



## EMC filters

### 1-line filter

#### Feedthrough Filter in Solderless Technology

**Series/Type:**            **B85321A2363G300 Feedthrough Filter**

**Date:**                    July 2007

Identification/Classification 1: (header 1 + top left header bar)	1-line filter
Identification/Classification 2: (header 2 + bottom left header bar)	Feedthrough Filter
Ordering code: (top right header bar)	B85321A2363G300
Series/Type: (top right header bar)	Ø 20 , 30A
Preliminary data (optional): (if necessary)	
Department:	IN FI PD
Date:	2007-07-12

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**Feedthrough Filter: Metallized (selfhealing) film capacitor. High insertion losses up to the GHZ range.**

**Rated voltage 250 V AC (50/60Hz), 600 V DC**

**Rated current 30 A**

### **Construction**

- 1-line filters, Building-block system
- Metal case with synthetic resin terminals (UL 94 V-0)
- MKP/MKT technology (dry, self-healing), Dielectric: polypropylene/polyester metallised
- For central screw fixing

### **Features**

- Excellent price/performance ratio
- Ultra-compact design
- High attenuation
- Easy to install
- High contact reliability through central screw fixing
- RoHS conform

### **Applications**

- Shielded rooms
- Power supplies
- Telephone exchanges, base stations
- Electrical machines and systems

### **Terminals**

- Threaded studs / axial leads

### **EPCOS internal code for production location (not marked on component)**

- Production Szombathely, Hungary : V1
- Production Hongqi, China : Z99

### **Marking**

Marking on component:

Manufacturer's logo, ordering code, rated voltage,  
rated current, test voltage, climatic category, date code (MM.YY), rated capacitance




### Typical circuit diagram:



### Technical data and measuring conditions

Rated capacitance	2 x 0,018 µF, ± 20% ,
Rated voltage $V_R$	250 V AC, 50/60 Hz, 600 V DC
Rated current $I_R$	30 A, Referred to 40 °C ambient temperature
Test voltage $V_{test}$	2700 V DC, 2s , (lines/case)
Climatic category (IEC 60068-1)	40/085/56 (-40 °C/+85 °C/ 56 days damp heat test)
Approx. weight	65g
Terminals	M 5 / Ø 2,36
Fixing	M 12x0,75
Approvals comply with	EN 132400 / EN133200

### Characteristics and ordering codes

$V_R$ AC	$I_R$	$U_R$	$U_R$	$U_{test}$	Approx. weight	Ordering code	Approvals		
V	A	VAC	VDC	VDC/2s	kg				
250	30	250	600	2700	0.065	B85321A2363G300		X	

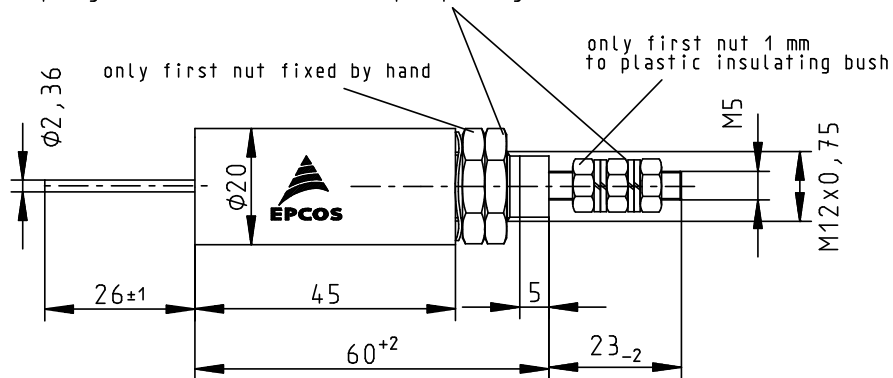
X = approval granted

## Dimensional drawings

### B85321A2363G300

Auslieferungszustand pro Verpackungseinheit = 60 Stück  
Extradition situation per packing unit = 60 pcs

120 nuts M5 D934 A50 M37 per packing unit — [ 60 nuts fixed at components ]  
240 spring washer D127 B50 R60 per packing unit  
60 nuts C62157-A60-C10 per packing unit — [ 60 nuts fixed at components ]  
60 spring washer C60294-B2802-C14 per packing unit



all other parts included separately in packing unit

### MATERIAL:

Metal case, nickel plated. UL-listed material for resin and plastic insulting bush.

Terminals, nuts and washers are nickel- or tin plated.

### Mounting instructions:

In case of using a screw fixing type the connecting line must be attached by fixing it between two countered nuts in order to avoid exposing the component to torque loads (use two spanners)

### Insertion loss (typical values at Z = 50 Ω)

f	10 KHz	100 KHz	1 MHz	10 MHz	100 MHz	1 GHz
dB		1	10	62	>100	>100



## Cautions and warnings

Please note the advices in our data book "EMC filters" (latest edition); attention should be paid to the chapters "Important notes" and "General safety notes".

- It should be ensured that only qualified persons (electricity specialists) are engaged on work such as planning, assembly, installation, operation, repair and maintenance. They must be provided with the corresponding documentation.
- Danger of electric shock. EMC filters contain components that store an electric charge. Dangerous voltages can continue to exist at the filter terminals for longer than five minutes even after the power has been switched off.
- The protective earth connections should be the first to be made when the EMC filter is installed and the last to be disconnected. Depending on the magnitude of the leakage currents, the particular specifications for making the protective-earth connection must be observed.
- Impermissible overloading of the EMC filter, such as with circuits able to cause resonances, impermissible voltages at higher frequencies etc. can lead to destruction of the filter housing.
- EMC filters must be protected in the application against impermissible exceeding of the rated currents by overcurrent protective.
- In case of leakage currents  $> 3.5 \text{ mA}$  you shall mount the PE conductor stationary with the required cross section before beginning of operation and save it against disconnecting. For leakage currents  $I_L < 10 \text{ mA}$  the PE conductor must have a KU value of 4.5; for leakage currents  $I_L > 10 \text{ mA}$  the PE conductor must have a KU value of 6.<sup>1</sup>

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<sup>1</sup> The KU value (symbol KU) is a classification parameter of safety-referred failure types designed to ensure protection against hazardous body currents and excessive heating.

KU = 6 with respect to interruptions is achieved for fixed-connection lines  $\geq 10 \text{ mm}^2$  where the type of connection and line layout corresponds to the requirements for PEN conductors as specified in relevant standards.

A value of KU = 4.5 with respect to interruptions is attained:

- With a permanently connected protective earth circuit  $\geq 1.5 \text{ mm}^2$
- With a protective earth circuit  $\geq 2.5 \text{ mm}^2$  connected via shroud connectors (IEC 60309-2).

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