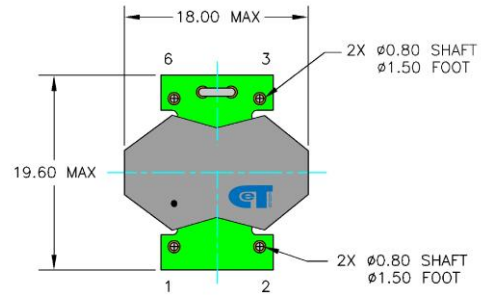
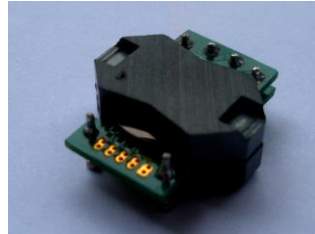


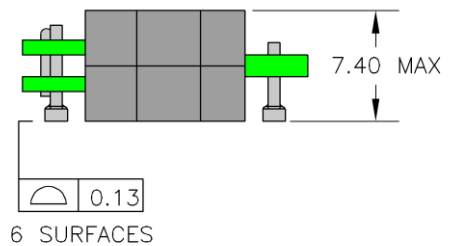
# CET-TP18D SERIES

High Frequency 30 Watts  
Planar Transformers



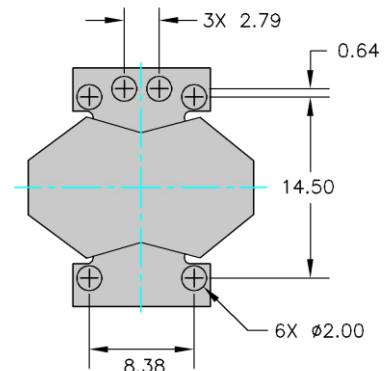
## FEATURES

- Power Rating Up to 30 Watts
- High Efficiency
- Footprint 19.6 mm X 18.0 mm
- Lower Profile of 7.4 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 300 kHz – 3.0 MHz
- Operating Temperature -40° C to +125° C



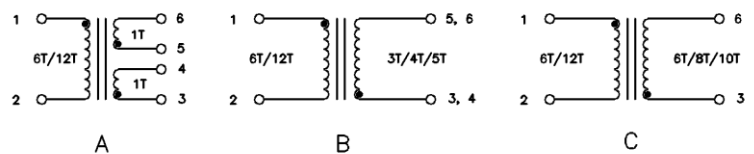
## DESCRIPTION

The TP18 series of planar transformers are optimized for power supplies of high performance DC/DC converters. Due to an optimized core, winding geometry and interleaving technology, they are able to offer a high efficiencies and high power density of 400 watts per cubic inch, lower profile of 7.4 mm. The series consist of 12 part numbers. They are intended for use in DC/DC converter with forward, full-bridge, half-bridge and push-pull and power supplies. Topologies in application with input voltages between 18 and 75 volts, and output voltages from 18 volts down to 1.2 volts.



SUGGESTED PAD LAY-OUT

Weight .....5.30 grams  
Tray.....60/tray



SCHEMATICS

# CET-TP18D SERIES

High Frequency 30 Watts  
Planar Transformers

| ELECTRICAL SPECIFICATIONS |   |  |                         |     |     |           |             |           |                               |        |           |
|---------------------------|---|--|-------------------------|-----|-----|-----------|-------------|-----------|-------------------------------|--------|-----------|
| Part Number               | Primary <sup>1</sup><br>Inductance<br>(uH Min ) | Leakage <sup>2</sup><br>Inductance<br>( uH Max ) | DC Resistance (m Ω Max) |     |     | Secondary | Turns Ratio |           | primary<br>Second<br>Hi --Pot | Figure | M. Height |
|                           |   |  | Primary                 |     |     |           | Primary     | Secondary |                               |        |           |
|                           |   |  | A                       | B   | AUX |           |             |           |                               |        |           |
| TP18D0601                 | 48.0  | 0.50   | 50.0                    | N/A | N/A | 1.50      | 6 T         | 1T // 1T  | 1500<br>VDC                   | A      | 7.4<br>mm |
| TP18D0602                 | 48.0  | 0.50   | 50.0                    | N/A | N/A | 3.00      | 6 T         | 1T+1T     |                               |        |           |
| TP18D0603                 | 48.0  | 0.40   | 50.0                    | N/A | N/A | 20.0      | 6 T         | 3 T       |                               |        |           |
| TP18D0606                 | 48.0  | 0.40   | 50.0                    | N/A | N/A | 40.0      | 6 T         | 6 T       |                               |        |           |
| TP18D0608                 | 48.0  | 0.30   | 50.0                    | N/A | N/A | 60.0      | 6 T         | 8 T       |                               |        |           |
| TP18D0610                 | 48.0  | 0.30   | 50.0                    | N/A | N/A | 80.0      | 6 T         | 10 T      |                               |        |           |
| TP18D1201                 | 190   | 1.50   | 156                     | N/A | N/A | 1.50      | 12 T        | 1T // 1T  | 1500<br>VDC                   | A      | 7.4<br>mm |
| TP18D1202                 | 190   | 1.50   | 156                     | N/A | N/A | 3.00      | 12 T        | 1T+1T     |                               |        |           |
| TP18D1203                 | 190   | 1.30   | 156                     | N/A | N/A | 20.0      | 12 T        | 3 T       |                               |        |           |
| TP18D1206                 | 190   | 1.30   | 156                     | N/A | N/A | 40.0      | 12 T        | 6 T       |                               |        |           |
| TP18D1208                 | 190   | 1.15   | 156                     | N/A | N/A | 60.0      | 12 T        | 8 T       |                               |        |           |
| TP18D1210                 | 190   | 1.15   | 156                     | N/A | N/A | 80.0      | 12 T        | 10 T      |                               |        |           |

The following is a matrix of the winding configurations. They are ideal for used in power supply of DC/CD converters application between 15-30 watts

| APPLICATION OF CONFIGURATION |             |                          |             |             |                          |
|------------------------------|-------------|--------------------------|-------------|-------------|--------------------------|
| Part Number                  | Vin         | Vout & Iout              | Part Number | Vin         | Vout & Iout              |
| TP18S0601                    | 18 – 36 Vdc | 1.2V@25.0A --1.8V@16.7A  | TP18S1201   | 36 – 75 Vdc | 1.2V@25.0A --1.8V@16.7A  |
| TP18S0602                    | 18 – 36 Vdc | 2.5V@12.0A -- 3.3V@9.00A | TP18S1202   | 36 – 75 Vdc | 2.5V@12.0A -- 3.3V@9.00A |
| TP18D0603                    | 18 – 36 Vdc | 5.0 V @ 6 A              | TP18D1203   | 36 – 75 Vdc | 5.0 V @ 6 A              |
| TP18D0606                    | 18 – 36 Vdc | 8.0V@3.75A -- 10V@3.00A  | TP18D1206   | 36 – 75 Vdc | 8.0V@3.75A -- 10V@3.00A  |
| TP18D0608                    | 18 – 36 Vdc | 12V@2.50A -- 15V@2.00A   | TP18D1208   | 36 – 75 Vdc | 12V@2.50A -- 15V@2.00A   |
| TP18D0610                    | 18 – 36 Vdc | 16V@1.88A -- 18V@1.67A   | TP18D1210   | 36 – 75 Vdc | 16V@1.88A -- 18V@1.67A   |

## NOTES:

1. The inductance is measured in primary windings Pin (1-2) at 100 kHz 100 mVrms.
2. The leakage inductance is measured in primary winding Pin (1 -2) with all other windings shorted.
3. All specifications typical at T<sub>A</sub>=25° C.