



# SAW Components

Data Sheet B3830





**SAW Components**

**B3830**

**Low-Loss Filter**

**395,0 MHz**

**Data Sheet**

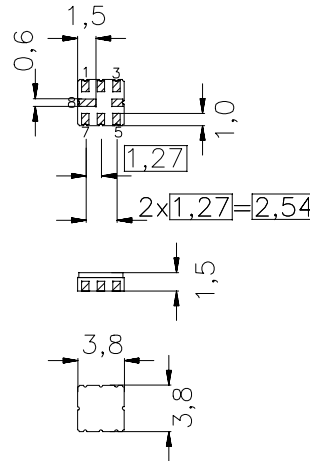
**Ceramic package QCC8B**

**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**

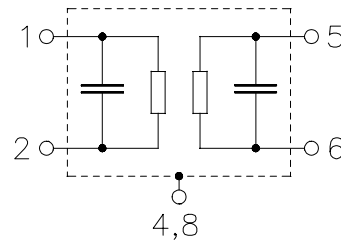
- Gold-plated



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	°C	
Storage temperature range	$T_{stg}$	-40 / +85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	15	dBm	passband


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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.	
<b>Nominal frequency</b>	$f_N$	—	395,0	—	MHz
<b>Maximum insertion attenuation</b> 390,0 MHz ... 400,0 MHz	$\alpha_{\max}$	—	1,8	3,5	dB
<b>Amplitude ripple (p-p)</b> 390,0 MHz ... 400,0 MHz	$\Delta\alpha$	—	0,7	1,5	dB
<b>VSWR</b> 390,0 MHz ... 400,0 MHz		—	1,65:1	2,0:1	
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
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
<b>Symmetry in band</b>					
$ 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	$^\circ$
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-36	—	ppm/K


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Operating temperature range:

$T_A = -30 \dots +70 \text{ }^\circ\text{C}$

Terminating source impedance:

$Z_S = 50 \text{ } \Omega \text{ unbalanced or unbalanced to balanced}$

Terminating load impedance:

$Z_L = 50 \text{ } \Omega \text{ unbalanced or unbalanced to balanced}$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	395,0	—	MHz
<b>Maximum insertion attenuation</b> 390,0 MHz ... 400,0 MHz	$\alpha_{\max}$	—	1,9	4,0	dB
<b>Amplitude ripple (p-p)</b> 390,0 MHz ... 400,0 MHz	$\Delta\alpha$	—	0,8	2,0	dB
<b>VSWR</b> 390,0 MHz ... 400,0 MHz		—	1,65:1	2,0:1	
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
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
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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
<b>Symmetry in band</b>					
$ S_{31} / S_{21} $ 390,0 ... 400,0 MHz		-1,0	0	1,0	dB
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<b>Temperature coefficient of frequency</b>	$TC_f$	—	- 36	—	ppm/K



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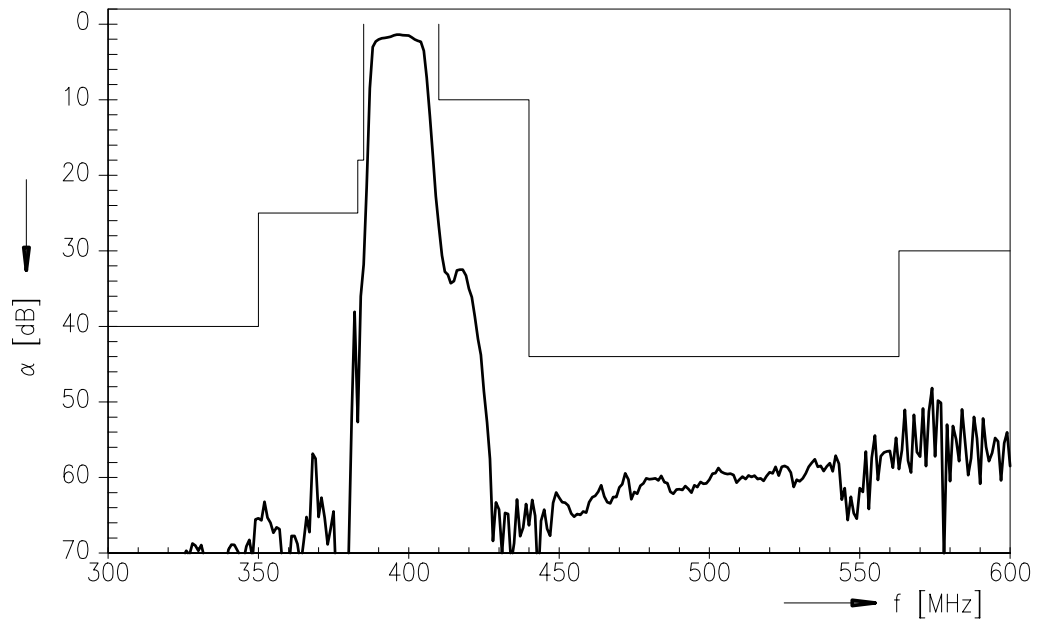
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Low-Loss Filter

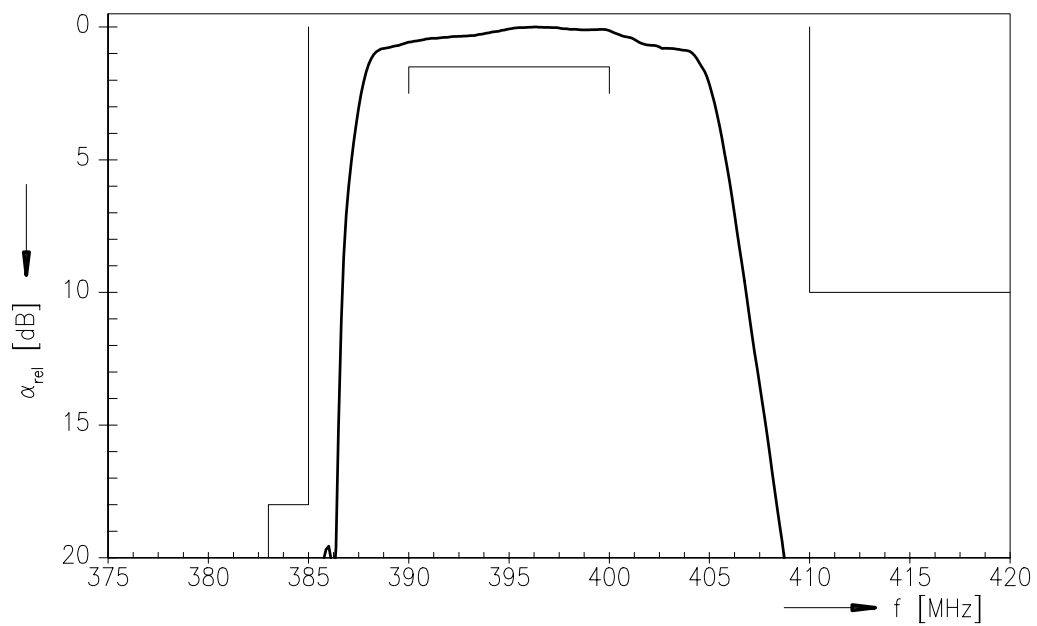
395,0 MHz

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Transfer function



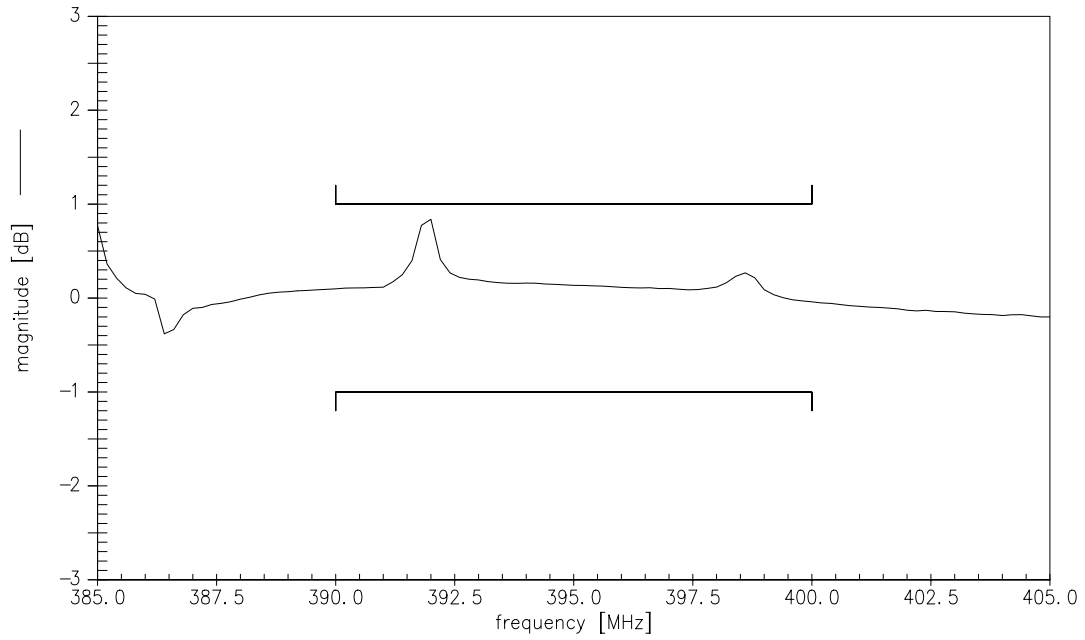
Normalized transfer function (pass band; +15 °C ... +35 °C)



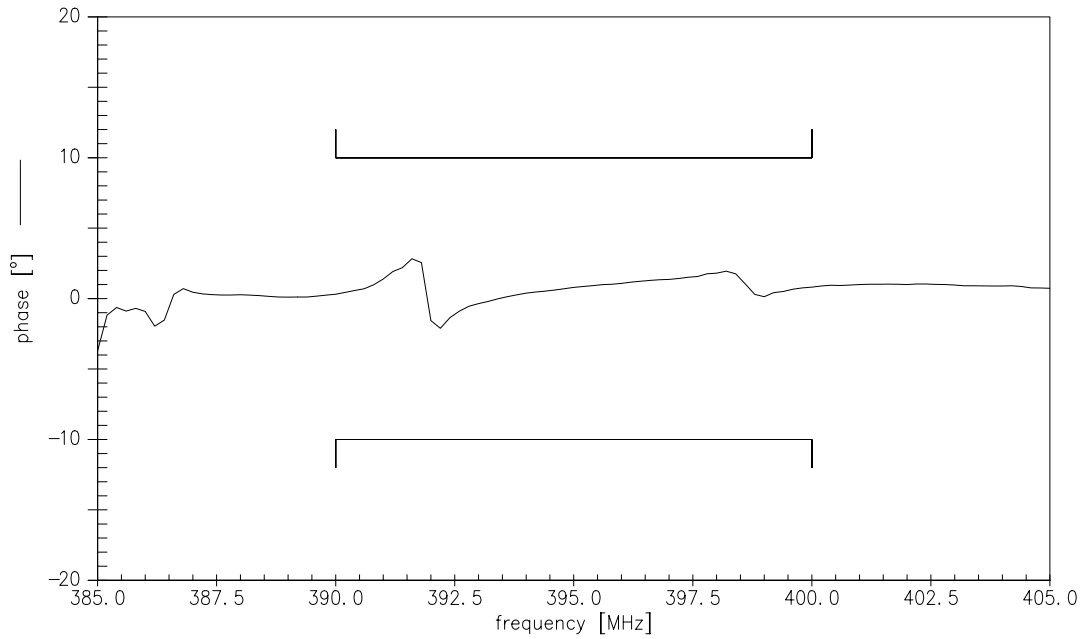


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Amplitude symmetry  $|S_{31}|/|S_{21}|$



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





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