

TP18D SERIES

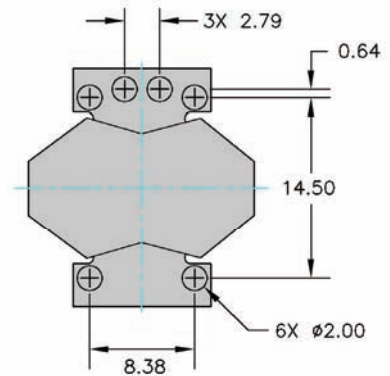
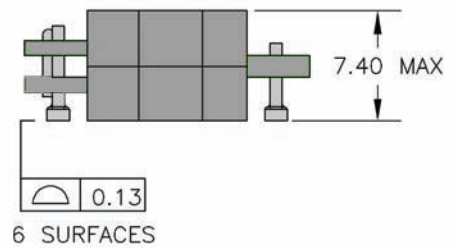
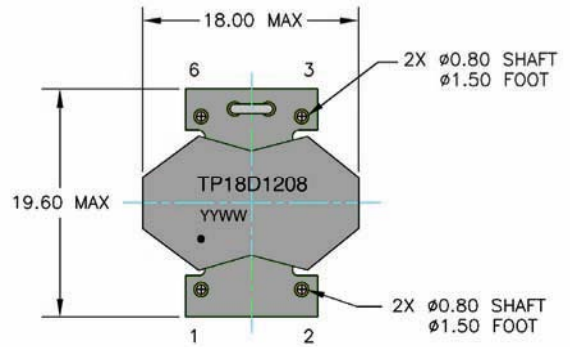
High Frequency 30 Watts
Planar Transformers

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

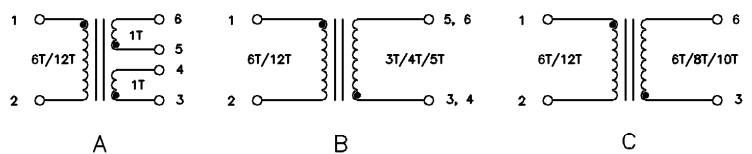
DESCRIPTION

The TP18 series of planar transformers are optimised for power supplies of high performance DC/DC converters. Due to an optimised 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

Weight5.30 grams
Tray.....60/tray



SCHEMATICS

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ELECTRICAL SPECIFICATIONS													
Part Number	Primary ¹ Inductance (uH Min)	Leakage ² Inductance (uH Max)	DC Resistance (mΩ 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	6 T	1T // 1T	1500 VDC	A	7.4 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 VDC	A	7.4 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_A=25° C.