

SHENZHEN HIGHSTARTECH ELECTRONICS CO., LTD

HS-TP30S SERIES

1. FEATURES:

- (1) Power Rating Up to 300 Watts.
- (2) High Efficiency of Over 98%.
- (3) High Power Density of 600 Watts Per Cubic Inch.
- (4) Footprint 29.6mm X 25.4mm.
- (5) Lower Profile of 9.0mm and 10.0mm.
- (6) High Isolation (operational) 1800 Vdc.
- (7) High Frequency 200 kHz - 700 kHz.
- (8) Operating Temperature -40°C to + 125°C.

2. APPLICATIONS:

The HS-TP30 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 up to over 98 percent, high power density of 600 watts per cubic inch, but lower profile of 9.0mm and 10.0mm. The series consist of 30 part numbers, off-the-shelf catalog parts can be arranged to 163 different winding configurations.. Adding a primary auxiliary winding or a small gap to transformers, they will be have more expanding of configurations. They series 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 52 volts down to 1.2 volts.

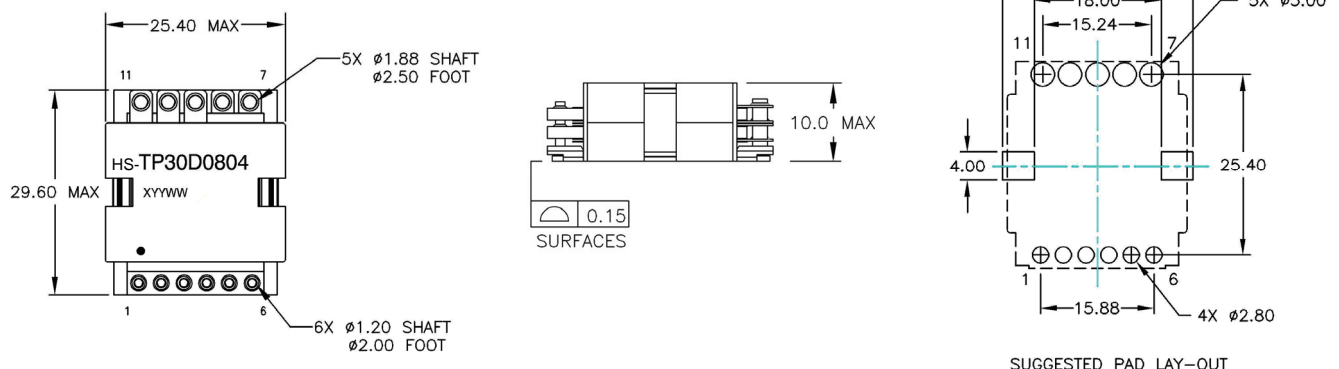
3. PART NUMBER SYSTEM:

HS-TP - 30S - 0402

(1) (2) (3)

- (1) Series name.
- (2) 30S is size.
- (3) 0402 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 (m Ω Max)			Secondary	Turns Ratio		Pri/Sec Hi-Pot	Figure	M. Height
			Primary				Primary	Secondary			
			A	B	AUX.						
HS-TP30S0402	46.00	0.30	10			1.20&1.20	4T	1T & 1T	1500 Vdc	B1	9.00 mm Max.
HS-TP30S0502	73.00	0.30	12		468		5T (5T/aux)				
HS-TP30S0602	105.0	0.30	20		154		6T (2T/aux.)				
HS-TP30S0702	143.0	0.30	48		158		7T (3T/aux.)				
HS-TP30S0802	187.0	0.30	58				8T				
HS-TP30S0403	46.00	0.30	10			1.80&0.60	4T	2T & 1T	1500 Vdc	B2	
HS-TP30S0503	73.00	0.30	12		468		5T (5T/aux)				
HS-TP30S0603	105.0	0.30	20		154		6T (2T/aux.)				
HS-TP30S0703	143.0	0.30	48		158		7T (3T/aux.)				
HS-TP30S0803	187.0	0.30	58				8T				
HS-TP30S0404	46.00	0.30	10			4.8	4T	4T (1T:1T:1T:1T)	1500 Vdc	B3	
HS-TP30S0504	73.00	0.30	12		468		5T (5T/aux)				
HS-TP30S0604	105.0	0.30	20		154		6T (2T/aux.)				
HS-TP30S0704	143.0	0.30	48		158		7T (3T/aux.)				
HS-TP30S0804	187.0	0.30	58				8T				
HS-TP30S0414	46.00	0.30	10			42&42	4T	7T & 7T	1500 Vdc	B1	
HS-TP30S0514	73.00	0.30	12		468		5T (5T/aux)				
HS-TP30S0614	105.0	0.30	20		154		6T (2T/aux.)				
HS-TP30S0714	143.0	0.30	48		158		7T (3T/aux.)				
HS-TP30S0814	187.0	0.30	58				8T				
HS-TP30D0802	187.0	0.30	10	10		0.60&0.60	4T&4T	1T & 1T	1500 Vdc	A1	
HS-TP30D1002	450.0	0.30	12	12	233		5T&5T (5T/aux)				
HS-TP30D1202	293.0	0.30	20	20	76		6T&6T (2T/aux)				
HS-TP30D1402	882.0	0.30	48	48	78		7T&7T (3T/aux)				
HS-TP30D1602	1152	0.30	58	58			8T&8T				
HS-TP30D0804	288.0	0.30	10	10		4.8	4T&4T	4T (1T:1T:1T:1T)	1500 Vdc	A2	
HS-TP30D1004	450.0	0.30	12	12	233		5T&5T (5T/aux)				
HS-TP30D1204	648.0	0.30	20	20	76		6T&6T (2T/aux)				
HS-TP30D1404	882.0	0.30	48	48	78		7T&7T (3T/aux)				
HS-TP30D1604	1152	0.30	58	58			8T&8T				

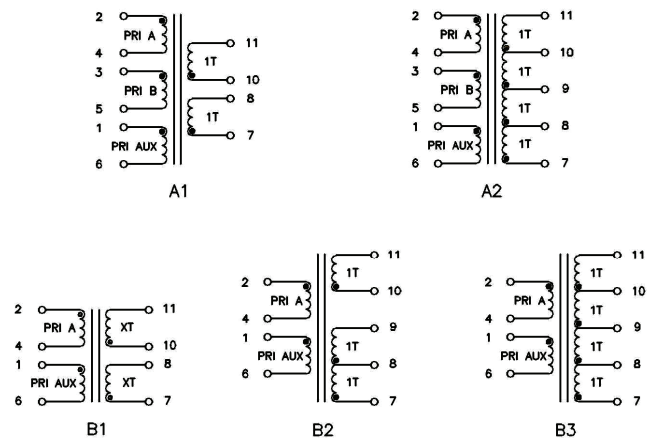
NOTES:

- The inductance is measured with both primary windings connected in series where applicable (type D: 2 to 5 with 3 and 4 shorted, type S: 2 to 4 only)..
- The leakage inductance is measured with both primary windings connected in series where applicable in all other winding shorted.
- All specifications typical at T_A=25° C.

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5. SCHEMATICS:



SCHEMATICS