	°C

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

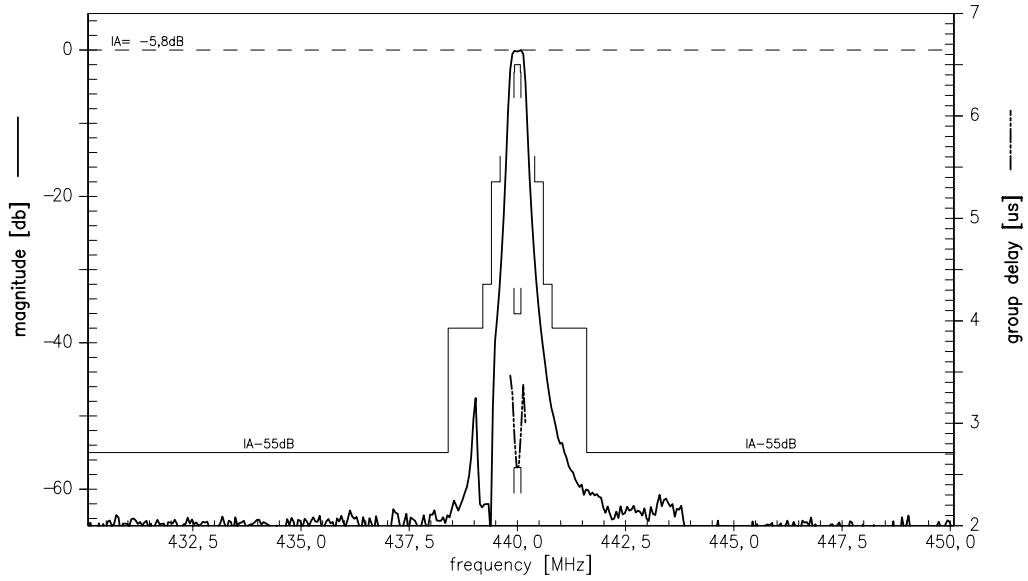


Matching network to 50  $\Omega$ : (Element values depend on PCB layout)

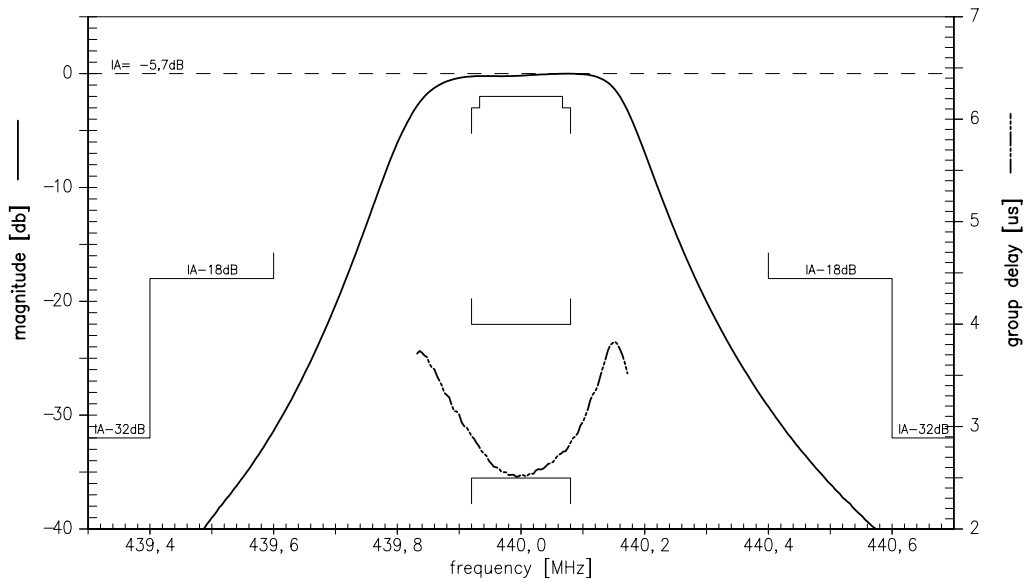




Transfer function:



Transfer function (pass band):





**SAW Components**

**B4841**

**Low-Loss Filter for Mobile Communication**

**440,00 MHz**

Data Sheet



**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW MC WT PD**

**P.O. Box 80 17 09, D-81617 München**

© EPCOS AG 2000. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.