

SHENZHEN HIGHSTARTECH ELECTRONICS CO., LTD

HS-TP18 SERIES

1. FEATURES:

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

2. APPLICATIONS:

The HS-TP18D 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 7.4mm. The series consist of 12 part numbers. They are intended for use of DC-DC converter power supply with forward, full-bridge, half-bridge and push - pull power supplies. Topologies in application with input voltages between 18 and 75 volts, and output voltages from 18 volts down to 1.2 volts.

3. PART NUMBER SYSTEM:

HS-TP - 18D - 0601

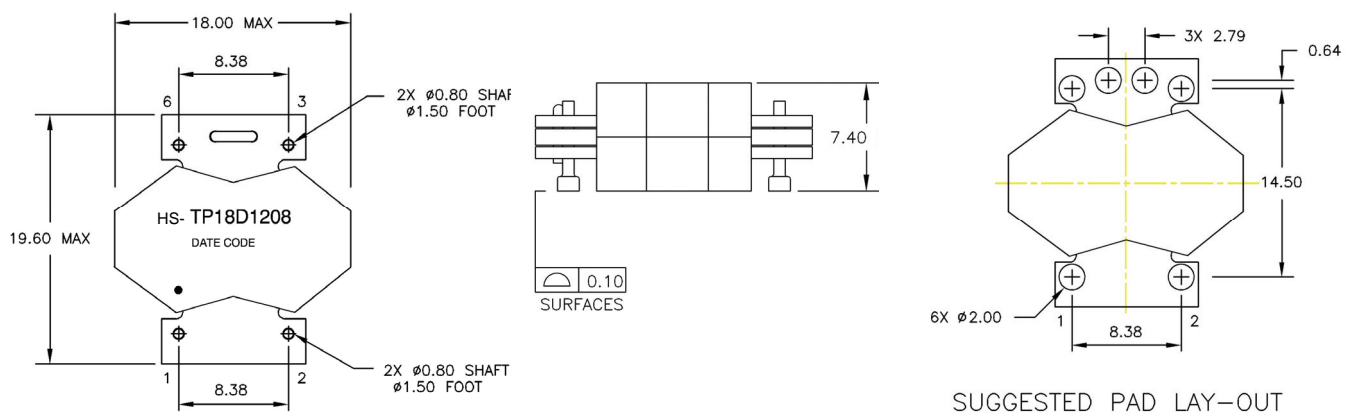
(1) (2) (3)

(1) Series name.

(2) 18D is size.

(3) 601 is sequence number.

4. PHYSICAL CHARACTERISTICS:



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5. ELECTRICAL CHARACTERISTICS:

ELECTRICAL SPECIFICATIONS											
Part Number	Primary ¹ Inductance (uH Min)	Leakage ² Inductance (uH Max)	DC Resistance (mΩ Max)			Secondary	Turns Ratio		primary Second Hi --Pot	Figure	M. Height
			Primary				Primary	Secondary			
			A	B	AUX						
HS-TP18D0601	48.0	0.50	50.0	N/A	N/A	1.50	6 T	1T // 1T	1500 VDC	A	7.4 mm
HS-TP18D0602	48.0	0.50	50.0	N/A	N/A	3.00	6 T	1T+1T			
HS-TP18D0603	48.0	0.40	50.0	N/A	N/A	20.0	6 T	3 T			
HS-TP18D0606	48.0	0.40	50.0	N/A	N/A	40.0	6 T	6 T		C	
HS-TP18D0608	48.0	0.30	50.0	N/A	N/A	60.0	6 T	8 T			
HS-TP18D0610	48.0	0.30	50.0	N/A	N/A	80.0	6 T	10 T			
HS-TP18D1201	190	1.50	156	N/A	N/A	1.50	12 T	1T // 1T	1500 VDC	A	7.4 mm
HS-TP18D1202	190	1.50	156	N/A	N/A	3.00	12 T	1T+1T			
HS-TP18D1203	190	1.30	156	N/A	N/A	20.0	12 T	3 T			
HS-TP18D1206	190	1.30	156	N/A	N/A	40.0	12 T	6 T		C	
HS-TP18D1208	190	1.15	156	N/A	N/A	60.0	12 T	8 T			
HS-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 idea DC/CD converters application between 15-30 watts

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

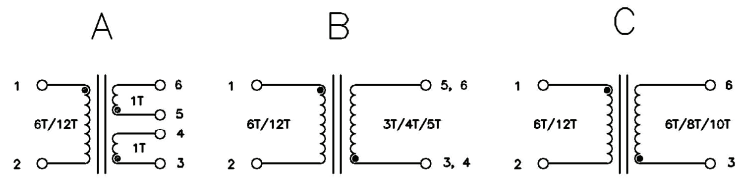
NOTES:

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.

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5. SCHEMATICS:



SCHEMATICS