



# SAW Components

Data Sheet B4832





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Low-Loss Filter for Mobile Communication

400,0 MHz

Data Sheet



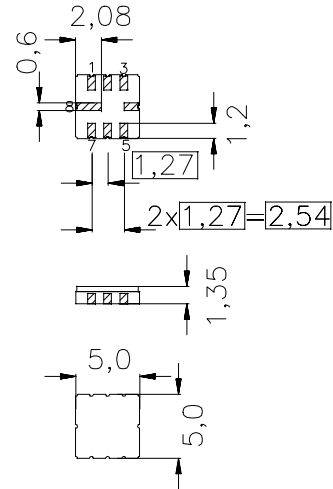
SMD ceramic package QCC8C

**Features**

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

**Terminals**

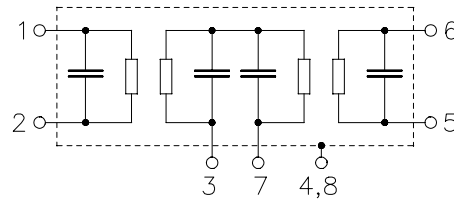
- Gold-plated Ni



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**

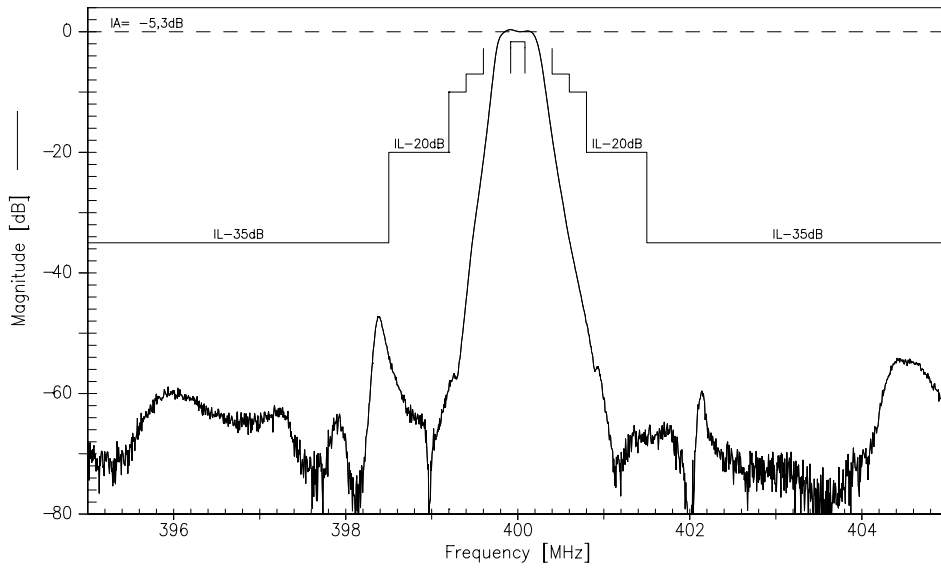
Operating temperature range:	T = -40° C to +85° C
Terminating source impedance:	Z <sub>S</sub> = 600 Ω    90 nH
Terminating load impedance:	Z <sub>L</sub> = 600 Ω    90 nH
External Coil:	L <sub>c</sub> = 47 nH

		min.	typ.	max.	
<b>Nominal frequency</b>	f <sub>N</sub>	—	400,0	—	MHz
<b>Maximum insertion attenuation</b> (excluding loss in matching elements)	f <sub>N</sub> -0,083 ... f <sub>N</sub> +0,083	—	3,7	6,0	dB
(including loss in matching elements)	f <sub>N</sub> -0,083 ... f <sub>N</sub> +0,083	—	5,2	7,5	dB
	α <sub>max</sub>				
<b>Amplitude ripple (p-p)</b>	Δα				
f <sub>N</sub> -0,083 ... f <sub>N</sub> +0,083	MHz	—	1,0	2,0	dB
<b>Relative attenuation (relative to α<sub>max</sub>)</b>	α <sub>rel</sub>				
f <sub>N</sub> -100,0 ... f <sub>N</sub> -1,5	MHz	35,0	48,0	—	dB
f <sub>N</sub> -1,5 ... f <sub>N</sub> -0,8	MHz	20,0	51,0	—	dB
f <sub>N</sub> -0,8 ... f <sub>N</sub> -0,6	MHz	10,0	45,0	—	dB
f <sub>N</sub> -0,6 ... f <sub>N</sub> -0,4	MHz	7,0	15,0	—	dB
f <sub>N</sub> +0,4 ... f <sub>N</sub> +0,6	MHz	7,0	15,0	—	dB
f <sub>N</sub> +0,6 ... f <sub>N</sub> +0,8	MHz	10,0	30,0	—	dB
f <sub>N</sub> +0,8 ... f <sub>N</sub> +1,5	MHz	20,0	40,0	—	dB
f <sub>N</sub> +1,5 ... f <sub>N</sub> +100,0	MHz	35,0	54,0	—	dB
<b>Group delay ripple (p-p)</b>	Δτ				
f <sub>N</sub> -0,083 ... f <sub>N</sub> +0,083	MHz	—	0,55	1,0	μs
<b>Temperature coefficient of frequency <sup>1)</sup></b>	TC <sub>f</sub>	—	-0,036	—	ppm/K <sup>2</sup>
<b>Frequency inversion point</b>	T <sub>0</sub>	—	20	—	°C

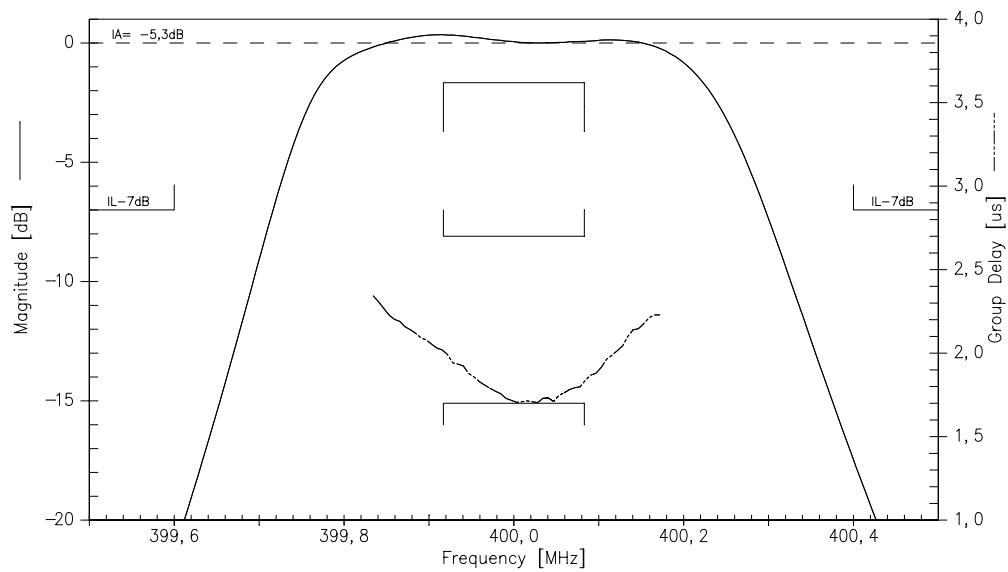
<sup>1)</sup> Temperature dependence of f<sub>c</sub>: f<sub>c</sub>(T) = f<sub>c</sub>(T<sub>0</sub>)(1 + TC<sub>f</sub>(T - T<sub>0</sub>)<sup>2</sup>)



Transfer function (including losses of matching elements and balun):

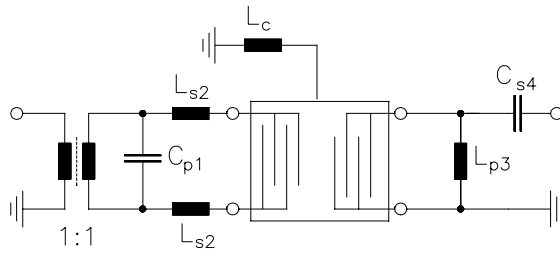


Transfer function (pass band, including losses of matching elements and balun):

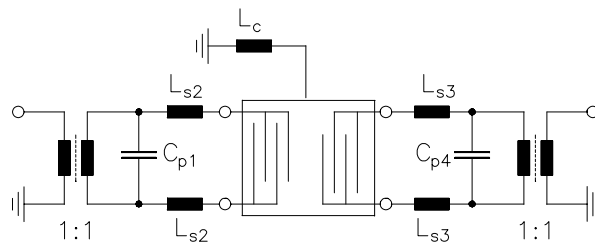




Test matching network to 50 Ω (element values depend on PCB layout, balun TOKO B5FL):



- $C_{p1} = 4,7\text{pF}$
- $L_{s2} = 39\text{nH}$
- $L_c = 47\text{nH}$
- $L_{p3} = 27\text{nH}$
- $C_{s4} = 2,7\text{pF}$



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- $L_{s2} = 39\text{nH}$
- $L_c = 47\text{nH}$
- $L_{s3} = 39\text{nH}$
- $C_{p4} = 4,7\text{pF}$



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