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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# SAW Filters for Infrastructure Systems

## Series/Type: **B3684**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39391B3684U310		2008-02-07	2008-07-31	2008-10-31

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](http://www.epcos.com/sales).



SAW Components

B3684

Low-Loss Filter

387,5 MHz

Data Sheet

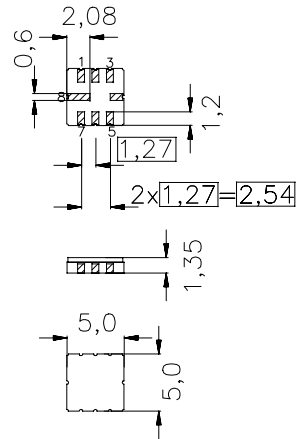
Ceramic package QCC8C

Features

- Low-loss filter (WBN) for Trunked Radio
- Usable bandwidth 5 MHz
- No matching required for operation at 50 Ω
- Package for Surface Mounted Technology (SMT)
- Hermetically sealed ceramic package

Terminals

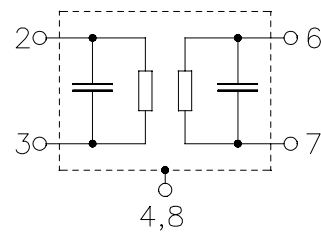
- Gold-plated



Dimensions in mm, approx. weight 0,1 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B3684	B39391-B3684-U310	C61157-A7-A56	F61064-V8070-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	$T$	- 25/+ 75	°C	
Storage temperature range	$T_{stg}$	- 40/+ 85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	10	dBm	source impedance 50 Ω


**SAW Components**
**B3684**
**Low-Loss Filter**
**387,5 MHz**
**Data Sheet**
**Characteristics**

Operating temperature:  $T = +15 \dots +35 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Nominal frequency</b>	$f_N$	—	387,5	—	MHz
<b>Maximum insertion attenuation</b> 385,0 MHz ... 390,0 MHz	$\alpha_{\max}$	—	3,2	3,5	dB
<b>Amplitude ripple (p-p)</b> 385,0 MHz ... 390,0 MHz	$\Delta\alpha$	—	0,9	1,4	dB
<b>Return loss (Input and Output)</b> 385,0 MHz ... 390,0 MHz		11,0	12,5	—	dB
<b>Group delay</b> 385,0 MHz ... 390,0 MHz	$\tau$	—	140	180	ns
<b>Deviation from lin. phase (in 1 MHz bandwidth)</b> 385,0 MHz ... 390,0 MHz	$\Delta\varphi$	—	0,9	5	$^\circ$
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
45,0 MHz ... 81,5 MHz		40	70	—	dB
222,0 MHz ... 300,0 MHz		40	60	—	dB
303,5 MHz ... 345,0 MHz		20	45	—	dB
395,0 MHz ... 396,0 MHz		28	30	—	dB
396,0 MHz ... 400,0 MHz		30	32	—	dB
407,5 MHz ... 475,0 MHz		30	40	—	dB
475,0 MHz ... 1025,0 MHz		40	45	—	dB
1025,0 MHz ... 2000,0 MHz		20	30	—	dB
2000,0 MHz ... 4000,0 MHz		15	17	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-36	—	ppm/K



**SAW Components**

**B3684**

**Low-Loss Filter**

**387,5 MHz**

**Data Sheet**

**Characteristics**

Operating temperature:  $T = -25 \dots +75 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Nominal frequency</b>	$f_N$	—	387,5	—	MHz
<b>Maximum insertion attenuation</b> 385,0 MHz ... 390,0 MHz	$\alpha_{\max}$	—	3,5	4,0	dB
<b>Amplitude ripple (p-p)</b> 385,0 MHz ... 390,0 MHz	$\Delta\alpha$	—	1,1	2,0	dB
<b>Return loss (Input and Output)</b> 385,0 MHz ... 390,0 MHz		11,0	12,5	—	dB
<b>Group delay</b> 385,0 MHz ... 390,0 MHz	$\tau$	—	140	180	ns
<b>Deviation from lin. phase (in 1 MHz bandwidth)</b> $\Delta\phi$ 385,0 MHz ... 390,0 MHz		—	1,3	5	$^\circ$
<b>Temperature coefficient of frequency</b>	$TC_f$	—	- 36	—	ppm/K



SAW Components

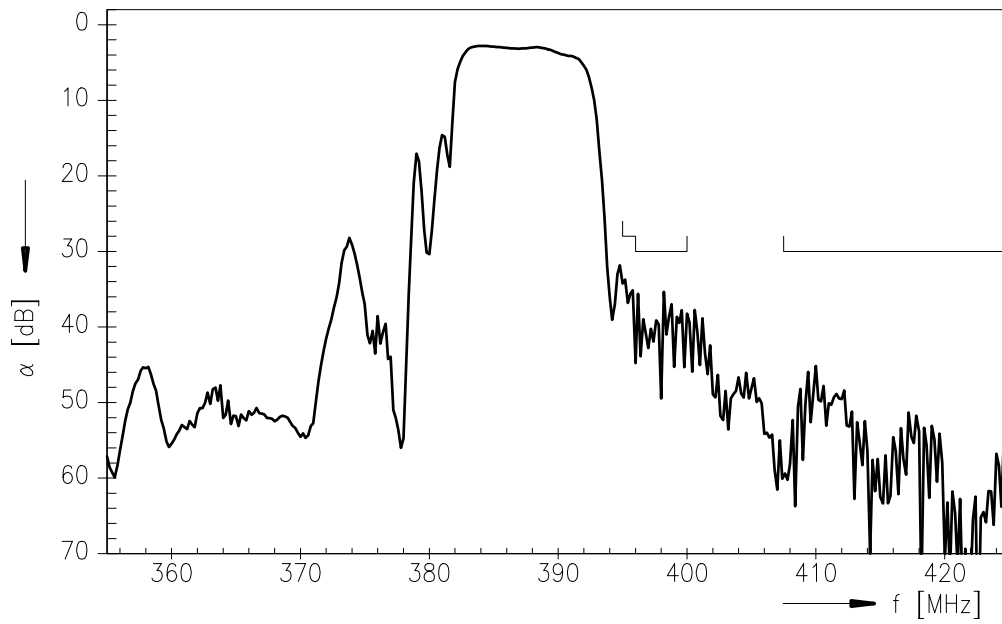
B3684

Low-Loss Filter

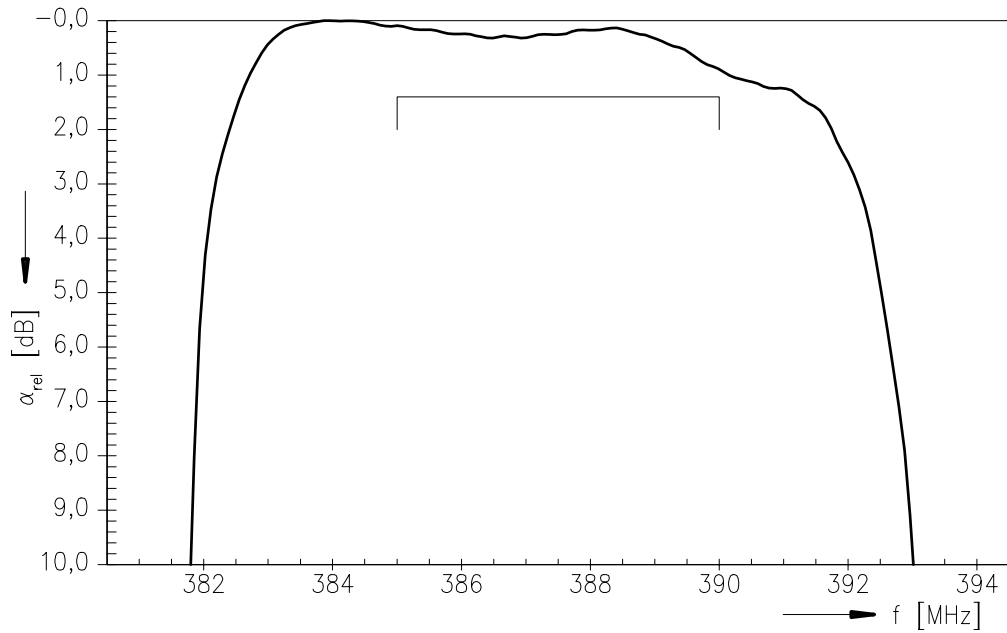
387,5 MHz

Data Sheet

Transfer function



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





**SAW Components**

**B3684**

**Low-Loss Filter**

**387,5 MHz**

**Data Sheet**

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