



EMC filters

Series/Type: B84776* A000
Date: November 2012

Power line filters for 1-phase systems

Rated voltage 250 V AC/DC

Rated current 1 A to 10 A

Construction



- 2-line filter with IEC connector, fuse holder and switch
- Appliance connector according to IEC/EN 60320-1
- Fuse holder for 2 fuses $\varnothing 5 \times 20$ mm
- Metal case
- 2-pole rocker switch



Versions

- Standard version (B84776A*)
- Medical version with low leakage current (B84776M*)

Features

- Easy to install
- Compact design
- Cost optimized construction
- Degree of protection from front side IP 40¹⁾
- UL and cUL approval obtained 
- ENEC 10 approval is pending 

Applications

- Switched-mode power supplies for
 - industrial electronics
 - telecom systems
 - data systems
- DC applications
- Measuring instruments
- Medical engineering

Terminals

- Line side: IEC inlet C14 according to IEC/EN 60320-1
- Load side: Tab connectors 6.3×0.8 mm

Marking

Marking on component:

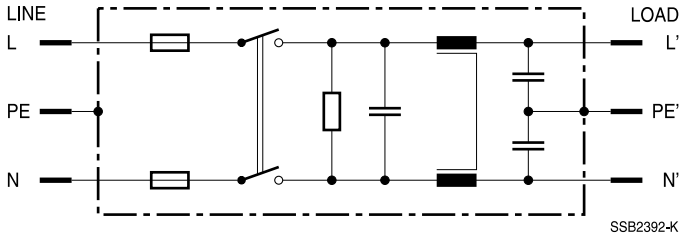
Manufacturer's logo, ordering code, rated voltage, rated current, rated temperature, climatic category, date code

Minimum data on packaging:

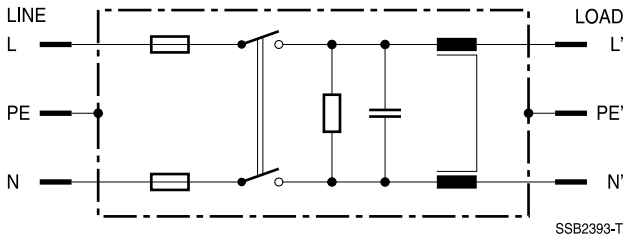
Manufacturer's logo, ordering code, quantity, date code

1) To IEC 60529

Typical circuit diagram of B84776A*A000 (standard version)




Typical circuit diagram of B84776M*A000 (medical version)



Technical data and measuring conditions of B84776*A000

Rated voltage	V_R	250	V DC/AC
Rated frequency	f_R	50/60	Hz
Test voltage line to line for 2 s	V_{test}	760	V AC
Test voltage line to case for 2 s (B84776A*)	V_{test}	2000	V AC
Test voltage line to case for 2 s (B84776M*)	V_{test}	2500	V AC
Rated temperature	T_R	40	°C
Climatic category (IEC 60068-1)		25/085/21	
Rocker switch	Rating	10 A (½ HP) / 250 V AC	
	Inrush current	82	A
	Electrical life time ON – OFF	10000	cycles
	Mechanical life time ON – OFF	50000	cycles

Characteristics and ordering codes of B84776*A000
 $V_R = 250 \text{ V AC/DC}$

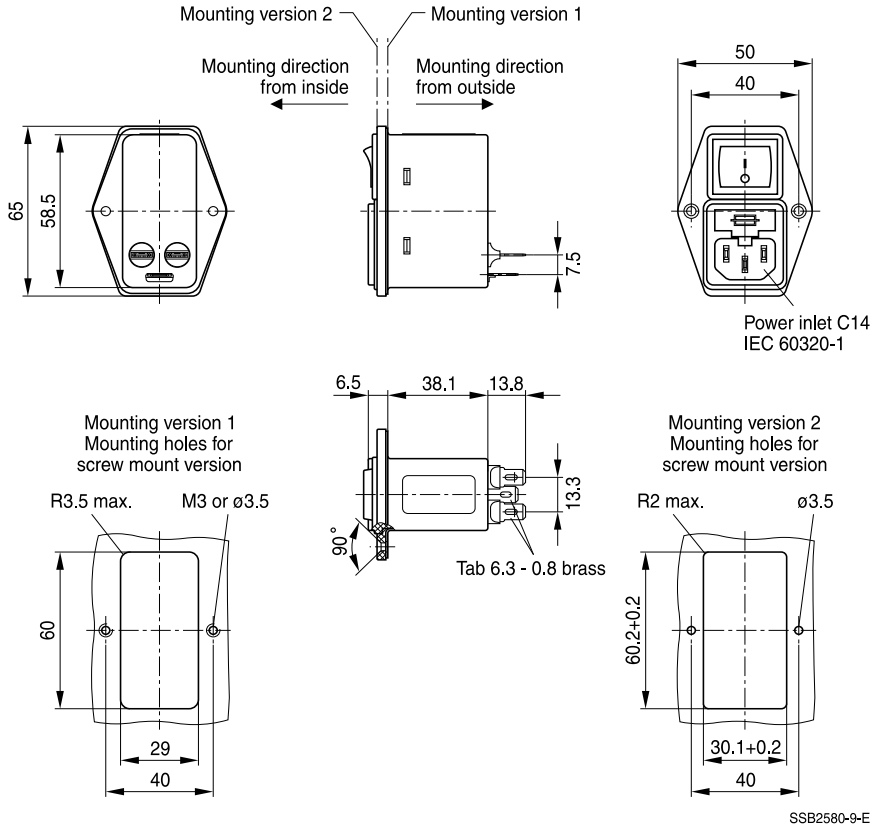
I_R	C_R X2 μF	C_R Y2 pF	L_R mH	$I_{leak}^{1)}$ mA	R_{bleed} $\text{M}\Omega$	Approx. weight g	Ordering code	Approvals 
A	1×0.22	2×2200	2×7.6	0.173	1	90	B84776A0001A000	P <input type="checkbox"/> <input type="checkbox"/>
	1×0.22	–	2×7.6	0	1	90	B84776M0001A000	P <input type="checkbox"/> <input type="checkbox"/>
2	1×0.22	2×2200	2×2.0	0.173	1	90	B84776A0002A000	P <input type="checkbox"/> <input type="checkbox"/>
	1×0.22	–	2×2.0	0	1	90	B84776M0002A000	P <input type="checkbox"/> <input type="checkbox"/>
4	1×0.22	2×2200	2×1.0	0.173	1	90	B84776A0004A000	P <input type="checkbox"/> <input type="checkbox"/>
	1×0.22	–	2×1.0	0	1	90	B84776M0004A000	P <input type="checkbox"/> <input type="checkbox"/>
6	1×0.22	2×2200	2×0.46	0.173	1	90	B84776A0006A000	P <input type="checkbox"/> <input type="checkbox"/>
	1×0.22	–	2×0.46	0	1	90	B84776M0006A000	P <input type="checkbox"/> <input type="checkbox"/>
10	1×0.22	2×2200	2×0.33	0.173	1	130	B84776A0010A000	P <input type="checkbox"/> <input type="checkbox"/>
	1×0.22	–	2×0.33	0	1	130	B84776M0010A000	P <input type="checkbox"/> <input type="checkbox"/>

 \times = approval is granted

P = approval is pending

1) Calculation according draft proposal IEC 60939–1 Ed. 3 (2008–10–29), annex A. "Calculation of leakage current" at 50 Hz. In practice are up to double values to be expected due to the insulation resistance values of the used ceramic capacitors. For the medical version results computationally the value 0. In practice are values 1 ... 2 μA to be expected due to the insulation resistance values of the used materials.

Dimensional drawing



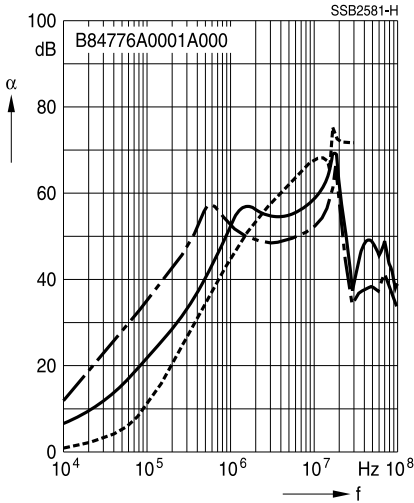
Dimensions in mm
ISO 2768-cl

IEC inlet filters

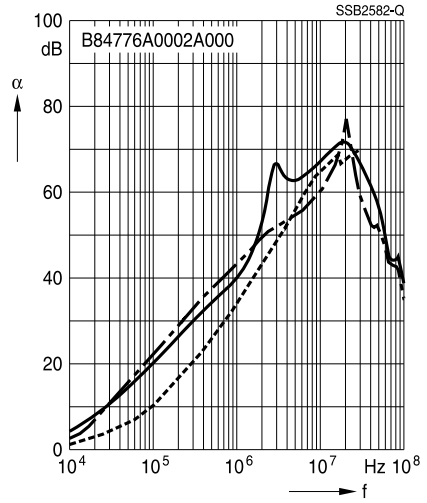
Insertion loss (typical values at $Z = 50 \Omega$)

- unsymmetrical, adjacent branches terminated
- - - - - common mode, all branches in parallel (asymmetrical)
- - - - - differential mode (symmetrical)

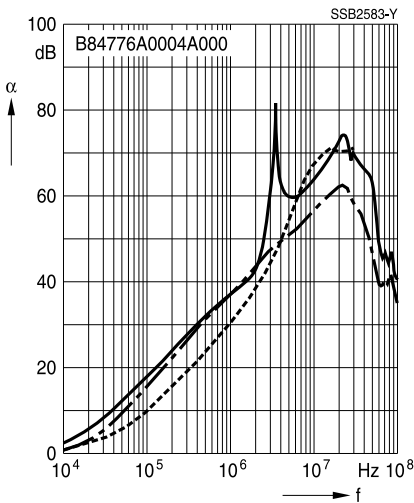
Filter for 1 A



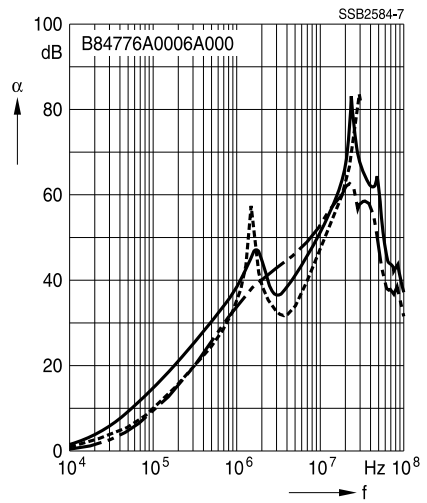
Filter for 2 A



Filter for 4 A



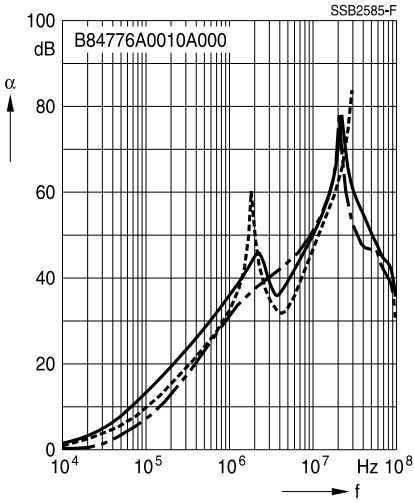
Filter for 6 A



Insertion loss (typical values at $Z = 50 \Omega$)

- unsymmetrical, adjacent branches terminated
- - - - - common mode, all branches in parallel (asymmetrical)
- - - - - differential mode (symmetrical)

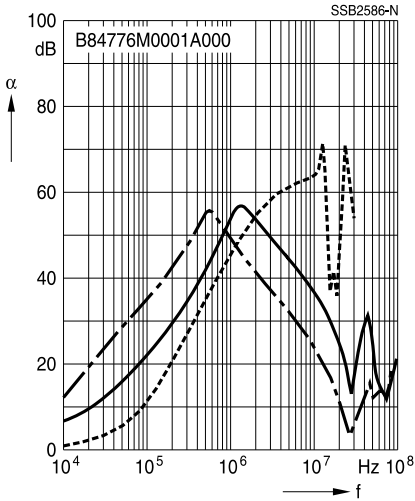
Filter for 10 A



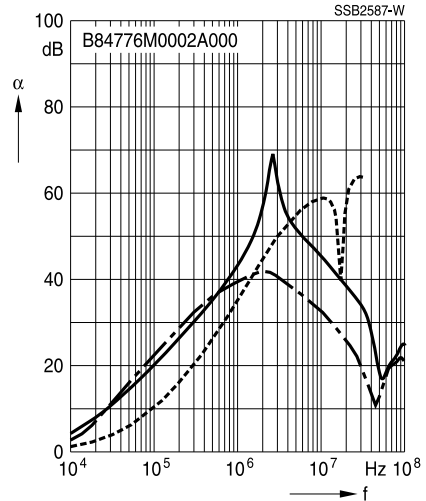
Insertion loss (typical values at $Z = 50 \Omega$)

- unsymmetrical, adjacent branches terminated
- - - - - common mode, all branches in parallel (asymmetrical)
- - - - - differential mode (symmetrical)

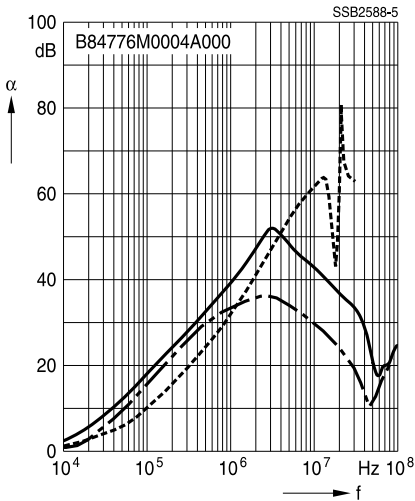
Filter for 1 A



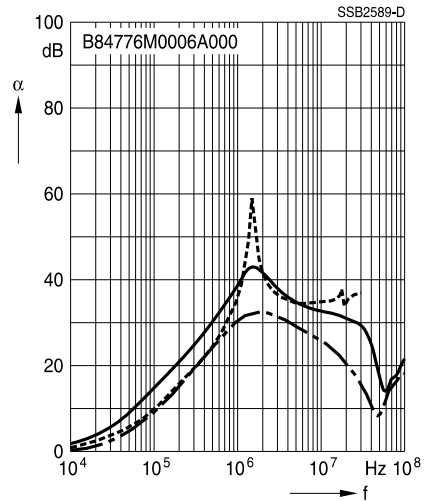
Filter for 2 A



Filter for 4 A



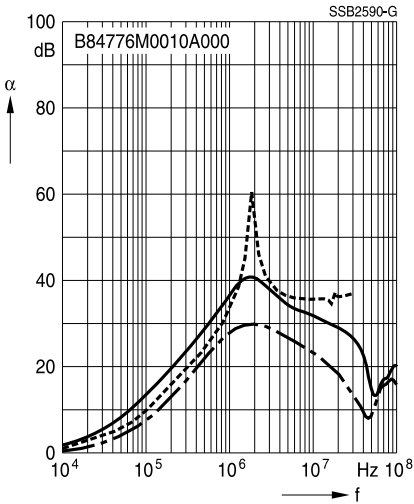
Filter for 6 A



Insertion loss (typical values at $Z = 50 \Omega$)

- unsymmetrical, adjacent branches terminated
- - - - - common mode, all branches in parallel (asymmetrical)
- - - - - differential mode (symmetrical)

Filter for 10 A



Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or lifesaving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order. We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CeraLink, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, FilterCap, FormFit, MiniBlue, MiniCell, MKD, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.