## FE Series - (Encapsulated) <br> Single Primary - Toroidal Transformers



## Features:

- Very high quality construction.
- High efficiency and smaller size compared to conventional El transformers.
- Extremely low radiated magnetic field, suitable for sensitive electronics.
- Double insulated primary leads.
- Flexible leadouts can be trimmed to any length without the need of enamel removal.
- Fully resin encapsulated in case.
- Designed, tested and manufactured in accordance with EN60742, EN60065 and EN60950.
- $100 \%$ electrical and flash tested.


## Specifications

| VA | $\begin{gathered} \text { Regulation } \\ \% \\ \text { typical } \end{gathered}$ | Iron Loss Watts | Copper Loss Watts | Temperature rise ( ${ }^{\circ} \mathrm{C}$ ) | $\begin{gathered} \text { Efficiency } \\ \% \\ \text { typical } \end{gathered}$ | Diameter | Height | Weight (kg) | Fixing Hole Diameter |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | 16 | 0.24 | 2.9 | 2.9 | 83\% | 62.4 | 34.5 | 0.34 | 5.1 |
| 30 | 12 | 0.39 | 4.5 | 4.5 | 86\% | 81.5 | 39.1 | 0.62 |  |
| 50 | 11 | 0.52 | 6.1 | 6.1 | 88\% | 87.3 | 42 | 0.84 |  |
| 80 | 10 | 0.64 | 8.7 | 8.7 | 90\% | 96.7 | 44 | 1.12 | 6.1 |
| 120 | 7 | 0.89 | 9.6 | 9.6 | 92\% | 104.2 | 52.1 | 1.62 |  |
| 160 |  | 1.23 | 11.9 | 11.9 |  | 115 | 53.2 | 2.05 |  |
| 225 | 6 | 1.51 | 14.9 | 14.9 | 93\% | 25.4 | 52.4 | 2.5 |  |
| 300 | 5 | 1.89 | 17 | 17 | 94\% |  | 65.3 | 3.19 |  |
| 500 |  | 2.76 | 24.6 | 24.6 | 95\% | 147.1 | 64.7 | 4.57 | 8.2 |

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Maximum ambient temperature $40^{\circ} \mathrm{C}$.
Overall temperature rating Class $\mathrm{A}\left(105^{\circ} \mathrm{C}\right)$.
Secondary voltage tolerance $\pm 1 \%$ at nominal input and full resistive load.
All leads 150 mm long, stripped and tinned for last 6.0 mm .
No mounting screw supplied.
Note: Under no circumstances should both ends of any fixing bolt be allowed to come simultaneously in contact with metal chassis or framework so that an electrical path is formed through the bolt in the centre of the transformer via the external frame work. This would constitute a shorted turn and would cause irreparable damage.

## Specification Table

| Specifications | Load (VA) |
| :---: | :---: |
| 0-6V, 0-6V @ 1.25A | 15 |
| 0-9V, 0-9V @ 0.83A |  |
| 0-12V, 0-12V @ 0.63A |  |
| 0-15V, 0-15V @ 0.5A |  |
| 0-18V, 0-18V @ 0.42A |  |
| 0-25V, 0-25V @ 0.3A |  |
| 0-6V, 0-6V @ 2.5A | 30 |
| 0-9V, 0-9V @ 1.67A |  |
| 0-15V, 0-15V @ 1A |  |
| 0-18V, 0-18V @ 0.83A |  |
| 0-25V, 0-25V @ 0.6A |  |
| 0-9V, 0-9V @ 2.78A | 50 |
| 0-12V, 0-12V @ 2.08A |  |
| 0-15V, 0-15V @ 1.67A |  |
| 0-18V, 0-18V @ 1.39A |  |
| 0-25V, 0-25V @ 1A |  |
| 0-9V, 0-9V @ 4.44A | 80 |
| 0-12V, 0-12V @ 3.33A |  |
| 0-18V, 0-18V @ 2.22A |  |
| 0-25V, 0-25V @ 1.6A |  |
| 0-12V, 0-12V @ 5A | 120 |
| 0-15V, 0-15V @ 4A |  |
| 0-18V, 0-18V @ 3.33A |  |
| 0-25V, 0-25V @ 2.4A |  |

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Specification Table

| Specifications | Load (VA) |
| :---: | :---: |
| 0-18V, 0-18V @ 4.44A | 160 |
| 0-25V, 0-25V @ 3.2A |  |
| 0-30V, 0-30V @ 2.67A |  |
| 0-12V, 0-12V @ 9.38A |  |
| 0-15V, 0-15V @ 7.5A | 225 |
| 0-18V, 0-18V @ 6.25A |  |
| 0-25V, 0-25V @ 4.5A |  |
| 0-30V, 0-30V @ 3.75A |  |
| 0-25V, 0-25V @ 6A | 300 |
| 0-30V, 0-30V @ 5A |  |
| 0-35V, 0-35V @ 4.29A |  |
| 0-25V, 0-25V @ 10A | 500 |
| 0-35V, 0-35V @ 7.14A |  |
| 0-40V, 0-40V @ 6.25A |  |

Part Number Table

| Description | Part Number |
| :--- | :--- |
| TRANSFORMER, 15VA, $2 \times 6 \mathrm{~V}$ | MCFE015/06 |
| TRANSFORMER, 15VA, $2 \times 9 \mathrm{~V}$ | MCFE015/09 |
| TRANSFORMER, 15VA, $2 \times 12 \mathrm{~V}$ | MCFE015/12 |
| TRANSFORMER, 15VA, $2 \times 15 \mathrm{~V}$ | MCFE015/15 |
| TRANSFORMER, 15VA, $2 \times 18 \mathrm{~V}$ | MCFE015/18 |
| TRANSFORMER, 15VA, $2 \times 25 \mathrm{~V}$ | MCFE015/25 |
| TRANSFORMER, 30VA, $2 \times 6 \mathrm{~V}$ | MCFE030/06 |
| TRANSFORMER, 30VA, $2 \times 9 \mathrm{~V}$ | MCFE030/09 |
| TRANSFORMER, 30VA, $2 \times 15 \mathrm{~V}$ | MCFE030/15 |
| TRANSFORMER, 30VA, $2 \times 18 \mathrm{~V}$ | MCFE030/18 |
| TRANSFORMER, 30VA, $2 \times 25 \mathrm{~V}$ | MCFE030/25 |
| TRANSFORMER, 50VA, $2 \times 9 \mathrm{~V}$ | MCFE050/09 |
| TRANSFORMER, 50VA, $2 \times 12 \mathrm{~V}$ | MCFE050/12 |
| TRANSFORMER, 50VA, $2 \times 15 \mathrm{~V}$ | MCFE050/15 |
| TRANSFORMER, 50VA, $2 \times 18 \mathrm{~V}$ | MCFE050/18 |

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Part Number Table

| Description | Part Number |
| :---: | :---: |
| TRANSFORMER, 50VA, $2 \times 25 \mathrm{~V}$ | MCFE050/25 |
| TRANSFORMER, 80VA, $2 \times 9 \mathrm{~V}$ | MCFE080/09 |
| TRANSFORMER, 80VA, $2 \times 12 \mathrm{~V}$ | MCFE080/12 |
| TRANSFORMER, 80VA, $2 \times 18 \mathrm{~V}$ | MCFE080/18 |
| TRANSFORMER, 80VA, $2 \times 25 \mathrm{~V}$ | MCFE080/25 |
| TRANSFORMER, 120VA, $2 \times 12 \mathrm{~V}$ | MCFE120/12 |
| TRANSFORMER, 120VA, $2 \times 15 \mathrm{~V}$ | MCFE120/15 |
| TRANSFORMER, 120VA, $2 \times 18 \mathrm{~V}$ | MCFE120/18 |
| TRANSFORMER, 120VA, $2 \times 25 \mathrm{~V}$ | MCFE120/25 |
| TRANSFORMER, 160VA, $2 \times 18 \mathrm{~V}$ | MCFE160/18 |
| TRANSFORMER, 160VA, $2 \times 25 \mathrm{~V}$ | MCFE160/25 |
| TRANSFORMER, 160VA, $2 \times 30 \mathrm{~V}$ | MCFE160/30 |
| TRANSFORMER, 225VA, $2 \times 12 \mathrm{~V}$ | MCFE225/12 |
| TRANSFORMER, 225VA, $2 \times 15 \mathrm{~V}$ | MCFE225/15 |
| TRANSFORMER, 225VA, $2 \times 18 \mathrm{~V}$ | MCFE225/18 |
| TRANSFORMER, 225VA, $2 \times 25 \mathrm{~V}$ | MCFE225/25 |
| TRANSFORMER, 225VA, $2 \times 30 \mathrm{~V}$ | MCFE225/30 |
| TRANSFORMER, 300VA, $2 \times 25 \mathrm{~V}$ | MCFE300/25 |
| TRANSFORMER, 300VA, $2 \times 30 \mathrm{~V}$ | MCFE300/30 |
| TRANSFORMER, 300VA, $2 \times 35 \mathrm{~V}$ | MCFE300/35 |
| TRANSFORMER, 500VA, $2 \times 25 \mathrm{~V}$ | MCFE500/25 |
| TRANSFORMER, 500VA, $2 \times 35 \mathrm{~V}$ | MCFE500/35 |
| TRANSFORMER, 500VA, $2 \times 40 \mathrm{~V}$ | MCFE500/40 |

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