EPCOS

SAW Components

Data Sheet B4841

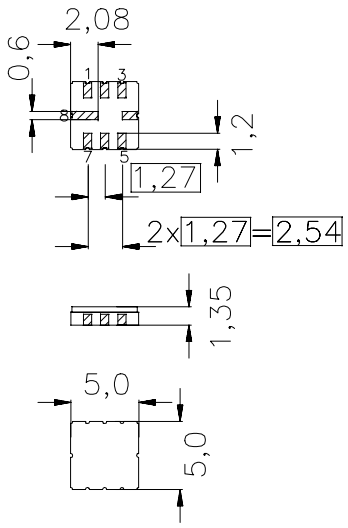
SMD ceramic package **QCC8C**

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

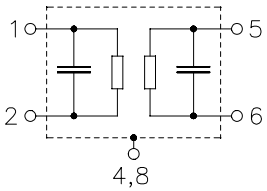
- Gold-plated Ni



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 **S**ensitive **D**evice (**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	

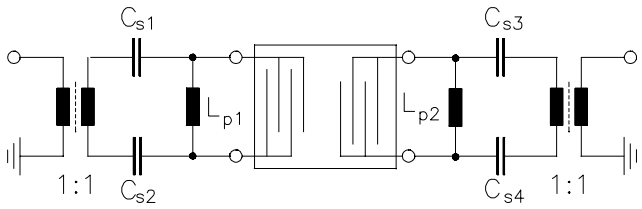
Characteristics for balanced operation

Operating temperature range: T = -20 to 70 °C
Terminating source impedance: Z_S = 360 Ω || -1,5 pF
Terminating load impedance: Z_L = 340 Ω || -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	µs
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 || 1,5	—	Ω || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	340 || 1,7	—	Ω || pF
Temperature coefficient of frequency [1]	TC_f	—	-0,036	—	ppm/K²
Turnover temperature	T_0	—	25	—	°C

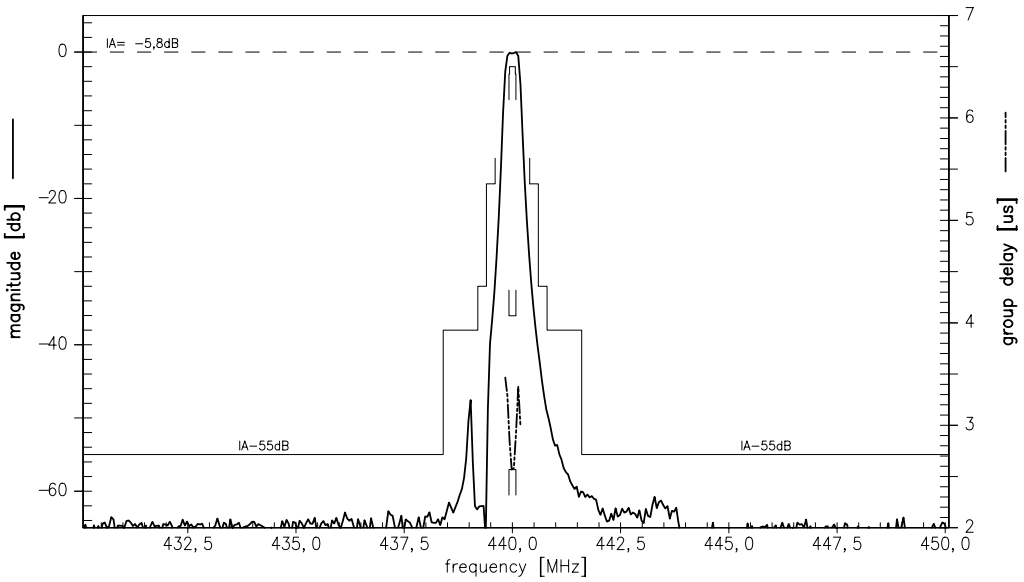
[1] Temperature dependence of f_c: $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2)$

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

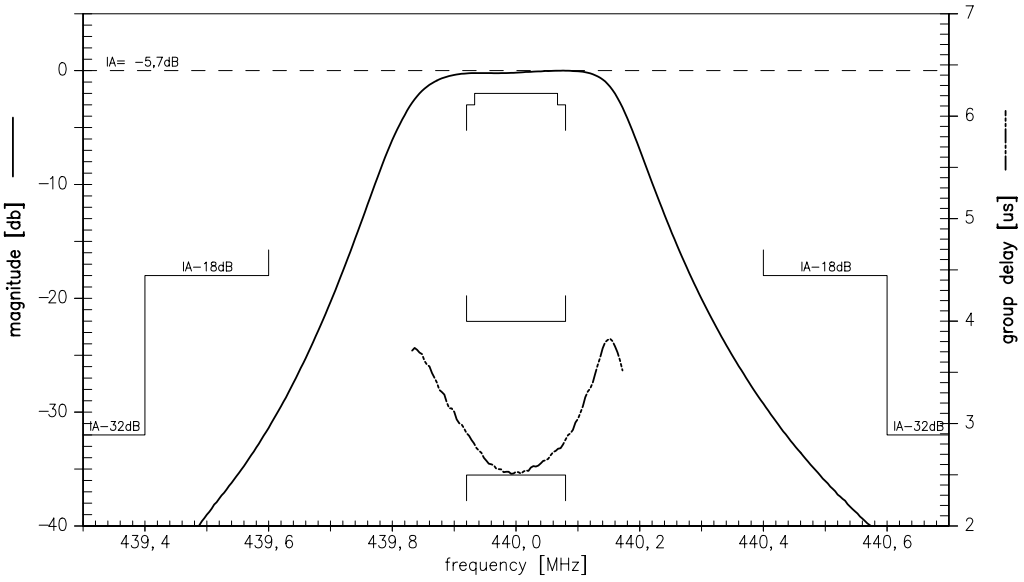


C_{s1}	=	3,9 pF
C_{s2}	=	3,9 pF
L_{p1}	=	27 nH
L_{p2}	=	22 nH
C_{s3}	=	5,6 pF
C_{p4}	=	5,6 pF

Transfer function:



Transfer function (pass band):



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.