EPCOS

SAW Components

Data Sheet B3830

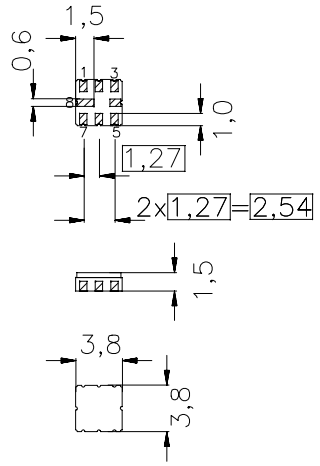
Ceramic package QCC8B

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

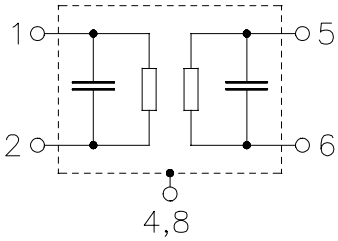
- Gold-plated



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 **S**ensitive **D**evice (**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

Characteristics

Operating temperature range: T_A = +15 ... +35 °C
Terminating source impedance: Z_S = 50 Ω unbalanced or unbalanced to balanced
Terminating load impedance: Z_L = 50 Ω unbalanced or unbalanced to balanced

		min.	typ.	max.	
Nominal frequency	f_N	—	395,0	—	MHz
Maximum insertion attenuation	α_{max}				
390,0 MHz ... 400,0 MHz		—	1,8	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
390,0 MHz ... 400,0 MHz		—	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					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 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

Characteristics

Operating temperature range: T_A = -30 ... +70 °C
Terminating source impedance: Z_S = 50 Ω unbalanced or unbalanced to balanced
Terminating load impedance: Z_L = 50 Ω unbalanced or unbalanced to balanced

		min.	typ.	max.	
Nominal frequency	f_N	—	395,0	—	MHz
Maximum insertion attenuation	α_{max}				
390,0 MHz ... 400,0 MHz		—	1,9	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
390,0 MHz ... 400,0 MHz		—	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
383,0 MHz ... 385,0 MHz		18	20	—	dB
410,0 MHz ... 440,0 MHz		10	20	—	dB
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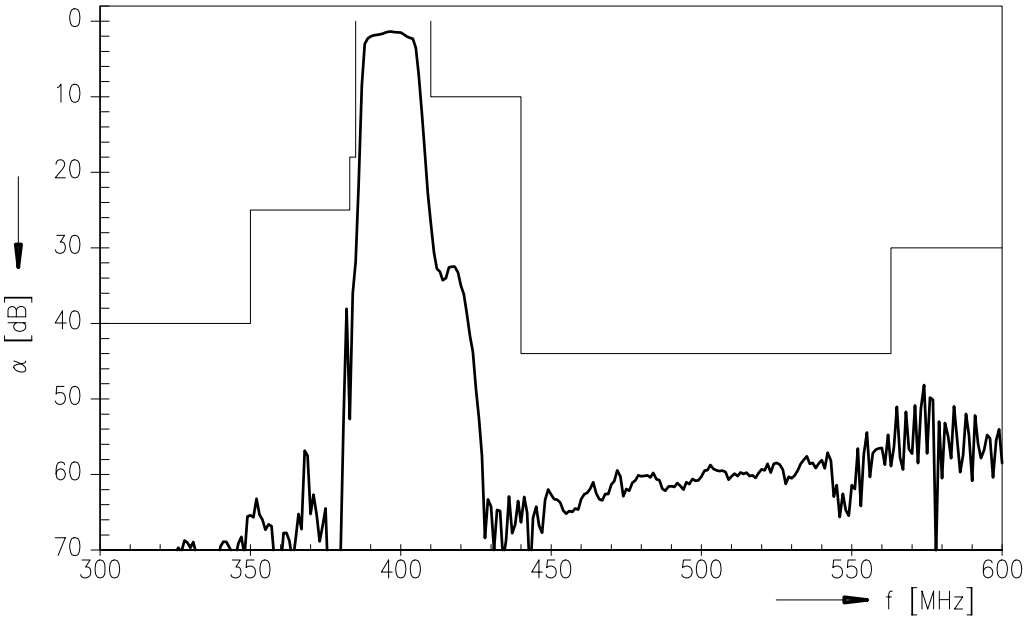
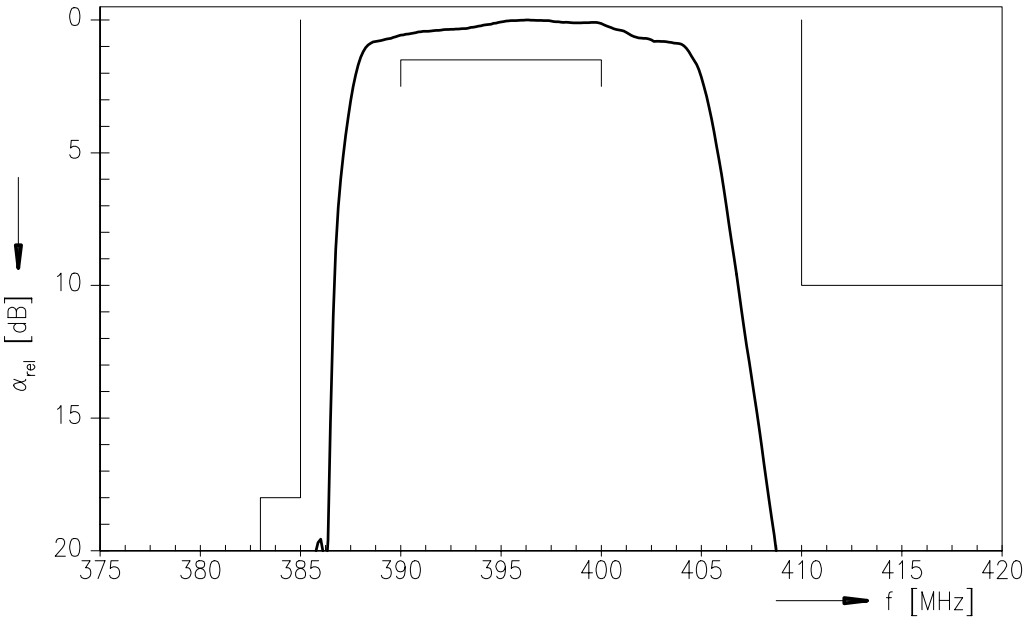
563,0 MHz ... 1100,0 MHz		30	35	—	dB
1100,0 MHz ... 1526,0 MHz		30	37	—	dB
1526,0 MHz ... 2200,0 MHz		30	37	—	dB
2200,0 MHz ... 2500,0 MHz		15	20	—	dB
2500,0 MHz ... 4000,0 MHz		5	7	—	dB
Symmetry in band					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 390,0 ... 400,0 MHz		-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$ 390,0 ... 400,0 MHz		170	180	190	°
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

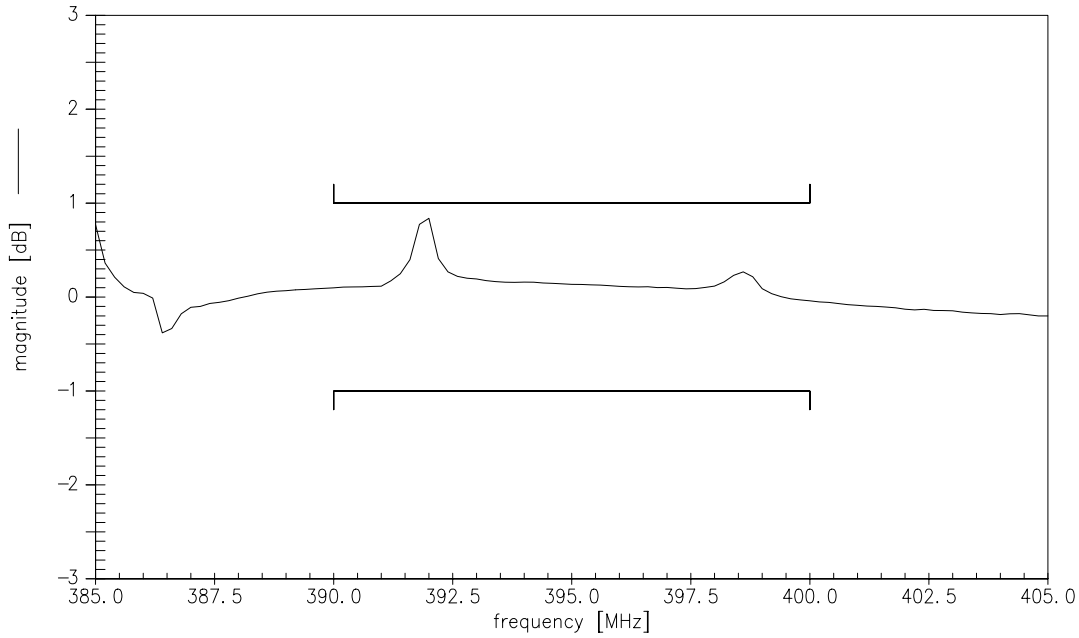
Transfer function



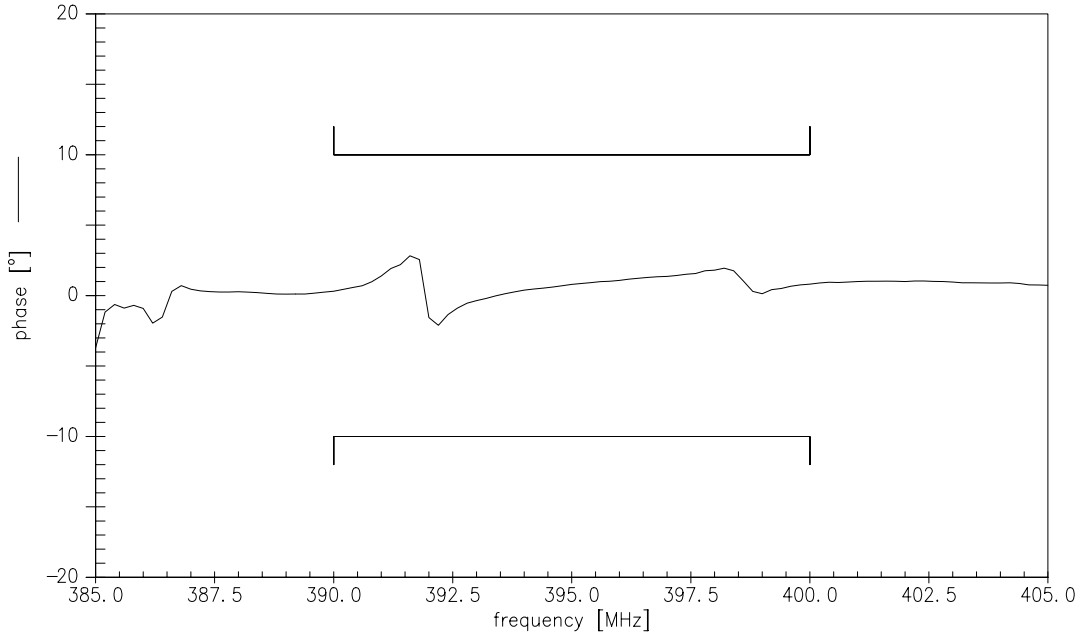
Normalized transfer function (pass band; +15 ˚C ... +35 ˚C)



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



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



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