EPCOS

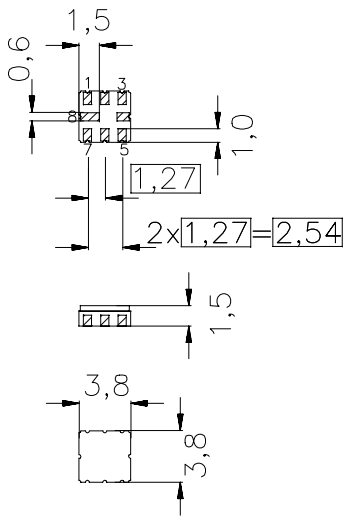
SAW Components

Data Sheet B4941

Ceramic package **QCC8B**

Features

- IF filter for mobile telephone
- Extremely small size
- 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**)



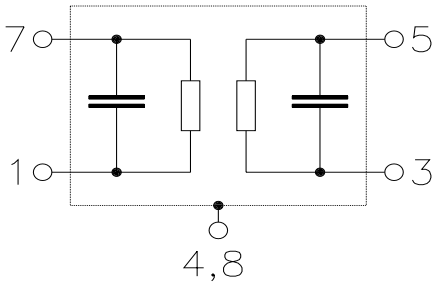
Terminals

- Ni, gold plated

Dimensions in mm, approx. weight 0,07 g

Pin configuration

1	Input
7	Balanced Input or input ground
3	Balanced output or output ground
5	Output
4,8	Case - Ground, to be grounded
2,6	To be grounded



Type	Ordering code	Marking and package according to	Packing according to
B4941	B39131-B4941-Z810	C61157-A7-A46	F61074-V8037-Z000

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

Maximum ratings

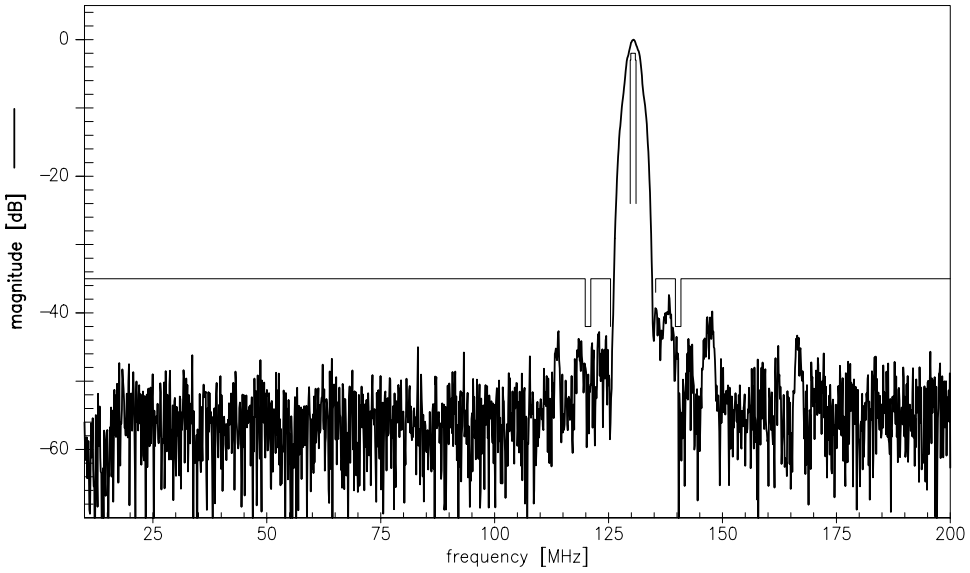
Operable temperature range	T	– 30/+ 85	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	13	V	
Source power	P_S	10	dBm	

Characteristics

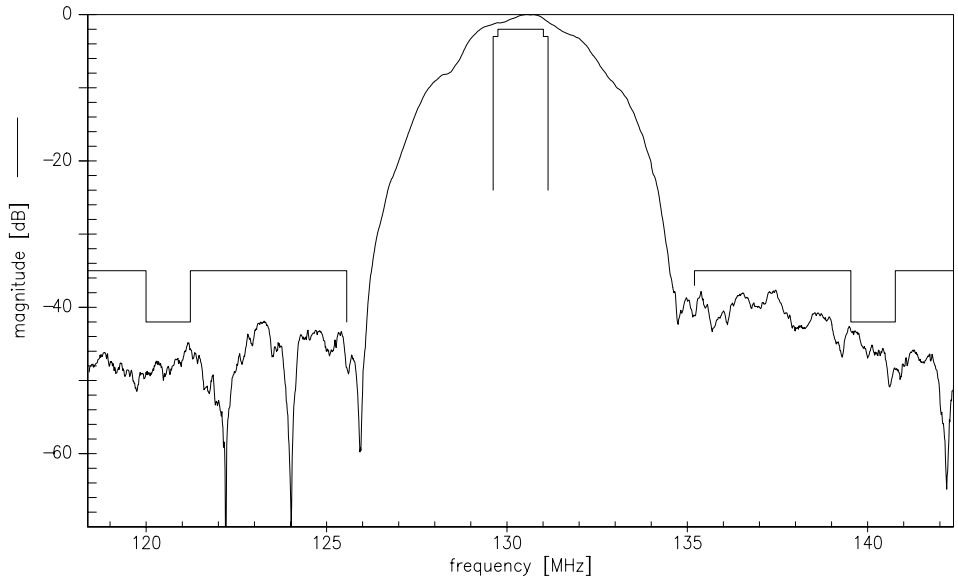
Operating temperature range: T = -30 to +85 °C
Terminating source impedance: Z_S = 1000 Ω || 220 nH
Terminating load impedance: Z_L = 1000 Ω || 220 nH

		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		—	0,9	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	50	—	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		37	40	—	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

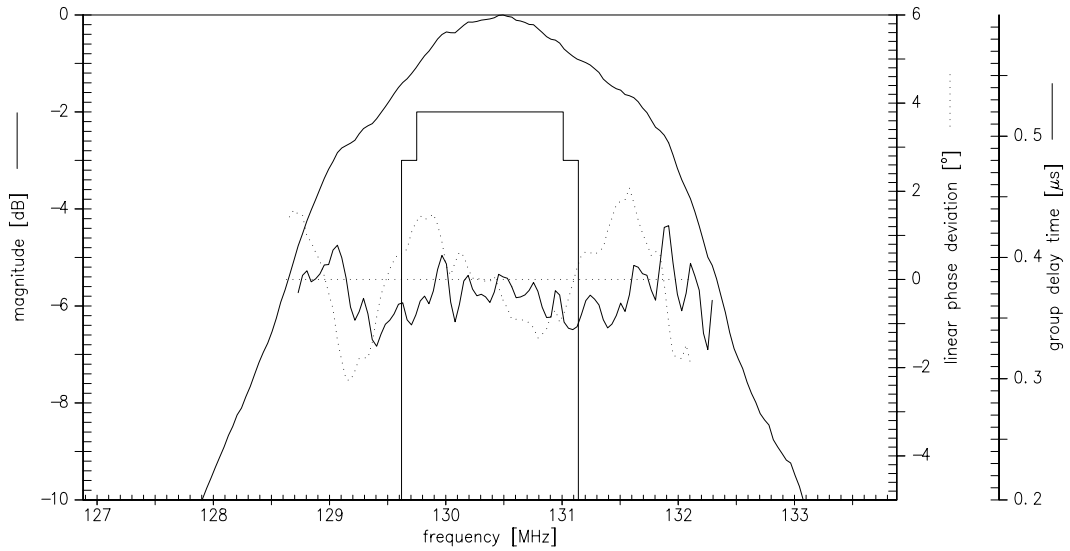
Normalized Transfer function (wideband, measured balanced-balanced)



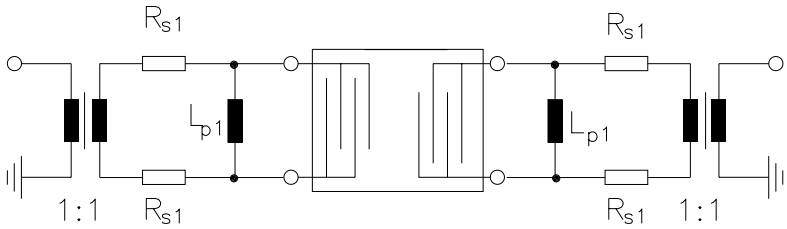
Normalized transfer function (wideband, measured balanced-balanced)



Normalized transfer function (passband, measured balanced-balanced)



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.

Published by EPCOS AG
Surface Acoustic Wave Components Division, OFW E MF
P.O. Box 80 17 09, D-81617 München

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.
Terms of delivery and rights to change design reserved.

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.