



SAW Components

Data Sheet B3830

Data Sheet

An abstract, grayscale graphic featuring a large, stylized, and slightly blurred "EPCOS" logo. The logo is set against a background of curved, overlapping bands and a faint world map, creating a sense of global connectivity and technological advancement.



SAW Components

B3830

Low-Loss Filter

395,0 MHz

Data Sheet

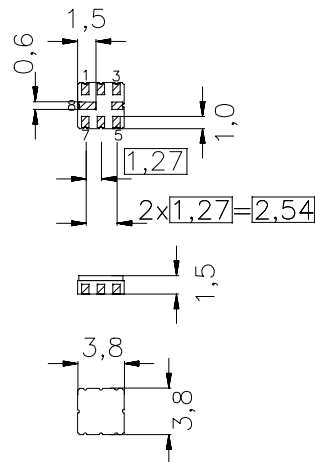
Ceramic package QCC8B

Features

- Low-loss filter (RX) for Trunked Radio
- Usable bandwidth 10 MHz
- No matching required for operation at 50 Ω
- Unbalanced to unbalanced or unbalanced to balanced operation
- Package for Surface Mounted Technology (SMT)
- Hermetically sealed ceramic package

Terminals

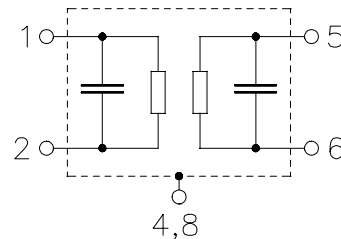
- Gold-plated



typ. Dimensions in mm, approx. weight 0,07 g

Pin configuration

- | | |
|---------|---------------------------------|
| 5 | Input |
| 1 | Output / Output balanced |
| 2 | Output ground / Output balanced |
| 3, 6, 7 | Ground |
| 4, 8 | Input ground / Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B3830	B39401-B3830-Z810	C61157-A7-A46	F61074-V8037-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-30 / +70	$^{\circ}\text{C}$	
Storage temperature range	T_{stg}	-40 / +85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	0	V	
Source power	P_s	15	dBm	passband



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Characteristics

Operating temperature range:	$T_A = +15 \dots +35 \text{ }^\circ\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ unbalanced or unbalanced to balanced
Terminating load impedance:	$Z_L = 50 \text{ } \Omega$ unbalanced or unbalanced to balanced

		min.	typ.	max.	
Nominal frequency	f_N	—	395,0	—	MHz
Maximum insertion attenuation 390,0 MHz ... 400,0 MHz	$\alpha_{\max}$	—	1,8	3,5	dB
Amplitude ripple (p-p) 390,0 MHz ... 400,0 MHz	$\Delta\alpha$	—	0,7	1,5	dB
VSWR 390,0 MHz ... 400,0 MHz		—	1,65:1	2,0:1	
Absolute attenuation	α_{abs}				
0,1 MHz ... 350,0 MHz		40	60	—	dB
350,0 MHz ... 383,0 MHz		25	30	—	dB
383,0 MHz ... 385,0 MHz		18	20	—	dB
410,0 MHz ... 440,0 MHz		10	20	—	dB
440,0 MHz ... 563,0 MHz		44	50	—	dB
563,0 MHz ... 1100,0 MHz		30	35	—	dB
1100,0 MHz ... 1526,0 MHz		30	37	—	dB
1526,0 MHz ... 2200,0 MHz		30	37	—	dB
2200,0 MHz ... 2500,0 MHz		15	20	—	dB
2500,0 MHz ... 4000,0 MHz		5	7	—	dB
Symmetry in band					
$ S_{31} / S_{21} $ 390,0 ... 400,0 MHz		-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$ 390,0 ... 400,0 MHz		170	180	190	°
Temperature coefficient of frequency	TC_f	—	- 36	—	ppm/K



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Characteristics

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Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ unbalanced or unbalanced to balanced
Terminating load impedance:	$Z_L = 50 \text{ } \Omega$ unbalanced or unbalanced to balanced

		min.	typ.	max.	
Nominal frequency	f_N	—	395,0	—	MHz
Maximum insertion attenuation 390,0 MHz ... 400,0 MHz	$\alpha_{\max}$	—	1,9	4,0	dB
Amplitude ripple (p-p) 390,0 MHz ... 400,0 MHz	$\Delta\alpha$	—	0,8	2,0	dB
VSWR 390,0 MHz ... 400,0 MHz		—	1,65:1	2,0:1	
Absolute attenuation	α_{abs}				
0,1 MHz ... 350,0 MHz		40	60	—	dB
350,0 MHz ... 383,0 MHz		25	30	—	dB
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2200,0 MHz ... 2500,0 MHz		15	20	—	dB
2500,0 MHz ... 4000,0 MHz		5	7	—	dB
Symmetry in band					
$ S_{31} / S_{21} $ 390,0 ... 400,0 MHz		-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$ 390,0 ... 400,0 MHz		170	180	190	$^{\circ}$
Temperature coefficient of frequency	TC_f	—	- 36	—	ppm/K



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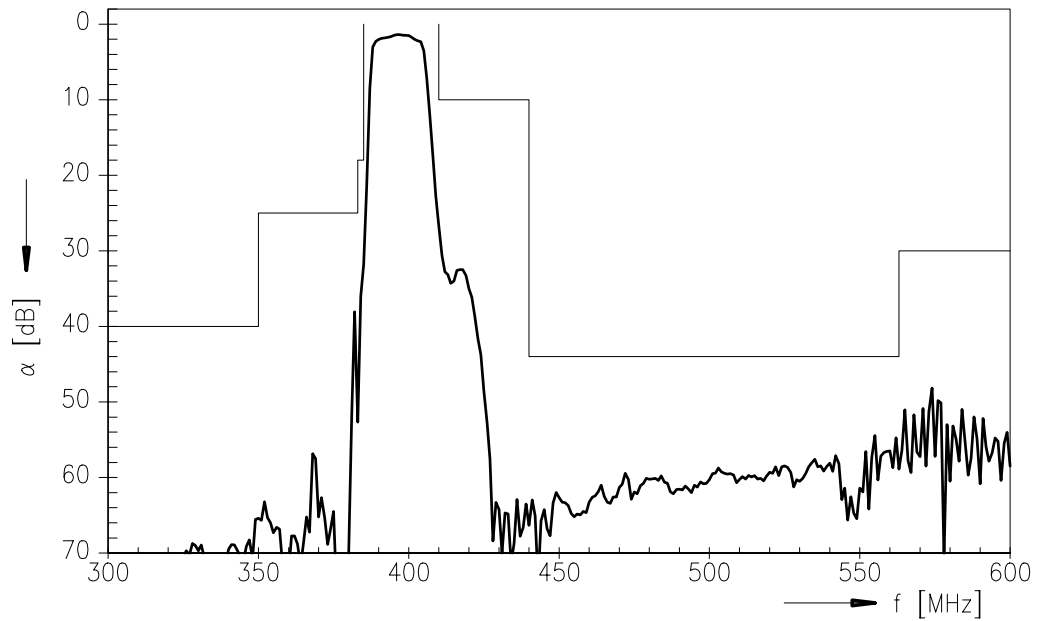
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Low-Loss Filter

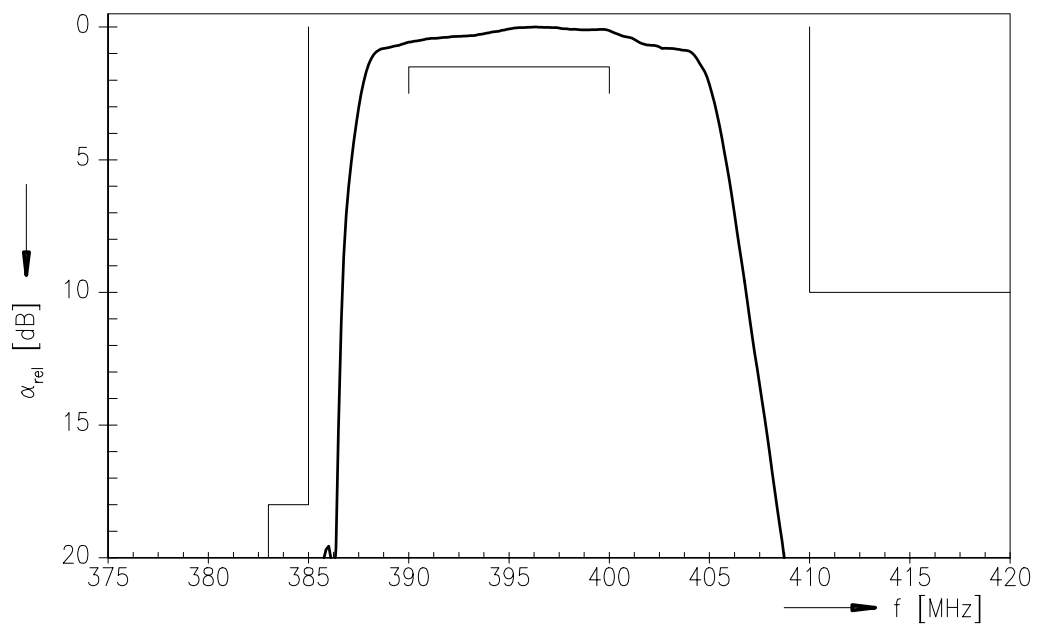
395,0 MHz

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Transfer function



Normalized transfer function (pass band; +15 °C ... +35 °C)





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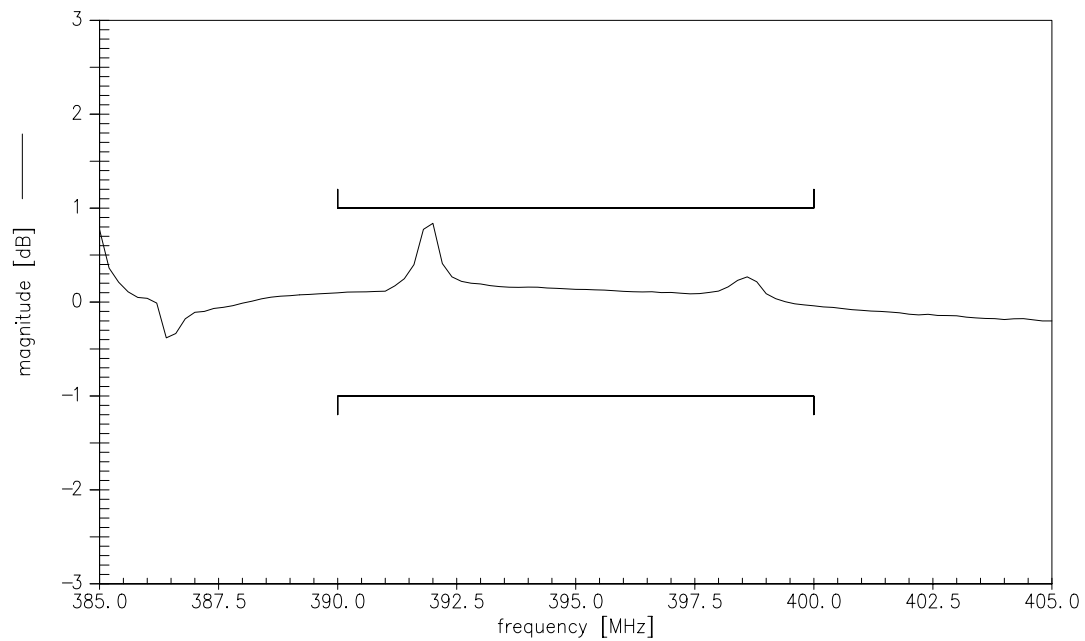
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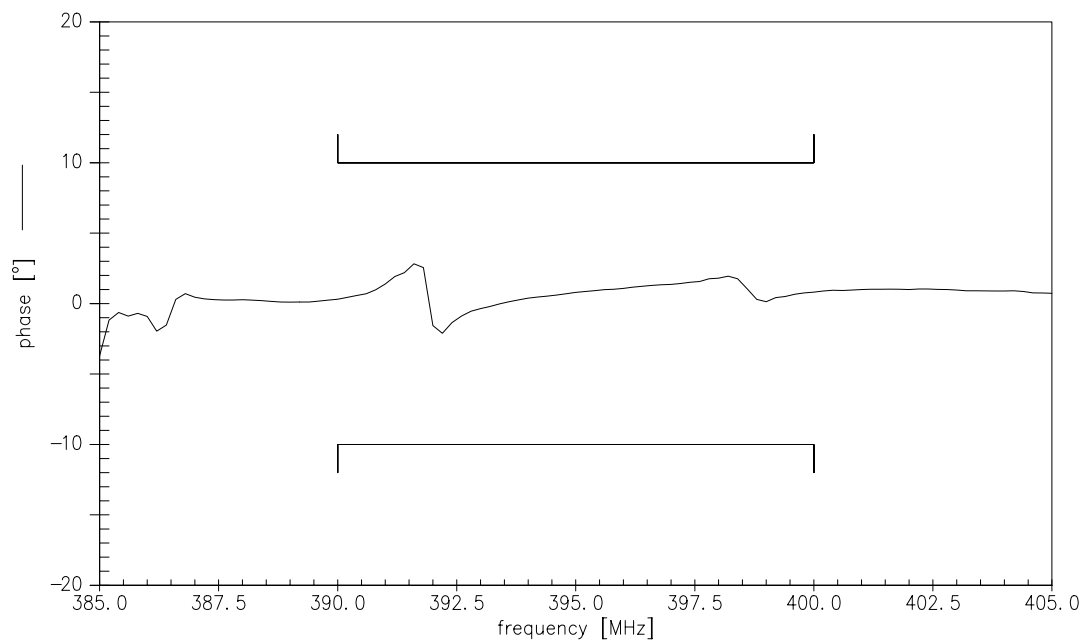
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Amplitude symmetry $|S_{31}|/|S_{21}|$



Phase symmetry $\arg(S_{31}/S_{21}) - 180^\circ$





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