EPCOS

SAW Components

Preliminary Data B4933

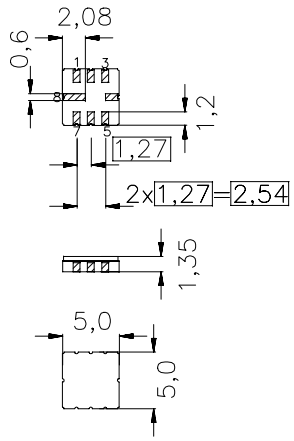
Features

- IF filter for mobile telephone
- Low amplitude ripple
- Usable passband 1,26 MHz
- Very low phase distortion
- Balanced and unbalanced operation possible
- Package for **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

- Ni, gold plated

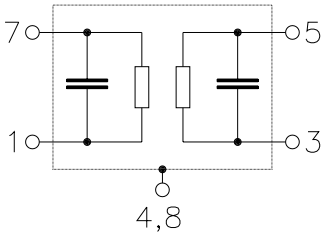
Ceramic package **QCC8C**



Dimensions in mm,approx. weight 0,10 g

Pin configuration

1	Input
7	Input
3	Output
5	Output
4,8	Case - Ground
2,6	To be grounded



Type	Ordering code	Marking and package according to	Packing according to
B4933	B39131-B4933-U310	C61157-A7-A56	F61074-V8070-Z000

Electrostactic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 40/+ 85	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_S	10	dBm	source impedance 50 Ω

Preliminary Data

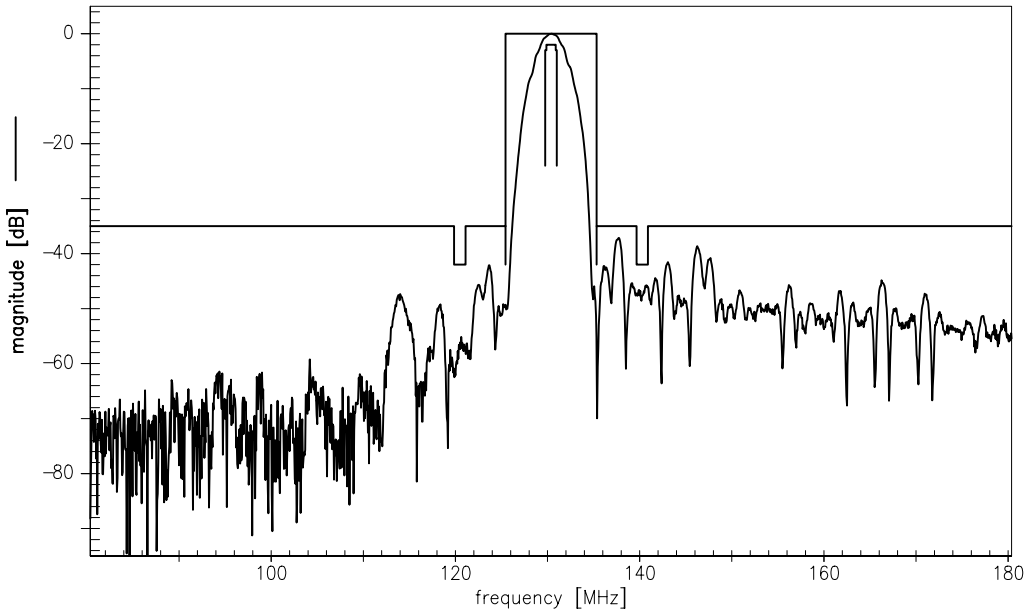
SMD

Characteristics

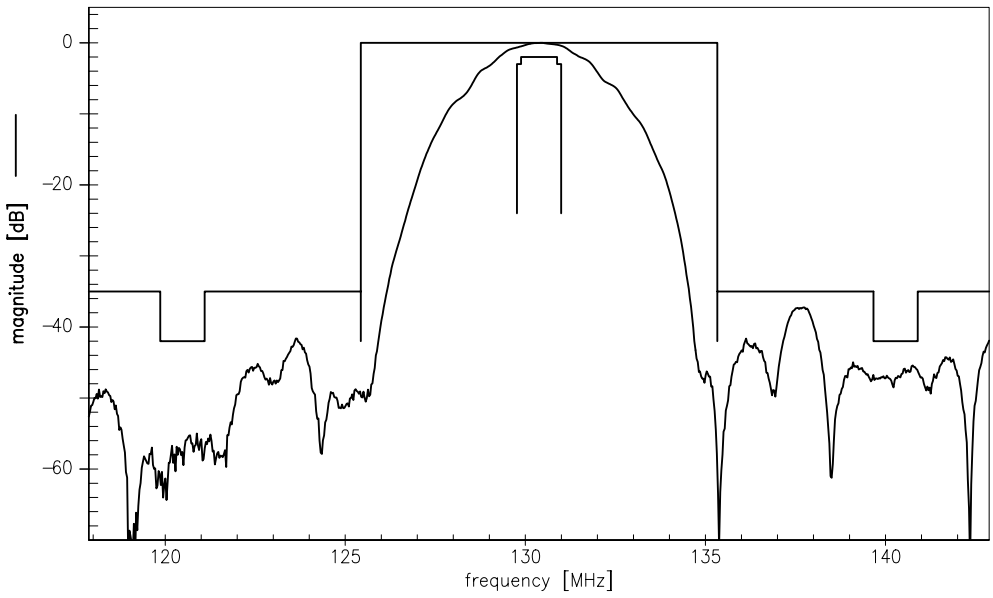
Operating temperature range: T = -40 to +85 °C
Terminating source impedance: Z_S = 1000 Ω || 220 nH
Terminating load impedance: Z_L = 1000 Ω || 220 nH

		min.	typ.	max.	
Normal frequency	f_N	—	130,38	—	MHz
Insertion attenuation at f_N (including losses in the matching circuit, without losses in the baluns)	α_{fN}	—	6,5	8,0	dB
Amplitude ripple in passband (p-p)	$\Delta\alpha$				
f_N - 500,0 kHz...f_N + 500,0 kHz		—	0,6	2,0	dB
f_N - 630,0 kHz...f_N + 630,0 kHz		—	0,8	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 630,0 kHz...f_N + 630,0 kHz		—	0,07	0,1	µs
Phase linearity (rms deviation)	$\Delta\phi$				
f_N - 630,0 kHz...f_N + 630,0 kHz		—	0,3	1,0	° rms
Attenuation (relative to α_{fN})	α_{rel}				
10 MHz ... f_N - 10,52 MHz		35	>50	—	dB
f_N - 10,52 MHz ... f_N - 9,29 MHz		42	58	—	dB
f_N - 9,29 MHz ... f_N - 4,95 MHz		35	45	—	dB
f_N - 4,95 MHz		42	50	—	dB
f_N + 4,95 MHz		42	60	—	dB
f_N + 4,95 MHz ... f_N + 9,29 MHz		35	40	—	dB
f_N + 9,29 MHz ... f_N +10,52 MHz		42	45	—	dB
f_N + 10,52 MHz ... 200 MHz		35	>40	—	dB

Transfer function (wideband)



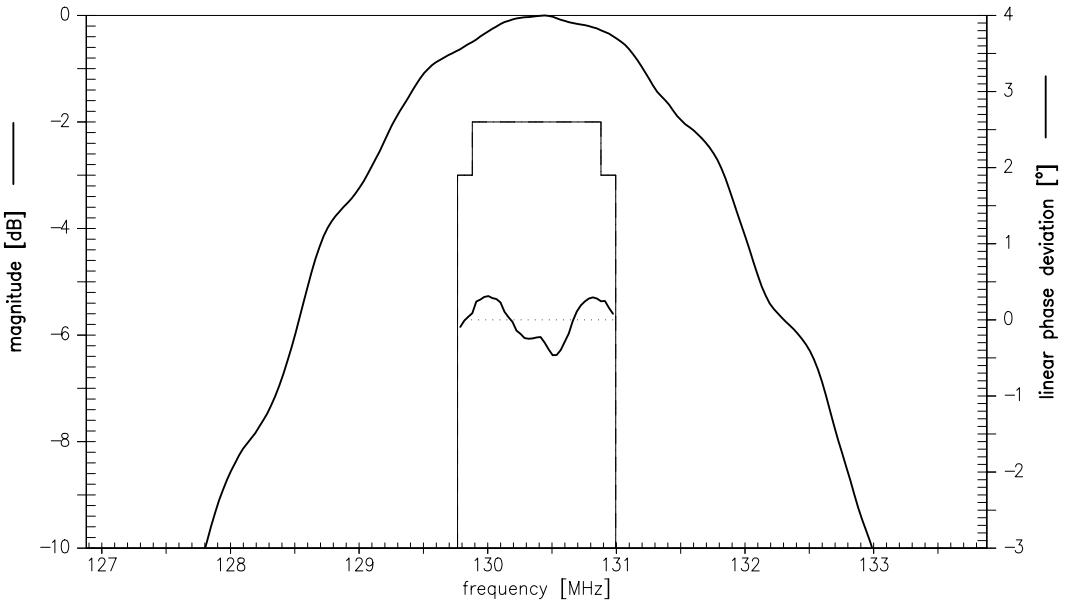
Transfer function (narrowband)



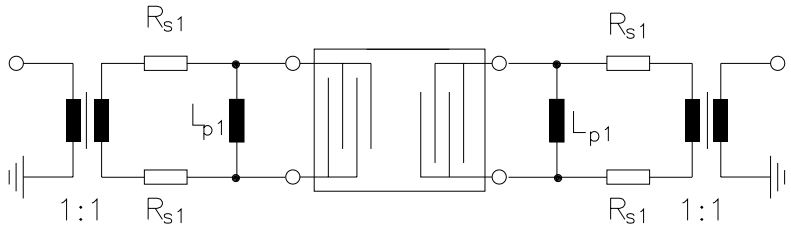
Preliminary Data

SMD

Transfer function (passband)



Test matching network to 1000 Ω (element values depend on pcb layout)



R_{s1} = 470 Ω
L_{P1} = 220 nH

The insertion attenuation of the above mentioned network includes 26,8 dB additional loss due to the impedance transformation to 1000Ω and the losses of the two baluns.

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