

Data Sheet B4832





B4832

Low-Loss Filter for Mobile Communication

400,0 MHz

Data Sheet



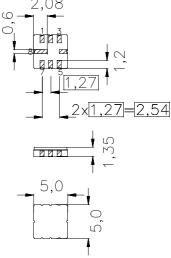
Features

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

Terminals

Gold-plated Ni

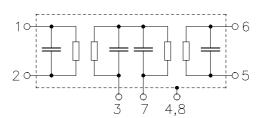
SMD ceramic package QCC8C



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



Туре	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	
Storage temperature range	$T_{\rm stg}$	- 40 / + 85	°C	
ESD voltage	V*ESD	100	V	Machine Model, 10 pulses
DC voltage	$V_{\rm DC}$	0	V	
Source power	$P_{\rm s}$	10	dBm	

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



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Characteristics

 $\begin{array}{lll} \mbox{Operating temperature range:} & T & = -40\mbox{°C to } +85\mbox{°C} \\ \mbox{Terminating source impedance:} & Z_{\rm S} & = 600\ \Omega\ ||\ 90\ \mbox{nH} \\ \mbox{Terminating load impedance:} & Z_{\rm L} & = 600\ \Omega\ ||\ 90\ \mbox{nH} \\ \end{array}$

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 f _N +0,083	MHz		_	3,7	6,0	dB
(including loss in matching elements)		α_{max}				
f _N -0,083 f _N +0,083	MHz		_	5,2	7,5	dB
Amplitude ripple (p-p)		Δα				
$f_{\rm N}$ -0,083 $f_{\rm N}$ +0,083	MHz		_	1,0	2,0	dB
Relative attenuation (relative to α_{max})		α_{rel}				
f _N -100,0 f _N -1,5	MHz		35,0	48,0	_	dB
f _N -1,5 f _N -0,8	MHz		20,0	51,0	_	dB
f _N -0,8 f _N -0,6	MHz		10,0	45,0	_	dB
f _N -0,6 f _N -0,4	MHz		7,0	15,0	_	dB
$f_{\rm N}$ +0,4 $f_{\rm N}$ +0,6	MHz		7,0	15,0	_	dB
$f_{\rm N}$ +0,6 $f_{\rm N}$ +0,8	MHz		10,0	30,0	_	dB
f _N +0,8 f _N +1,5	MHz		20,0	40,0	_	dB
f _N +1,5 f _N +100,0	MHz		35,0	54,0	_	dB
Group delay ripple (p-p)		Δτ				
$f_{\rm N}$ -0,083 $f_{\rm N}$ +0,083	MHz		<u> </u>	0,55	1,0	μs
Temperature coefficient of frequency 1)		TC _f		- 0,036	_	ppm/K ²
Frequency inversion point		T_0	_	20	_	°C

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



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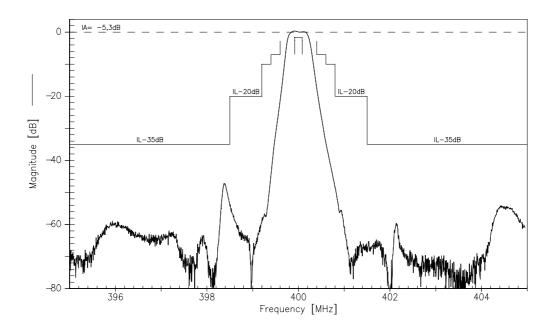
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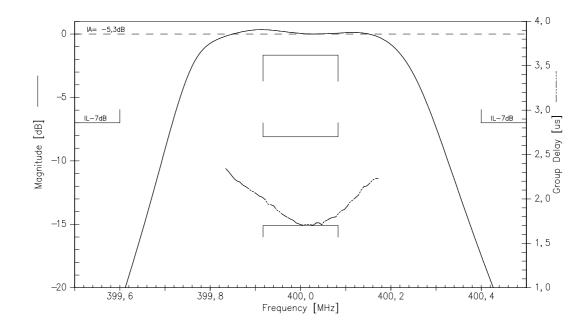
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Transfer function (including losses of matching elements and balun):



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





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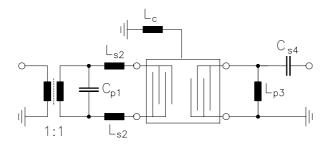
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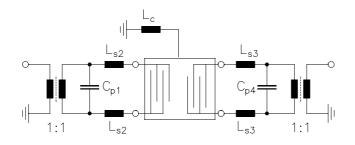
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Test matching network to 50 Ω (element values depend on PCB layout, balun TOKO B5FL):



 $\begin{array}{ll} C_{p1} & = 4,7 pF \\ L_{s2} & = 39 nH \\ L_{c} & = 47 nH \\ L_{p3} & = 27 nH \\ C_{s4} & = 2,7 pF \end{array}$



 $C_{p1} = 4.7pF$ $L_{s2} = 39nH$ $L_{c} = 47nH$ $L_{s3} = 39nH$ $C_{p4} = 4.7pF$



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