**Cost-effective EMI Power Inlet Filter**

# EEA & EEB Series

Including the EAS/EBS and EAH/EBH Models

**UL Recognized**
**CSA Certified**
**VDE Approved**

*EEA2 / EEB2*

*EEA1 / EEB1*

*EEAP / EEBP*

## EEA Series

- Compact single stage EMI filter with IEC 60320-1 C14 inlet
- Two element circuit provides basic attenuation
- Same performance as the EF Series
- Available in three terminal configurations
- Supersedes EF Series

## EEB Series

- Compact EMI filter with IEC 60320-1 C14 inlet
- Two element circuit provides extended attenuation
- Extended differential mode performance
- Available in three terminal configurations

### EAS & EBS Models

- Same performance as EEA and EEB Series
- Snap–in mounting
- Spade terminals

### EAH & EBH Models

- Same size as EEA and EEB
- Minimal leakage current suitable for medical applications
- Flange mounted
- Spade terminals

## Specifications

**Maximum leakage current each Line to Ground:**

| | EEA/EEB EAS/EBS | EAH/EBH |
|---|---|---|
| @ 120 VAC 60 Hz: | .22 mA | 2 µA |
| @ 250 VAC 50 Hz: | .38 mA | 5 µA |

**Hipot rating (one minute):**

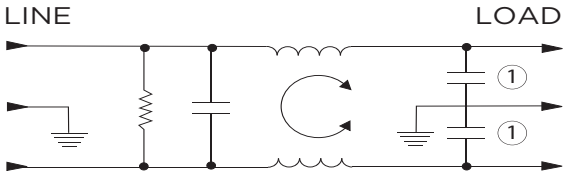
| | |
|---|---|
| Line to Ground: | 2250 VDC |
| Line to Line: | 1450 VDC |

| | |
|---|---|
| **Rated Voltage (max.):** | 250 VAC |
| **Operating Frequency:** | 50/60 Hz |
| **Rated Current:** | 1 to 10A |

**Operating Ambient Temperature Range (at rated current $I_r$):** -10°C to +40°C

In an ambient temperature ($T_a$) higher than +40°C the maximum operating current ($I_o$) is calculated as follows: $I_o = I_r \sqrt{(85-Ta)/45}$

## Electrical Schematic




*Note 1: Not present in EAH / EBH versions*



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# EEA & EEB Series

## Ordering Information

3 EEB 1

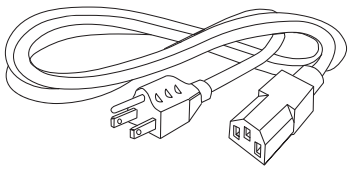
**Output Styles**
- 1 – .250 [*6.3*] spade terminals *(back)*
- 2 – .250 [*6.3*] spade terminals *(bottom)*
- P – PC board pins

**Series**
- EEA – Basic Inlet Filter
  - EAS – Snap–in EEA Filter
  - EAH – Medical EEA Filter
- EEB – Extended EMI Performance
  - EBS – Snap-in EEB Filter
  - EBH – Medical EEB Filter

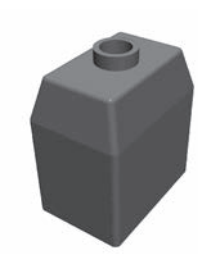
**Current Rating**
- 1, 3, 6, or 10A

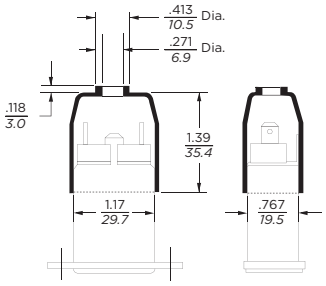
## Accessories

**GA400**: NEMA 5-15P to IEC 60320-1 C-13 line cord



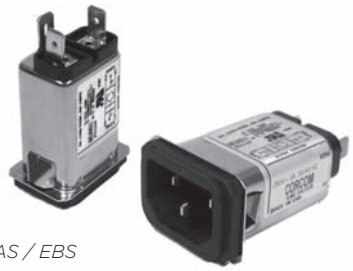
**FA601**: Insulating Shroud






## Available Part Numbers

| EEA Models | EEB Models |
|---|---|
| 1EEA1 | 1EEB1 |
| 1EEA2 | 1EEB2 |
| 1EEAP | 1EEBP |
| 3EEA1 | 3EEB1 |
| 3EEA2 | 3EEB2 |
| 3EEAP | 3EEBP |
| 6EEA1 | 6EEB1 |
| 6EEA2 | 6EEB2 |
| 6EEAP | 6EEBP |
| 10EEA1 | 10EEB1 |
| 10EEA2 | 10EEB2 |
| 10EEAP | 10EEBP |
| **EAS Models** | **EBS Models** |
| 1EAS1 | 1EBS1 |
| 3EAS1 | 3EBS1 |
| 6EAS1 | 6EBS1 |
| 10EAS1 | 10EBS1 |
| **EAH Models** | **EBH Models** |
| 1EAH1 | 1EBH1 |
| 3EAH1 | 3EBH1 |
| 6EAH1 | 6EBH1 |
| 10EAH1 | 10EBH1 |



*EAS / EBS*





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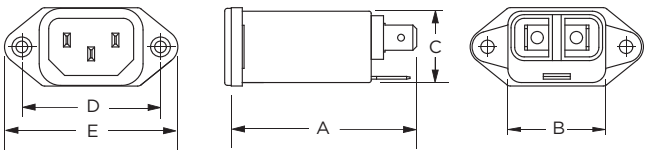
# EEA & EEB Series

## Case Styles

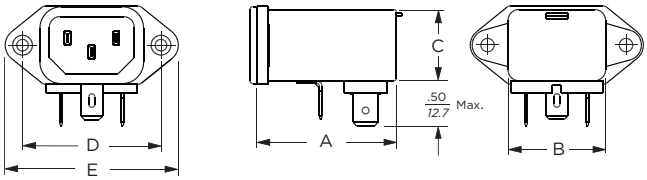
### EEA1, EEB1, EAH1 & EBH1




Typical Dimensions:

| | |
|---|---|
| Mounting holes (2): | .132 [*3.35*] Dia. with .236 [*5.99*] Dia. x 90º countersink for #4 flathead screw |
| Line Inlet (1): | IEC 60320-1 C14 |
| Load Terminals (2): | .250 [*6.3*] with .07 [*1.8*] Dia. hole |
| Ground Terminal (1): | .250 [*6.3*] with .07 x .16 [*1.8 x 3.8*] slot |

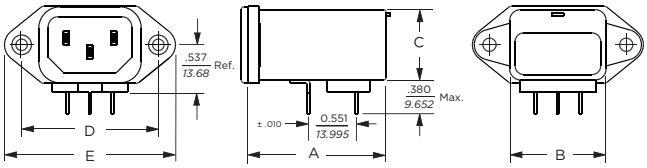
### EEA2 & EEB2




Typical Dimensions:

| | |
|---|---|
| Mounting holes (2): | .132 [*3.35*] Dia. with .236 [*5.99*] Dia. x 90º countersink for #4 flathead screw |
| Line Inlet (1): | IEC 60320-1 C14 |
| Load Terminals (2): | .250 [*6.3*] with .07 [*1.8*] Dia. hole |
| Ground Terminal (1): | .250 [*6.3*] with .07 x .16 [*1.8 x 3.8*] slot |

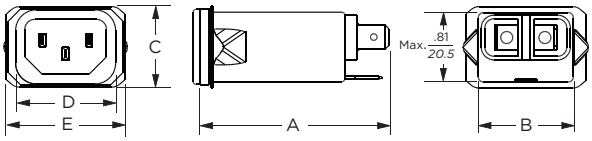
### EEAP & EEBP




Typical Dimensions:

| | |
|---|---|
| Mounting holes (2): | .132 [*3.35*] Dia. with .236 [*5.99*] Dia. x 90º countersink for #4 flathead screw |
| Line Inlet (1): | IEC 60320-1 C14 |
| PC board pins (3): | .031 [*.07*] square, ± .003 [*.07*] |

### EAS1 & EBS1




Typical Dimensions:

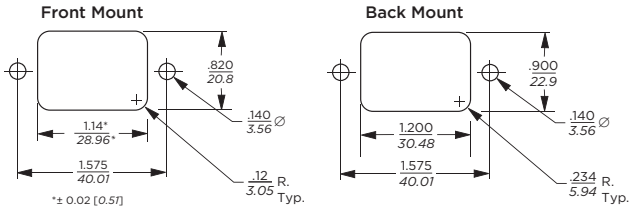
| | |
|---|---|
| Line Inlet (1): | IEC 60320-1 C14 |
| Load Terminals (2): | .250 [*6.3*] with .07 [*1.8*] Dia. hole |
| Ground Terminal (1): | .250 [*6.3*] with .07 x .16 [*1.8 x 3.8*] slot |

## Case Dimensions

| Part No. | A (max.) | B (max.) | C (max.) | D ± .010 ± .25 | E (max.) |
|---|---|---|---|---|---|
| EEA1, EEB1, EAH1, EBH1 | **2.15** *54.6* | **1.12** *28.4* | **0.81** *20.6* | **1.575** *40.01* | **1.98** *50.3* |
| EEA2, EEB2 | **1.54** *39.1* | **1.12** *28.4* | **0.81** *20.6* | **1.575** *40.01* | **1.98** *50.3* |
| EEAP, EEBP | **1.54** *39.1* | **1.12** *28.4* | **0.81** *20.6* | **1.575** *40.01* | **1.98** *50.3* |
| EAS1, EBS1 | **2.20** *55.88* | **1.15** *29.2* | **.96** *24.38* | **1.185** *30.10* | **1.41** *35.81* |

## Recommended Panel Cutouts

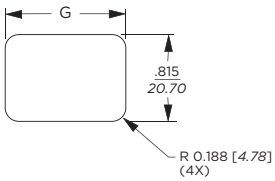
### EEA, EEB, EAH, EBH




Tolerances ± .005 [*0.13*] unless otherwise noted

Note 1: EEA1, EEB1, EAH1, EBH1 can be front or back mounted
Note 2: EEA2, EEB2, EEAP and EEBP can be back mounted only

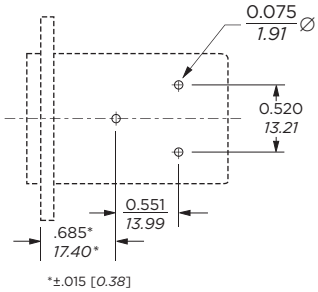
### EAS, EBS




Front Mount only

| Panel Thickness | G Dim. ± .002 [.05] |
|---|---|
| 0.031 - 0.052 [*0.79 - 1.32*] | 1.260 [*32.00*] |
| 0.046 - 0.068 [*1.17 - 1.73*] | 1.350 [*34.29*] |

## PC Board Layout



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# EEA & EEB Series

## Performance Data

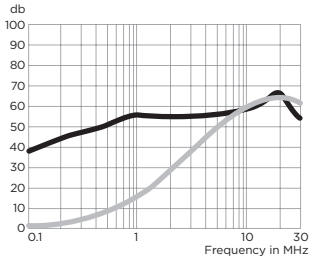
### Typical Insertion Loss

Measured in closed 50 Ohm system

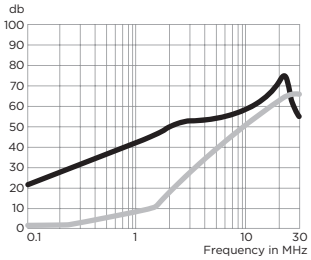
Common Mode / Asymmetrical (L-G)
Differential Mode / Symmetrical (L-L)

### EEA, EAS Models

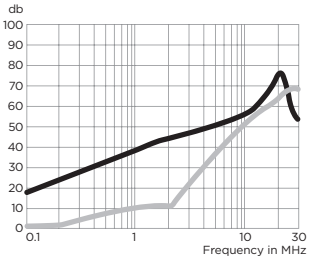
1A



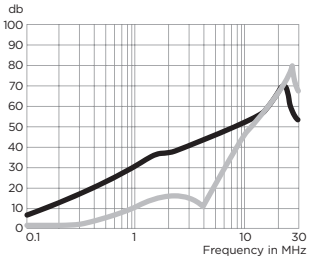

3A




6A

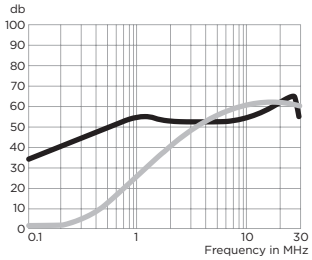



10A

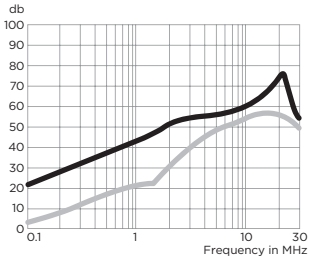



### EEB, EBS Models

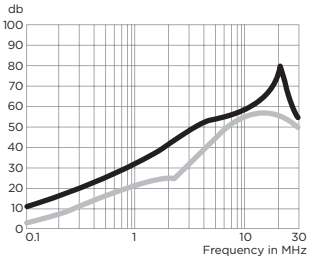
1A



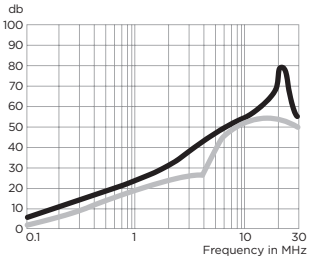

3A




6A

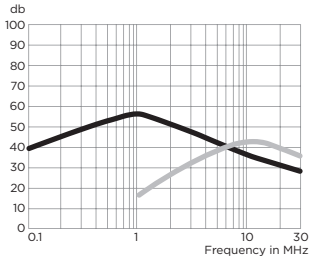



10A

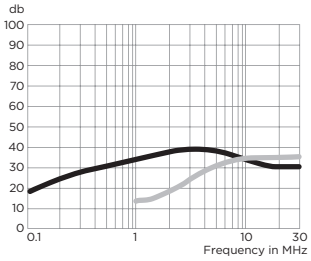



### EAH Models

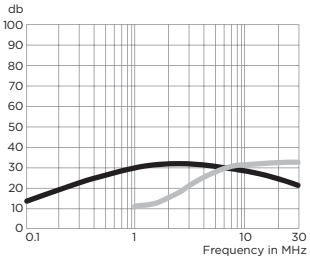
1A



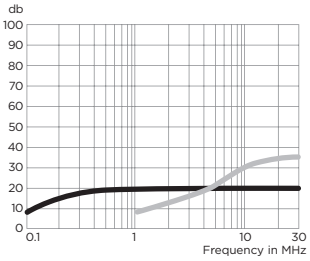

3A




6A

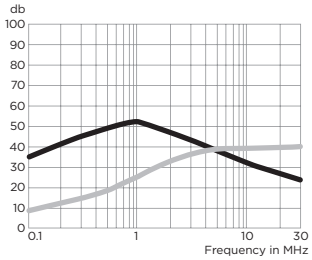



10A

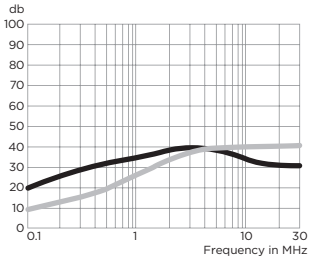



### EBH Models

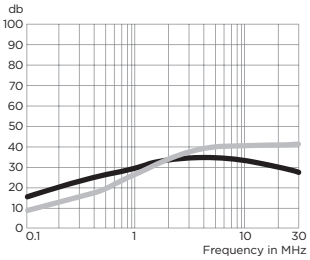
1A



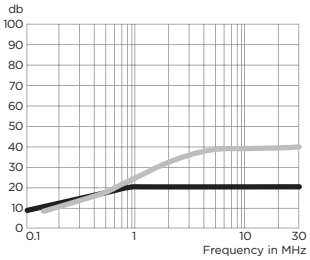

3A




6A




10A





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# EEA & EEB Series

## Performance Data *(continued)*

### Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

| Current Rating | Frequency – MHz .01 | .05 | .1 | .15 | .5 | 1 | 5 | 10 | 30 |
|---|---|---|---|---|---|---|---|---|---|
| **EEA / EAS Models** | | | | | | | | | |
| 1A | 12 | 23 | 29 | 32 | 41 | 47 | 47 | 47 | 40 |
| 3A | - | 10 | 15 | 19 | 30 | 36 | 48 | 50 | 47 |
| 6A | - | 1 | 4 | 10 | 22 | 28 | 42 | 48 | 47 |
| 10A | - | 1 | 3 | 5 | 14 | 20 | 32 | 38 | 47 |
| **EEB / EBS Models** | | | | | | | | | |
| 1A | 12 | 23 | 29 | 32 | 41 | 47 | 47 | 47 | 40 |
| 3A | - | 10 | 14 | 18 | 30 | 36 | 48 | 50 | 47 |
| 6A | - | 1 | 4 | 10 | 22 | 28 | 42 | 48 | 47 |
| 10A | - | 1 | 3 | 5 | 14 | 20 | 32 | 38 | 47 |
| **EAH Models** | | | | | | | | | |
| 1A | 8 | 21 | 29 | 32 | 42 | 45 | 32 | 30 | 19 |
| 3A | - | 5 | 10 | 15 | 25 | 27 | 30 | 27 | 22 |
| 6A | - | - | 5 | 6 | 19 | 21 | 24 | 20 | 15 |
| 10A | - | - | 1 | 5 | 9 | 12 | 12 | 12 | 12 |
| **EBH Models** | | | | | | | | | |
| 1A | 8 | 21 | 29 | 32 | 42 | 45 | 32 | 25 | 19 |
| 3A | - | 5 | 10 | 15 | 25 | 27 | 30 | 27 | 22 |
| 6A | - | - | 5 | 8 | 17 | 20 | 24 | 23 | 18 |
| 10A | - | - | - | 3 | 8 | 12 | 12 | 12 | 12 |

Differential Mode / Symmetrical (Line to Line)

| Current Rating | Frequency – MHz .5 | 1 | 1.5 | 3 | 5 | 10 | 30 |
|---|---|---|---|---|---|---|---|
| **EEA / EAS Models** | | | | | | | |
| 1A | 1 | 9 | 19 | 32 | 42 | 45 | 40 |
| 3A | 2 | 4 | 6 | 20 | 35 | 45 | 40 |
| 6A | 2 | 4 | 6 | 6 | 24 | 40 | 40 |
| 10A | 1 | 4 | 5 | 5 | 5 | 30 | 40 |

| | Frequency – MHz .01 | .15 | .5 | 1 | 3 | 5 | 10 | 30 |
|---|---|---|---|---|---|---|---|---|
| **EEB / EBS Models** | | | | | | | | |
| 1A | 1 | 3 | 14 | 23 | 41 | 47 | 50 | 44 |
| 3A | 1 | 2 | 11 | 14 | 25 | 38 | 44 | 40 |
| 6A | 1 | 2 | 10 | 14 | 20 | 33 | 42 | 40 |
| 10A | 1 | 2 | 10 | 16 | 19 | 19 | 39 | 40 |

| | Frequency – MHz 1 | 1.5 | 5 | 10 | 30 |
|---|---|---|---|---|---|
| **EAH Models** | | | | | |
| 1A | 5 | 13 | 28 | 32 | 25 |
| 3A | 4 | 6 | 20 | 27 | 28 |
| 6A | 2 | 5 | 19 | 25 | 27 |
| 10A | 1 | 5 | 15 | 22 | 27 |

| | Frequency – MHz .15 | .5 | 1 | 10 | 10 | 30 |
|---|---|---|---|---|---|---|
| **EBH Models** | | | | | | |
| 1A | 1 | 10 | 18 | 30 | 31 | 31 |
| 3A | 1 | 10 | 18 | 30 | 31 | 31 |
| 6A | 1 | 10 | 18 | 30 | 31 | 31 |
| 10A | 1 | 10 | 18 | 30 | 31 | 31 |



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# OCEAN CHIPS
## Океан Электроники
### Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения **«JONHON»**, а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов **«FORSTAR»**.

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ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

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