



SAW filters for infrastructure systems

Series/Type: B3815

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39391B3815Z810		2013-03-08	2013-12-31	2014-03-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.



SAW Components

B3815

Low-Loss Filter

385,0 MHz

Data Sheet

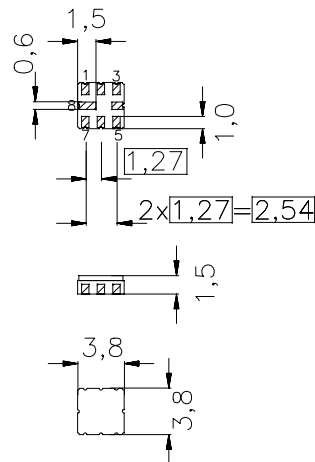
Ceramic package QCC8B

Features

- Low-loss filter 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

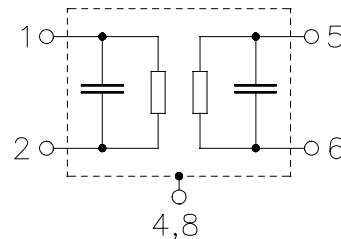
- Gold-plated



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
B3815	B39391-B3815-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	
ESD voltage	V_{ESD}	100	V	
Source power	P_s	15	dBm	source impedance 50 Ω



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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	—	385,0	—	MHz
Maximum insertion attenuation 380,0 MHz ... 390,0 MHz	α_{\max}	—	2,4	3,5	dB
Amplitude ripple (p-p) 380,0 MHz ... 390,0 MHz	$\Delta\alpha$	—	0,5	1,5	dB
Return loss (Input and Output) 380,0 MHz ... 390,0 MHz		10,0	12,0	—	dB
VSWR 380,0 MHz ... 390,0 MHz		—	1,7:1	2,0:1	
Absolute attenuation	α_{abs}				
0,1 MHz ... 350,0 MHz		40	50	—	dB
350,0 MHz ... 370,0 MHz		13	35	—	dB
400,0 MHz ... 430,0 MHz		10	20	—	dB
430,0 MHz ... 760,0 MHz		44	54	—	dB
760,0 MHz ... 1496,0 MHz		30	35	—	dB
1496,0 MHz ... 2600,0 MHz		20	25	—	dB
2600,0 MHz ... 4000,0 MHz		5	6	—	dB
Symmetry in band					
$ S_{31} / S_{21} $ 380,0 ... 390,0 MHz		-0,5	0,5	1,5	dB
$\arg(S_{31}/S_{21})$ 380,0 ... 390,0 MHz		170	180	190	°
Temperature coefficient of frequency	TC_f	—	- 70	—	ppm/K



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Characteristics

Operating temperature range:

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

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	—	385,0	—	MHz
Maximum insertion attenuation 380,0 MHz ... 390,0 MHz	α_{\max}	—	2,6	4,0	dB
Amplitude ripple (p-p) 380,0 MHz ... 390,0 MHz	$\Delta\alpha$	—	0,7	2,0	dB
Return loss (Input and Output) 380,0 MHz ... 390,0 MHz		10,0	12,0	—	dB
VSWR 380,0 MHz ... 390,0 MHz		—	1,8:1	2,0:1	
Absolute attenuation	α_{abs}				
0,1 MHz ... 350,0 MHz		40	50	—	dB
350,0 MHz ... 370,0 MHz		13	25	—	dB
400,0 MHz ... 430,0 MHz		10	17	—	dB
430,0 MHz ... 760,0 MHz		44	52	—	dB
760,0 MHz ... 1496,0 MHz		30	35	—	dB
1496,0 MHz ... 2600,0 MHz		20	25	—	dB
2600,0 MHz ... 4000,0 MHz		5	6	—	dB
Symmetry in band					
$ S_{31} / S_{21} $ 380,0 ... 390,0 MHz		-0,5	0,5	1,5	dB
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Temperature coefficient of frequency	TC_f	—	- 70	—	ppm/K



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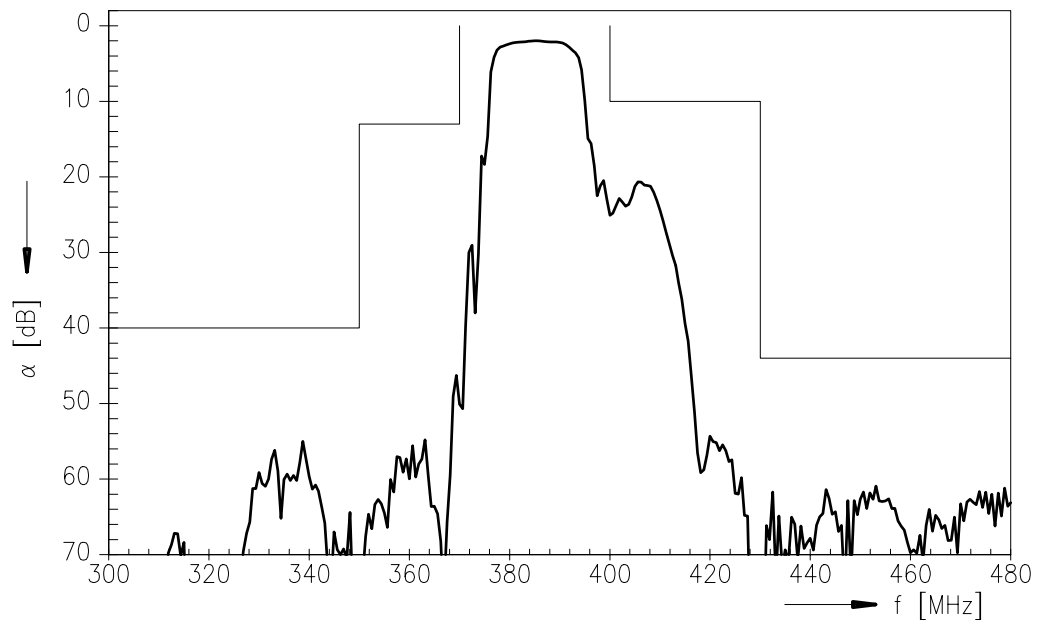
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Low-Loss Filter

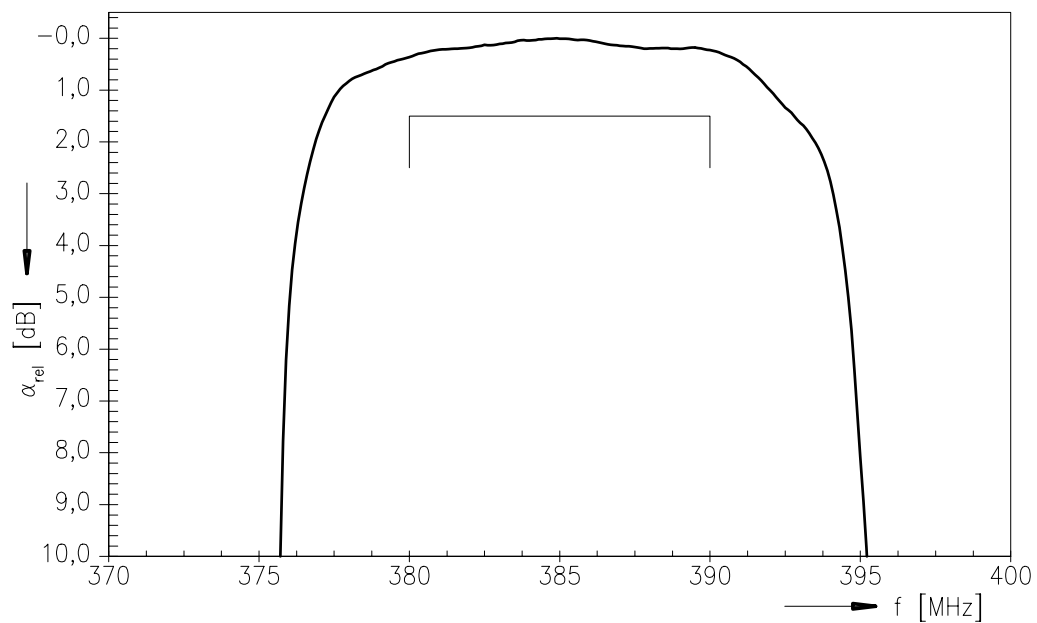
385,0 MHz

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Transfer function



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





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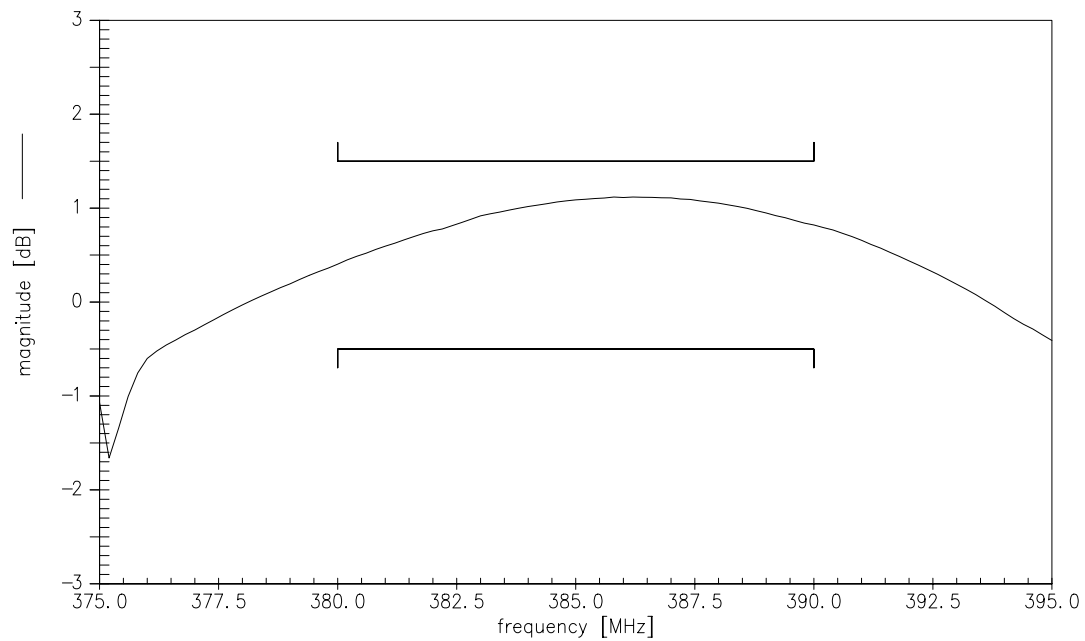
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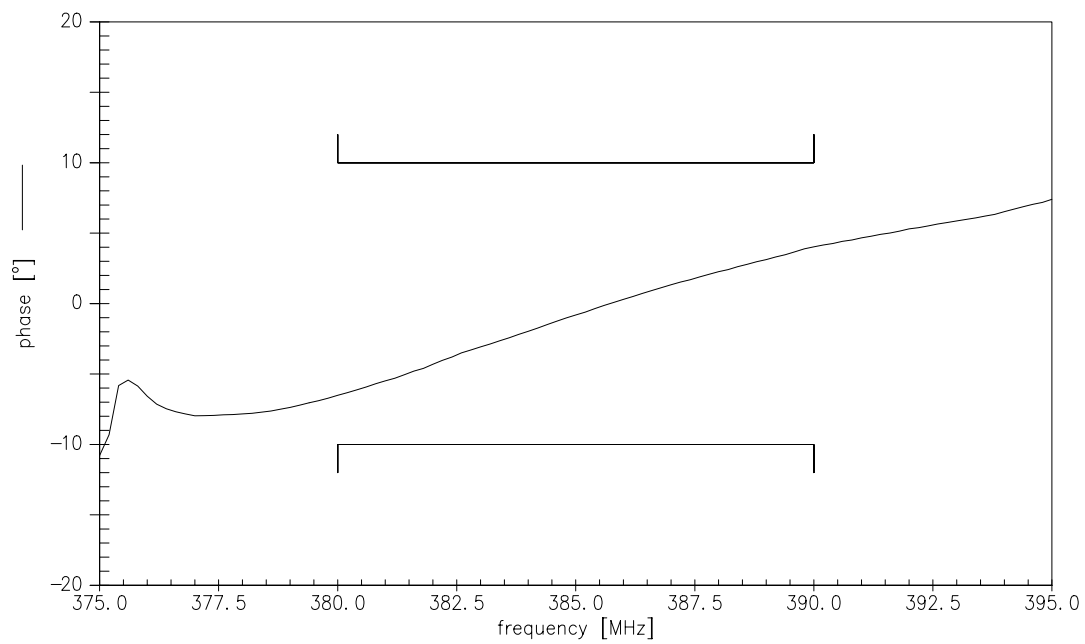
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Amplitude symmetry $|S_{31}|/|S_{21}|$



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





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