



SAW Components

Data Sheet B4832

Data Sheet

An abstract, grayscale background graphic featuring a globe with a grid of latitude and longitude lines. Overlaid on the globe is a large, stylized, three-dimensional representation of the word "EPCOS" in a bold, sans-serif font. The letters are white with a slight shadow, giving them a floating appearance. The overall composition is dynamic and modern.



SAW Components

B4832

Low-Loss Filter for Mobile Communication

400,0 MHz

Data Sheet



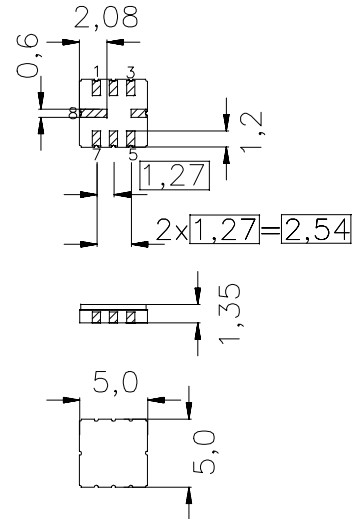
SMD ceramic package **QCC8C**

Features

- Low-loss IF filter for mobile telephone
- Channel selection in GSM/PCN systems
- Ceramic SMD package

Terminals

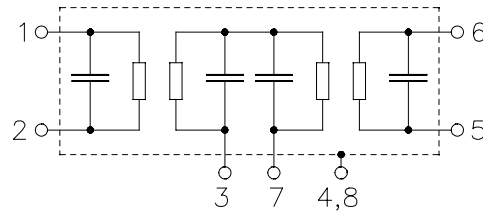
- Gold-plated Ni



Dimensions in mm, approx. weight 0,07 g

Pin configuration

- | | |
|-----|----------------------------------|
| 1 | Input |
| 2 | Input ground or balanced input |
| 5 | Output |
| 6 | Output ground or balanced output |
| 7 | External coupling coil |
| 4,8 | Case - ground |
| 3 | To be grounded |



Type	Ordering code	Marking and Package according to	Packing according to
B4832	B39401-B4832-U310	C61157-A7-A53	F61074-V8070-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40 / +85	°C	Machine Model, 10 pulses
Storage temperature range	T_{stg}	- 40 / +85	°C	
ESD voltage	V_{ESD}^*	100	V	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	

*-acc. to JESD22-A115A(Machine Model), 10 negative & 10 positive pulses



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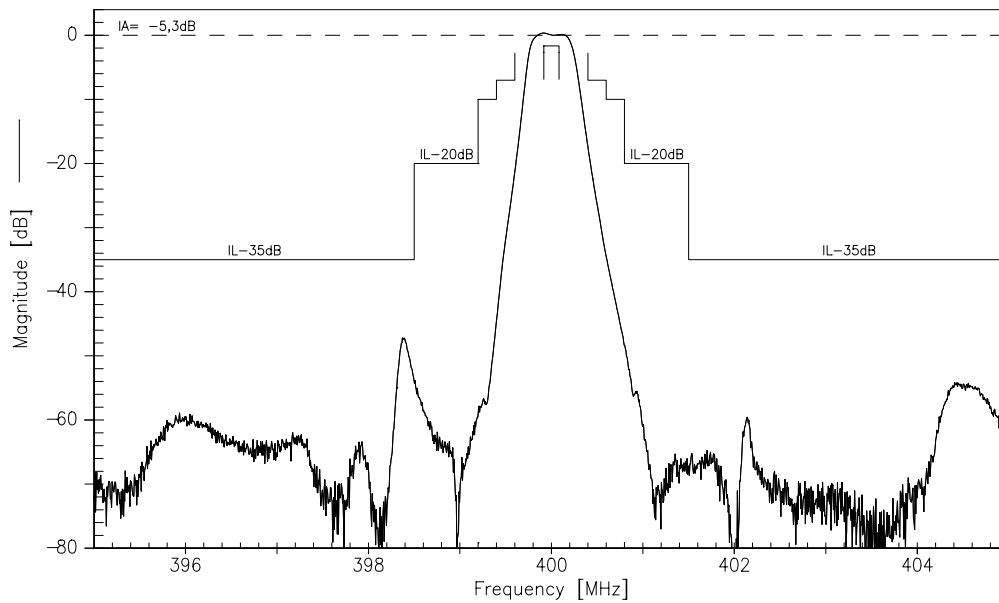
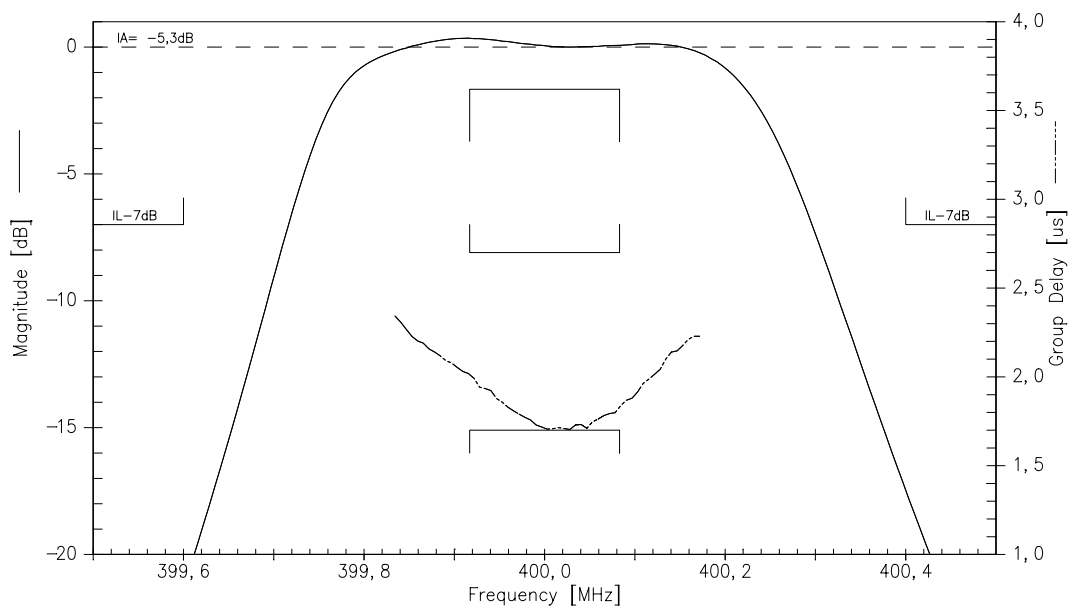


Characteristics

Operating temperature range:	$T = -40^{\circ}\text{C to } +85^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 600\ \Omega \parallel 90\ \text{nH}$
Terminating load impedance:	$Z_L = 600\ \Omega \parallel 90\ \text{nH}$
External Coil:	$L_c = 47\ \text{nH}$

		min.	typ.	max.	
Nominal frequency	f_N	—	400,0	—	MHz
Maximum insertion attenuation (excluding loss in matching elements)					
$f_{N-0,083} \dots f_{N+0,083}$	MHz	—	3,7	6,0	dB
(including loss in matching elements)	α_{\max}				
$f_{N-0,083} \dots f_{N+0,083}$	MHz	—	5,2	7,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_{N-0,083} \dots f_{N+0,083}$	MHz	—	1,0	2,0	dB
Relative attenuation (relative to α_{\max})	α_{rel}				
$f_{N-100,0} \dots f_{N-1,5}$	MHz	35,0	48,0	—	dB
$f_{N-1,5} \dots f_{N-0,8}$	MHz	20,0	51,0	—	dB
$f_{N-0,8} \dots f_{N-0,6}$	MHz	10,0	45,0	—	dB
$f_{N-0,6} \dots f_{N-0,4}$	MHz	7,0	15,0	—	dB
$f_{N+0,4} \dots f_{N+0,6}$	MHz	7,0	15,0	—	dB
$f_{N+0,6} \dots f_{N+0,8}$	MHz	10,0	30,0	—	dB
$f_{N+0,8} \dots f_{N+1,5}$	MHz	20,0	40,0	—	dB
$f_{N+1,5} \dots f_{N+100,0}$	MHz	35,0	54,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_{N-0,083} \dots f_{N+0,083}$	MHz	—	0,55	1,0	μs
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,036	—	ppm/K ²
Frequency inversion point	T_0	—	20	—	$^{\circ}\text{C}$

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

**SAW Components****B4832****Low-Loss Filter for Mobile Communication****400,0 MHz****Data Sheet****Transfer function** (including losses of matching elements and balun):**Transfer function** (pass band, including losses of matching elements and balun):



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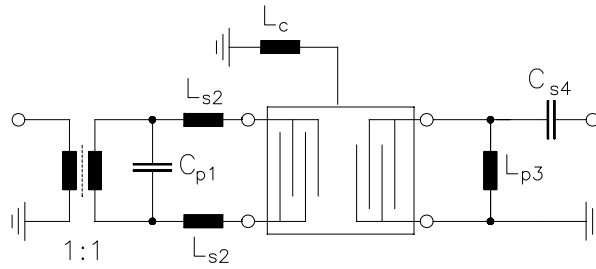
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Test matching network to 50 Ω (element values depend on PCB layout, balun TOKO B5FL):



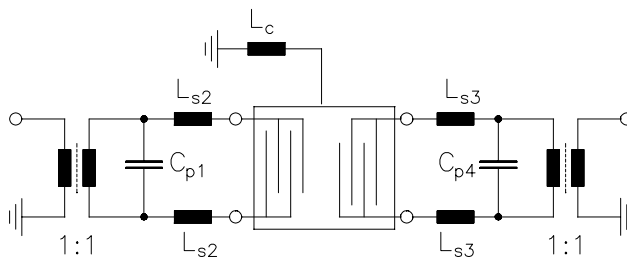
$$C_{p1} = 4,7\text{pF}$$

$$L_{s2} = 39\text{nH}$$

$$L_c = 47\text{nH}$$

$$L_{p3} = 27\text{nH}$$

$$C_{s4} = 2,7\text{pF}$$



$$C_{p1} = 4,7\text{pF}$$

$$L_{s2} = 39\text{nH}$$

$$L_c = 47\text{nH}$$

$$L_{s3} = 39\text{nH}$$

$$C_{p4} = 4,7\text{pF}$$



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Low-Loss Filter for Mobile Communication	400,0 MHz
Data Sheet	SMD

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