

# HIGH FREQUENCY 30W PLANAR TRANSFORMERS TP18 SERIES

## FEATURES:

- Power Rating Up to 30 Watts
- High Efficiency
- Footprint 19.60 mm 18.0 mm
- Lower Profile of 7.4 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 300 kHz-3.0 MHz
- Operating Temperature -40 to +125

## OPTIONS:

- Weight: 5.30 grams
- Tape & Reel: 250/reel
- Tube: 20/tube

## COMMON APPLICATIONS:

- High efficiencies, high power density of 400 watts per cubic inch DC/DC converters.
- For forward, full-bridge, half-bridge and push-pull DC/DC converters.
- Input voltages between 18V and 75V, and output voltages from 18V down to 1.2V DC/DC converters.
- Telecommunications, industrial control systems, Automotive and heavy equipment vehicle systems

## ELECTRICAL CHARACTERISTICS

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

## APPLICATION OF CONFIGURATION

| Part Number | Vin       | Vout & Iout           |
|-------------|-----------|-----------------------|
| TP18S0601   | 18-36Vdc  | 1.2V@25.0A-1.8V@16.7A |
| TP18S0602   | 18-36Vdc  | 2.5V@12.0A-3.3V@9.00A |
| TP18D0603   | 18-36Vdc  | 5.0V@6A               |
| TP18D0606   | 18-36Vdc  | 8.0V@3.75A-10V@3.00A  |
| TP18D0608   | 18-36Vdc  | 12V@2.50A-15V@2.00A   |
| TP18D0610   | 18-36Vdc  | 16V@1.88A-18V@1.67A   |
| TP18D1201   | 36-75Vdc  | 1.2V@25.0A-1.8V@16.7A |
| TP18D1202   | 36-75Vdc  | 2.5V@12.0A-3.3V@9.00A |
| TP18D1203   | 36-75Vdc  | 5.0V@6A               |
| TP18D1206   | 36-75 Vdc | 8.0V@3.75A-10V@3.00A  |
| TP18D1208   | 36-75 Vdc | 12V@2.50A-15V@2.00A   |
| TP18D1210   | 36-75 Vdc | 16V@1.88A-18V@1.67A   |

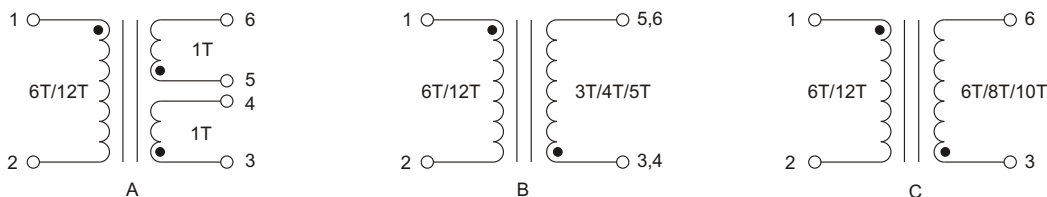
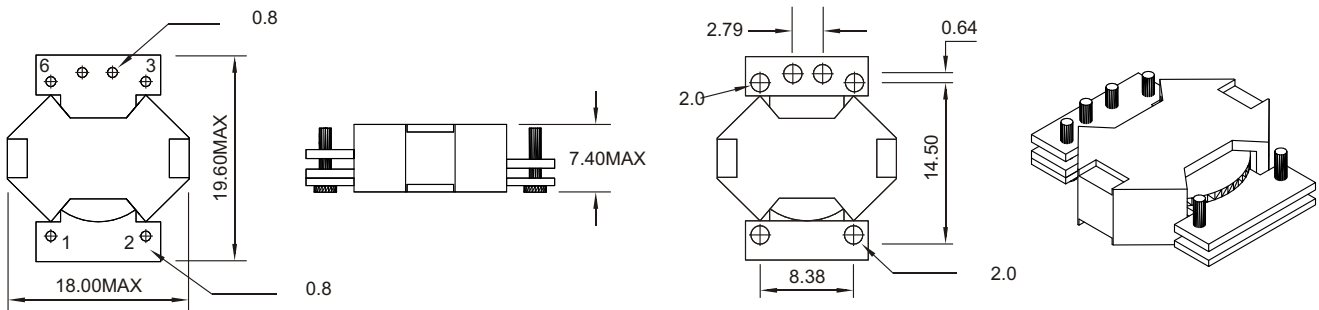
This is a matrix of the winding configurations. They are ideally suited to hand between 15-30W of power supply on DC-CD converters application.

## TECHNICAL INFORMATION

- The inductance is measured between Pin (1-2) at 100 kHz, 100 mVrms
- The leakage inductance is measured in primary winding Pin(1-2) with secondary winding shorted.
- All specifications typical at TA=25

## PHYSICAL CHARACTERISTICS

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SCHEMATIC

Note: All specifications subject to change without notice.