



SAW Components

Data Sheet B3894

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or global theme.



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Low Loss Filter for Mobile Communication

210,00 MHz

Data Sheet



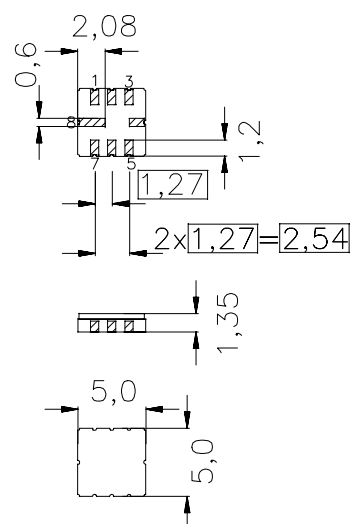
Features

- IF filter for mobile telephone
- Channel selection in CDMA systems
- Low insertion attenuation
- Extremely high rejection
- Single-ended/single-ended, balanced/single-ended and balanced/balanced operation possible
- Optimized for single-ended/balanced operation
- Very small size
- Package for **Surface Mounted Technology (SMT)**

Terminals

- Ni, gold plated

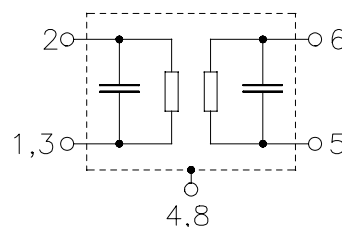
Ceramic package **QCC8C**



Dimensions in mm, approx. weight 0,07 g

Pin configuration

- | | |
|------|----------------------------------|
| 2 | Input |
| 1+3 | Input ground or balanced input |
| 6 | Output |
| 5 | Output ground or balanced output |
| 7 | to be grounded |
| 4, 8 | Case ground |



Device is reciprocal, i.e. inputs can be used as outputs and vice versa

Type	Ordering code	Marking and Package according to	Packing according to
B3894	B39211-B3894-U310	C61157-A7-A56	F61074-V8169-Z000

Electrostatic Sensitive Device (**ESD**)

Maximum ratings

Operable temperature range	T	- 30/+ 85	°C
Storage temperature range	T_{stg}	- 40/+ 85	°C
DC voltage	V_{DC}	0	V
Source power	P_s	10	dBm



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Characteristics single-ended/balanced

Operating temperature: $T = -30\text{ °C} \dots +80\text{ °C}$
Terminating source impedance: $Z_S = 1000\ \Omega \parallel 70\text{ nH}$
Terminating load impedance: $Z_L = 400\ \Omega \parallel 60\text{ nH}$

		min.	typ.	max.	
Nominal frequency	f_N	—	210,00	—	MHz
Insertion attenuation at f_N (including loss in matching network without loss in baluns)	α_{fN}	—	8,5	10,0	dB
Amplitude ripple (p-p) $f_N - 0,30 \dots f_N + 0,30$ MHz	$\Delta\alpha$	—	0,6	1,2	dB
Phase linearity (rms deviation) $f_N - 0,63 \dots f_N + 0,63$ MHz	$\Delta\phi$	—	2,5	3,5	°
Relative attenuation (relative to α_{fN}) $f_N - 0,63 \dots f_N + 0,63$ MHz	α_{rel}	—	3,5	5,0	dB
$f_N - 100,0 \dots f_N - 50,0$ MHz		60,0	80,0	—	dB
$f_N - 50,0 \dots f_N - 30,0$ MHz		50,0	65,0	—	dB
$f_N - 30,0 \dots f_N - 10,0$ MHz		40,0	55,0	—	dB
$f_N - 10,0 \dots f_N - 1,25$ MHz		35,0	38,0	—	dB
$f_N - 1,25$ MHz		37,0	41,0	—	dB
$f_N + 1,25$ MHz		37,0	41,0	—	dB
$f_N + 1,25 \dots f_N + 10,0$ MHz		35,0	41,0	—	dB
$f_N + 10,0 \dots f_N + 30,0$ MHz		40,0	55,0	—	dB
$f_N + 30,0 \dots f_N + 50,0$ MHz		50,0	60,0	—	dB
$f_N + 50,0 \dots f_N + 100,0$ MHz		60,0	70,0	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,036	—	ppm/K ²
Frequency inversion point	T_0	—	30	—	°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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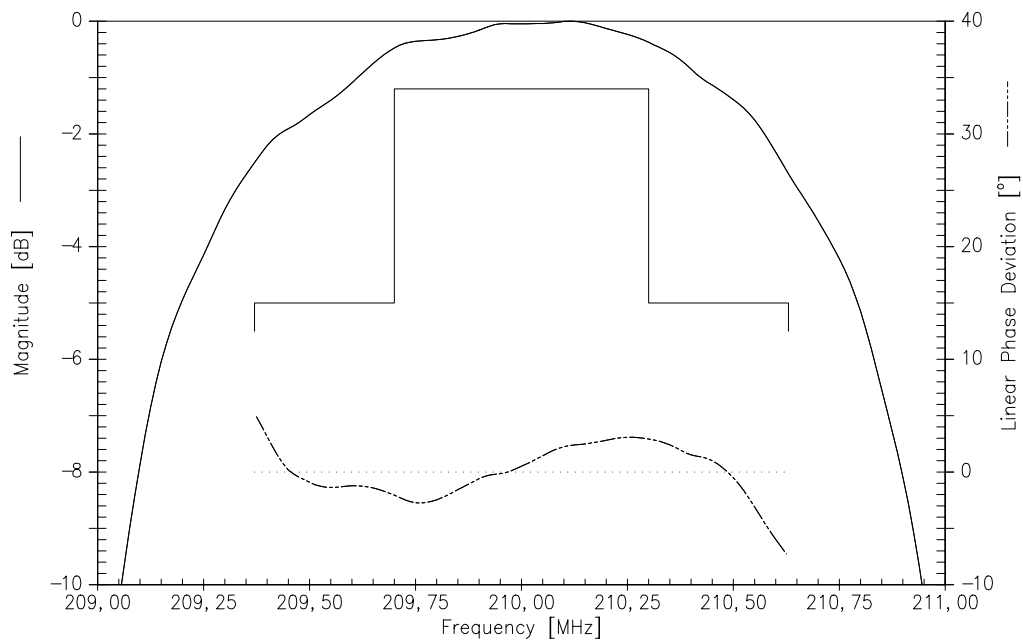
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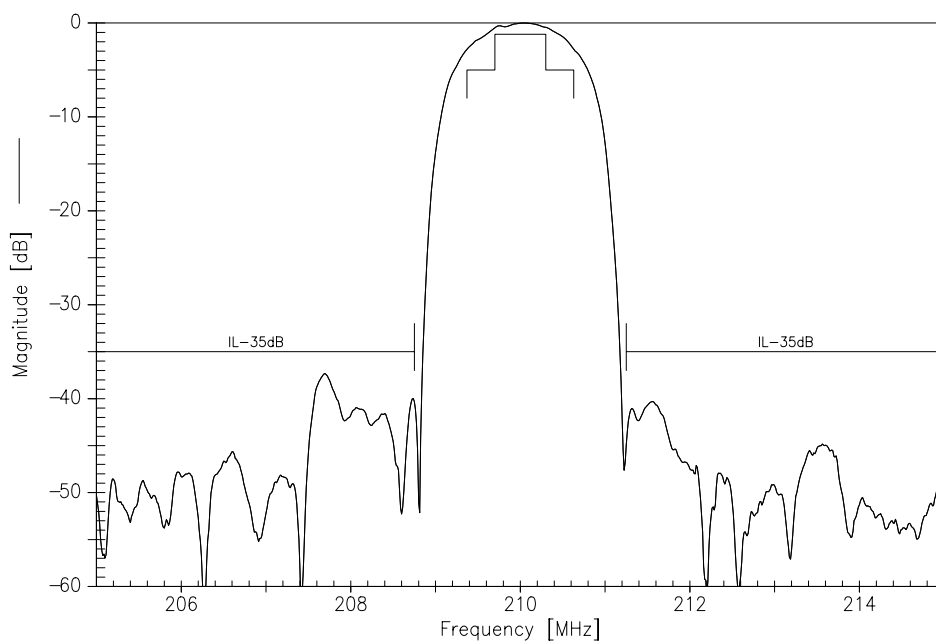
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Transfer function (passband, single-ended/balanced):



Transfer function (narrowband, single-ended/balanced):





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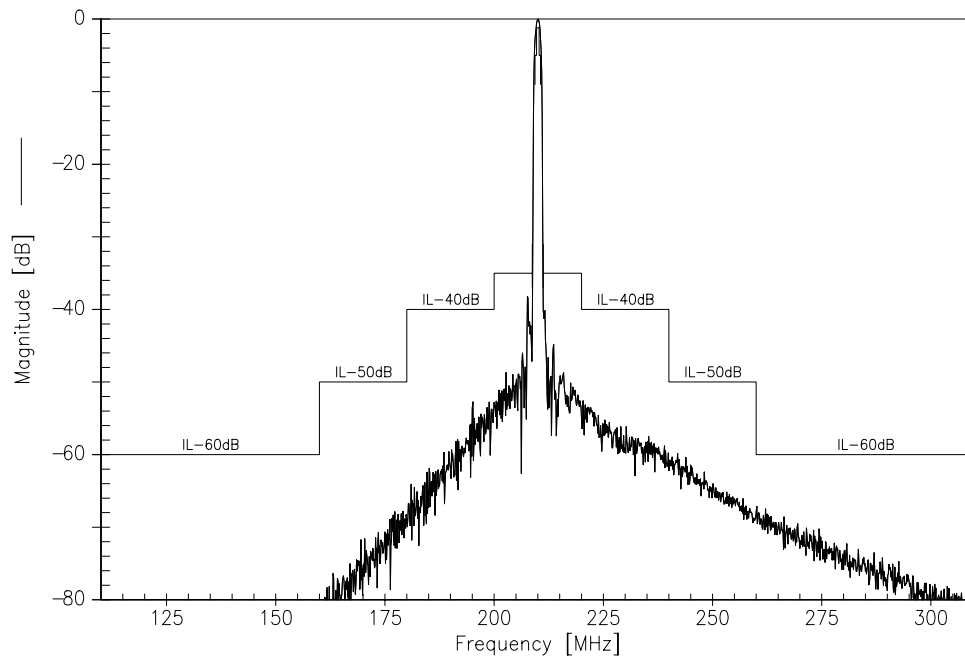
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Transfer function (wideband, single-ended/balanced):





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