

SHENZHEN HIGHSTARTECH ELECTRONICS CO., LTD

HS-TP20A SERIES

1. FEATURES:

- (1) Power Rating Up to 100 Watts.
- (2) High Efficiency.
- (3) Footprint 20.12mm X 18.50mm.
- (4) Lower Profile of 7.4mm.
- (5) High Isolation (operational) 1500 Vdc.
- (6) High Frequency 200 kHz - 700 kHz.
- (7) Operating Temperature -40°C to + 125°C.

2. APPLICATIONS:

The HS-TP20A 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, high power density. The series consist of 12 part numbers. They are intended for use of DC-DC converters 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.

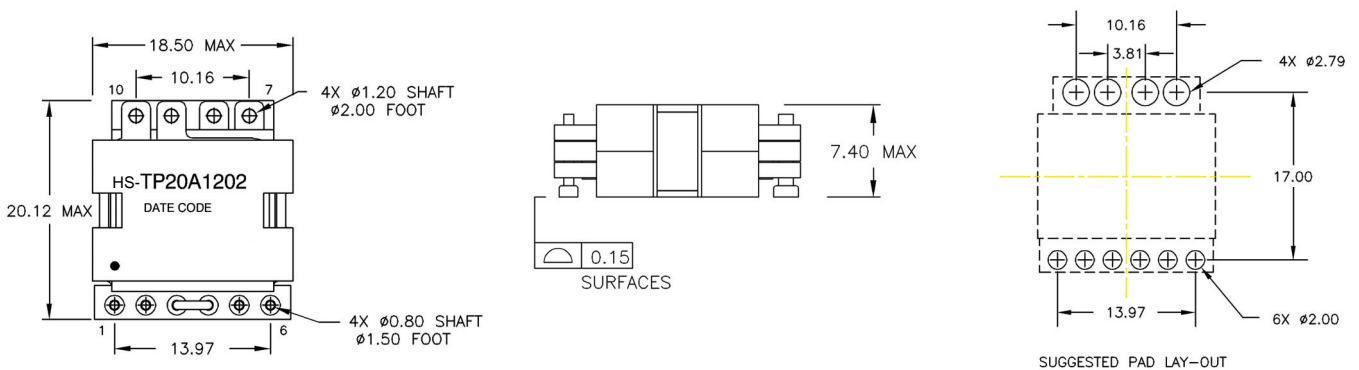
3. PART NUMBER SYSTEM:

HS-TP - 20A - 0601

(1) (2) (3)

- (1) Series name.
- (2) 20A is size.
- (3) 0601 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)				Turns Ratio		primary Second Hi --Pot	Figure	M. Height
			Primary			Secondary	Primary	Secondary			
			A	B	AUX						
HS-TP20A0601	62.0	0.30	11.5	N/A	55	0.6//0.6	6 T	1T // 1T	1500 VDC	A	7.4 mm
HS-TP20A0602	62.0	0.30	11.5	N/A	55	0.6+0.6	6 T	1T+1T			
HS-TP20A0603	62.0	0.30	11.5	N/A	55	2.00	6 T	3 T			
HS-TP20A0606	62.0	0.25	23.0	N/A	110	12.0	6 T	6 T		B	
HS-TP20A0608	62.0	0.25	23.0	N/A	110	20.0	6 T	8 T			
HS-TP20A0610	62.0	0.25	23.0	N/A	110	35.0	6 T	10 T			
HS-TP20A1201	248	0.75	47.5	N/A	130	0.6//0.6	12 T	1T //1T	1500 VDC	A	7.4 mm
HS-TP20A1202	248	0.75	47.5	N/A	130	0.6+0.6	12 T	1T+1T			
HS-TP20A1203	248	0.75	47.5	N/A	130	2.00	12 T	3 T			
HS-TP20A1206	248	0.70	95.0	N/A	260	12.0	12 T	6 T		B	
HS-TP20A1208	248	0.70	95.0	N/A	260	20.0	12 T	8 T			
HS-TP20A1210	248	0.70	95.0	N/A	260	35.0	12 T	10 T			

The following is a matrix of the winding configurations. They are ideally suited to hand between 75-100 watts of power supply on DC-CD converters application.

APPLICATION OF CONFIGURATION					
Part Number	Vin	Vout & Iout	Part Number	Vin	Vout & Iout
HS-TP20A0601	18 – 36 Vdc	1.2V@55.0A --1.8V@50.0A	HS-TP20A1201	36 – 75 Vdc	1.2V@55.0A --1.8V@50.0A
HS-TP20A0602	18 – 36 Vdc	2.5V@34.0A -- 3.3V@30.0A	HS-TP20A1202	36 – 75 Vdc	2.5V@34.0A -- 3.3V@30.0A
HS-TP20A0603	18 – 36 Vdc	5.0 V @ 20 A	HS-TP20A1203	36 – 75 Vdc	5.0 V @ 20 A
HS-TP20A0606	18 – 36 Vdc	8.0V@12.5A -- 10V@10.0A	HS-TP20A1206	36 – 75 Vdc	8.0V@12.5A -- 10V@10.0A
HS-TP20A0608	18 – 36 Vdc	12V@8.33A -- 15V@6.67A	HS-TP20A1208	36 – 75 Vdc	12V@8.33A -- 15V@6.67A
HS-TP20A0610	18 – 36 Vdc	16V@6.25A -- 18V@5.56A	HS-TP20A1210	36 – 75 Vdc	16V@6.25A -- 18V@5.56A

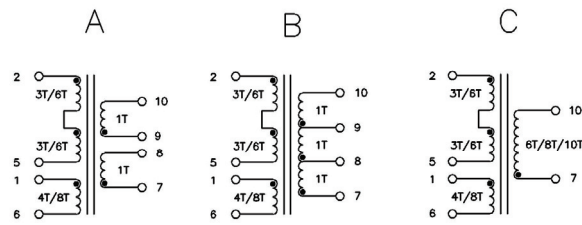
NOTES:

1. The inductance is measured in primary windings Pin (2-5).
2. The leakage inductance is measured in primary winding Pin (2 -5) with all other windings shorted.
3. All specifications typical at T_A=25° C.

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5. SCHEMATICS:



SCHEMATICS