

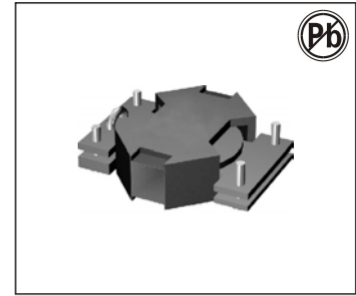
HIGH FREQUENCY 15W PLANAR TRANSFORMERS TP14 SERIES

FEATURES:

- Power Rating Up to 15 Watts
- High Efficiency
- Footprint 14.60 mm × 16.58 mm
- Lower Profile of 5.80 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–3.0 MHz
- Operating Temperature –40°C to +125°C

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 (mΩ Max)				Turns Ratio		Primary Second Hi-Pot	Figure	M. Height
			Primary			Secondary	Primary	Secondary			
			A	B	AUX.						
TP14D0601	30.00	0.50	46.0	N/A	N/A	1.80	6T	1T//1T	1500VDC	A	5.8mm
TP14D0602	30.00	0.50	46.0	N/A	N/A	3.60	6T	2T	1500VDC	A	5.8mm
TP14D0603	30.00	0.50	46.0	N/A	N/A	20.0	6T	3T	1500VDC	B	5.8mm
TP14D0606	30.00	0.45	46.0	N/A	N/A	40.0	6T	6T	1500VDC	C	5.8mm
TP14D0608	30.00	0.45	46.0	N/A	N/A	55.0	6T	8T	1500VDC	C	5.8mm
TP14D0610	30.00	0.45	46.0	N/A	N/A	100	6T	10T	1500VDC	C	5.8mm
TP14D1201	120.0	1.00	150	N/A	N/A	1.80	12T	1T//1T	1500VDC	A	5.8mm
TP14D1202	120.0	1.00	150	N/A	N/A	3.60	12T	2T	1500VDC	A	5.8mm
TP14D1203	120.0	1.00	150	N/A	N/A	20.0	12T	3T	1500VDC	B	5.8mm
TP14D1206	120.0	0.95	150	N/A	N/A	40.0	12T	6T	1500VDC	C	5.8mm
TP14D1208	120.0	0.95	150	N/A	N/A	55.0	12T	8T	1500VDC	C	5.8mm
TP14D1210	120.0	0.95	150	N/A	N/A	100	12T	10T	1500VDC	C	5.8mm

APPLICATION OF CONFIGURATION

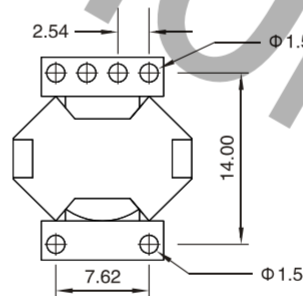
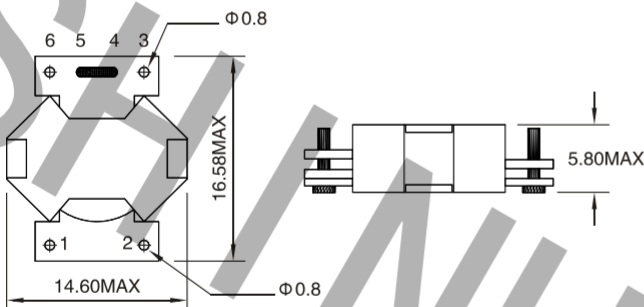
Part Number	Vin	Vout & Iout
TP14D0601	18–36Vdc	1.2V@12.5A–1.8V@8.33A
TP14D0602	18–36Vdc	2.5V@6.00A–3.3V@4.55A
TP14D0603	18–36Vdc	5.0V@3.00A
TP14D0606	18–36Vdc	8.0V@1.88A–10V@1.50A
TP14D0608	18–36Vdc	12V@1.25A–15V@1.00A
TP14D0610	18–36Vdc	16V@0.93A–18V@0.833A
TP14D1201	36–75Vdc	1.2V@12.5A–1.8V@8.33A
TP14D1202	36–75Vdc	2.5V@6.00A–3.3V@4.55A
TP14D1203	36–75Vdc	5.0V@3.00A
TP14D1206	36–75 Vdc	8.0V@1.88A–10V@1.50A
TP14D1208	36–75 Vdc	12V@1.25A–15V@1.00A
TP14D1210	36–75 Vdc	16V@0.93A–18V@0.833A

This is a matrix of the winding configurations. They are ideally suited to hand between 10–15W of power supply on DC–CD converters application.

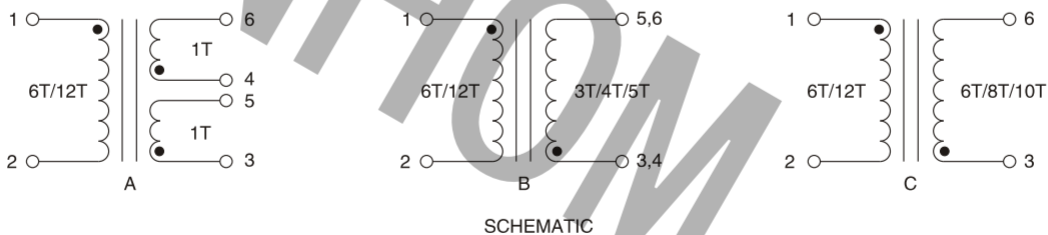
TECHNICAL INFORMATION

1. The inductance is measured between Pin (1–2) at 100 kHz, 100 mVrms
2. The leakage inductance is measured in primary winding Pin(1–2) with secondary winding shorted.
3. All specifications typical at T_A=25°C ± 5°C.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY-OUT



Note: All specifications subject to change without notice.

HIGH FREQUENCY 30W PLANAR TRANSFORMERS

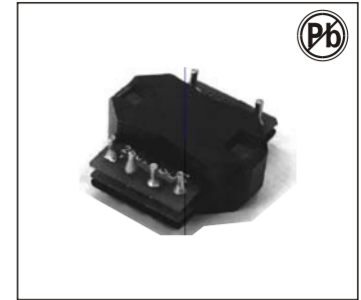
TP18 SERIES

FEATURES:

- Power Rating Up to 30 Watts
- High Efficiency
- Footprint 19.60 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

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

APPLICATION OF CONFIGURATION

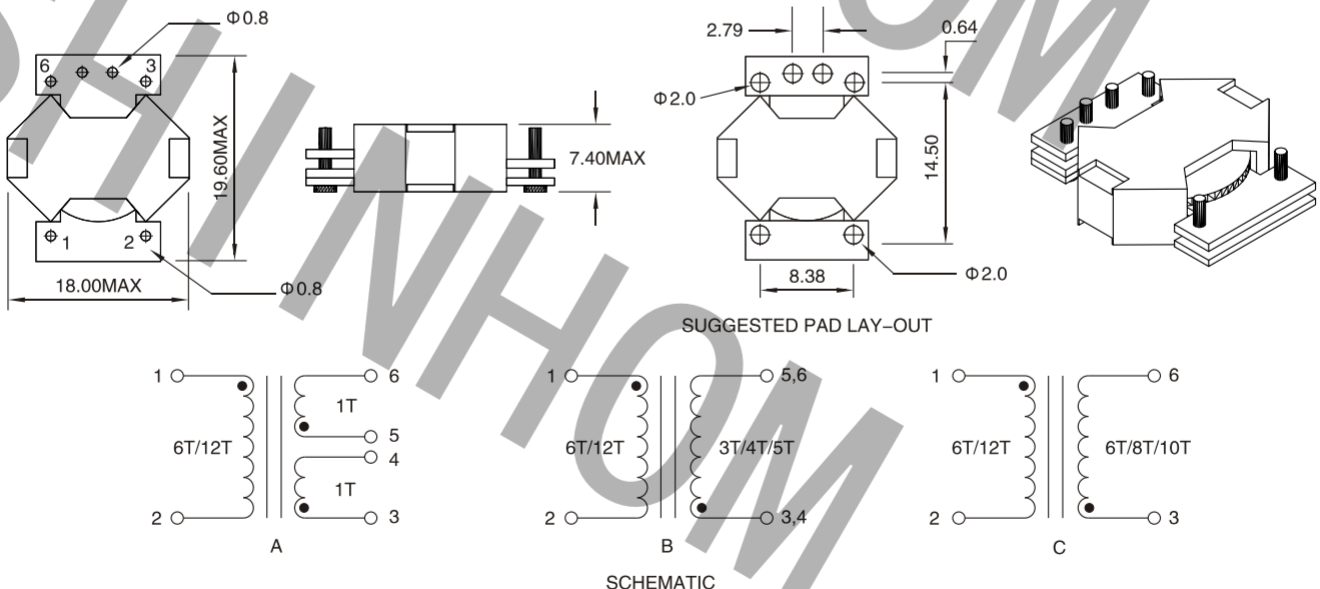
Part Number	Vin	Vout & Iout
TP18S0601	18–36Vdc	1.2V @ 25.0A–1.8V @ 16.7A
TP18S0602	18–36Vdc	2.5V @ 12.0A–3.3V @ 9.00A
TP18D0603	18–36Vdc	5.0V @ 6A
TP18D0606	18–36Vdc	8.0V @ 3.75A–10V @ 3.00A
TP18D0608	18–36Vdc	12V @ 2.50A–15V @ 2.00A
TP18D0610	18–36Vdc	16V @ 1.88A–18V @ 1.67A
TP18D1201	36–75Vdc	1.2V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

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

PHYSICAL CHARACTERISTICS



Note: All specifications subject to change without notice.

HIGH FREQUENCY 100W PLANAR TRANSFORMERS

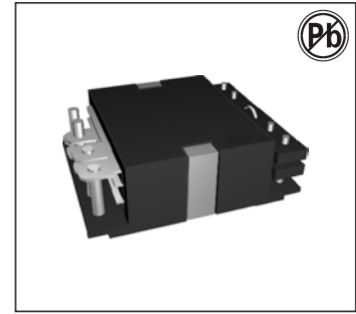
TP20A SERIES

FEATURES:

- Power Rating Up to 100 Watts
- High Efficiency
- Footprint 20.12 mm × 18.50 mm
- Lower Profile of 7.4 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

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

APPLICATION OF CONFIGURATION

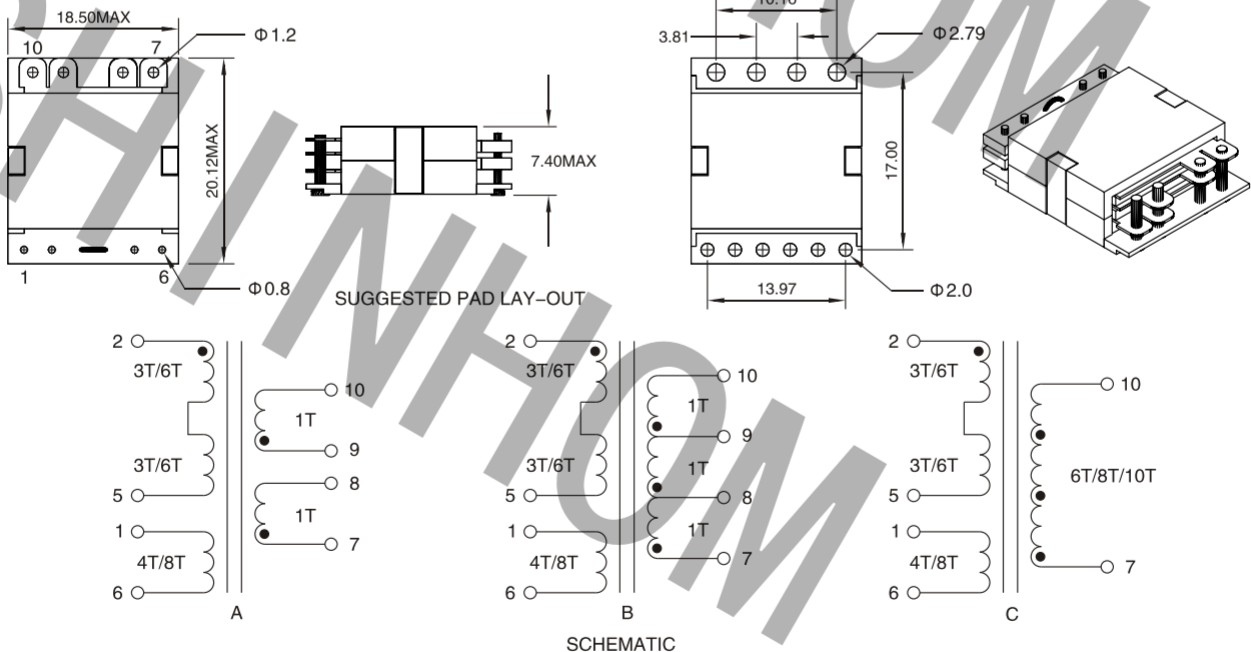
Part Number	Vin	Vout & Iout
TP20A0601	18–36Vdc	1.2V @ 55.0A–1.8V @ 50.0A
TP20A0602	18–36Vdc	2.5V @ 34.0A–3.3V @ 30.0A
TP20A0603	18–36Vdc	5.0V @ 20A
TP20A0606	18–36Vdc	8.0V @ 12.5A–10V @ 10.0A
TP20A0608	18–36Vdc	12V @ 8.33A–15V @ 6.67A
TP20A0610	18–36Vdc	16V @ 6.25A–18V @ 5.56A
TP20A1201	36–75Vdc	1.2V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

This is a matrix of the winding configurations. They are ideally suited to hand between 75–100W of power supply on DC–CD converters application.

TECHNICAL INFORMATION

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.

PHYSICAL CHARACTERISTICS



Note: All specifications subject to change without notice.

HIGH FREQUENCY 75W PLANAR TRANSFORMERS

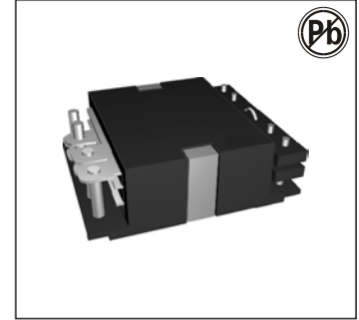
TP20B SERIES

FEATURES:

- Power Rating Up to 100 Watts
- High Efficiency of Over 98%
- Footprint 20.30 mm × 18.50 mm
- Lower Profile of 6.6 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

COMMON APPLICATIONS:

- High performance DC/DC converters.
- High efficiencies up to over 98 percent, high power density of 500 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 (mΩ Max)				Turns Ratio		Primary Second Hi-Pot	Figure	M. Height
			Primary			Secondary	Primary	Secondary			
			A	B	AUX.						
TP20B0601	54	0.20	20.0	N/A	103	1.5&1.5	6T	1T//1T	1500VDC	A	6.6mm
TP20B0602	54	0.20	20.0	N/A	103	3.00	6T	1T+1T	1500VDC	A	6.6mm
TP20B0603	54	0.20	20.0	N/A	103	34.5.0	6T	3T	1500VDC	B	6.6mm
TP20B0606	54	0.20	40.0	N/A	206	8.50	6T	6T	1500VDC	C	6.6mm
TP20B0608	54	0.15	40.0	N/A	206	15.0	6T	8T	1500VDC	C	6.6mm
TP20B0610	54	0.15	40.0	N/A	206	23.0	6T	10T	1500VDC	C	6.6mm
TP20B1201	216	0.85	70.0	N/A	150	1.5&1.5	12T	1T//1T	1500VDC	A	6.6mm
TP20B1202	216	0.85	70.0	N/A	150	3.00	12T	1T+1T	1500VDC	A	6.6mm
TP20B1203	216	0.60	70.0	N/A	150	34.5.0	12T	3T	1500VDC	B	6.6mm
TP20B1206	216	0.30	140	N/A	300	8.50	12T	6T	1500VDC	C	6.6mm
TP20B1208	216	0.25	140	N/A	300	15.0	12T	8T	1500VDC	C	6.6mm
TP20B1210	216	0.25	140	N/A	300	23.0	12T	10T	1500VDC	C	6.6mm

APPLICATION OF CONFIGURATION

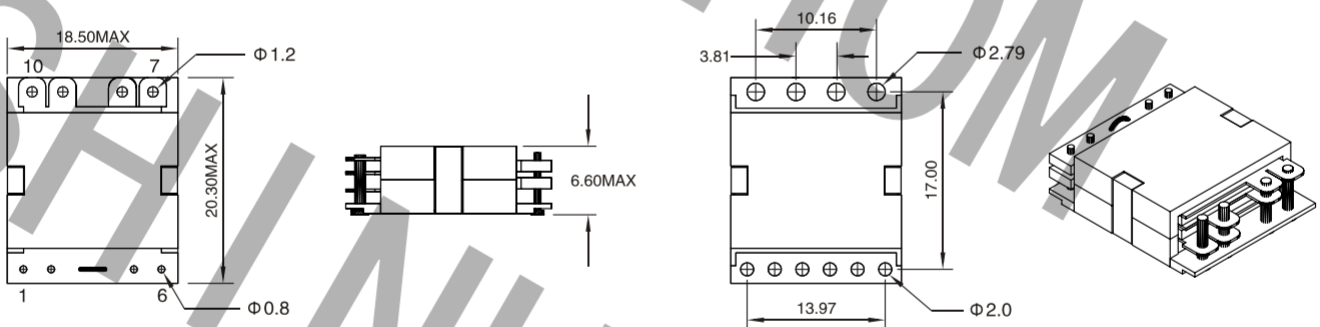
Part Number	Vin	Vout & Iout
TP20B0601	18–36Vdc	1.2V @ 41.6A – 1.8V @ 37.5A
TP20B0602	18–36Vdc	2.5V @ 25.5A – 3.3V @ 22.7A
TP20B0603	18–36Vdc	5.0 V @ 15 A
TP20B0606	18–36Vdc	8.0V @ 9.37A – 10V @ 7.50A
TP20B0608	18–36Vdc	12V @ 6.25A – 15V @ 5.00A
TP20B0610	18–36Vdc	16V @ 4.68A – 18V @ 4.16A
TP20B1201	36–75Vdc	1.2V @ 41.6A – 1.8V @ 37.5A
TP20B1202	36–75Vdc	2.5V @ 25.5A – 3.3V @ 22.7A
TP20B1203	36–75Vdc	5.0 V @ 15 A
TP20B1206	36–75 Vdc	8.0V @ 9.37A – 10V @ 7.50A
TP20B1208	36–75 Vdc	12V @ 6.25A – 15V @ 5.00A
TP20B1210	36–75 Vdc	16V @ 4.68A – 18V @ 4.16A

This is a matrix of the winding configurations. They are ideally suited to hand between 35–75W of power supply on DC–CD converters application.

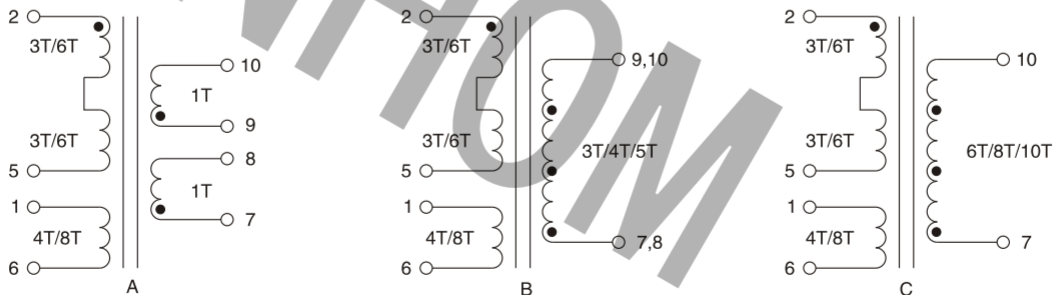
TECHNICAL INFORMATION

1. The inductance is measured in windings Pin(2–5) at 100kHz 100 mVrms.
2. The leakage inductance is measured in winding Pin(2–5) with all other windings shorted.
3. All specifications typical at Ta=25°C.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY-OUT



SCHEMATIC

Note: All specifications subject to change without notice.

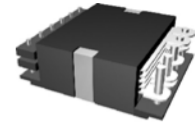
HIGH FREQUENCY 150W PLANAR TRANSFORMERS TP25D SERIES

FEATURES:

- Power Rating Up to 150 Watts
- High Efficiency of Over 98%
- High Power Density of 600 Watts Per Cubic Inch
- Footprint 23.5 mm × 20.10 mm
- Lower Profile of 9.12 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

COMMON APPLICATIONS:

- High performance DC/DC converters.
- High efficiencies up to over 98 percent, high power density of 600 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 52V down to 1.0V DC/DC converters.
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



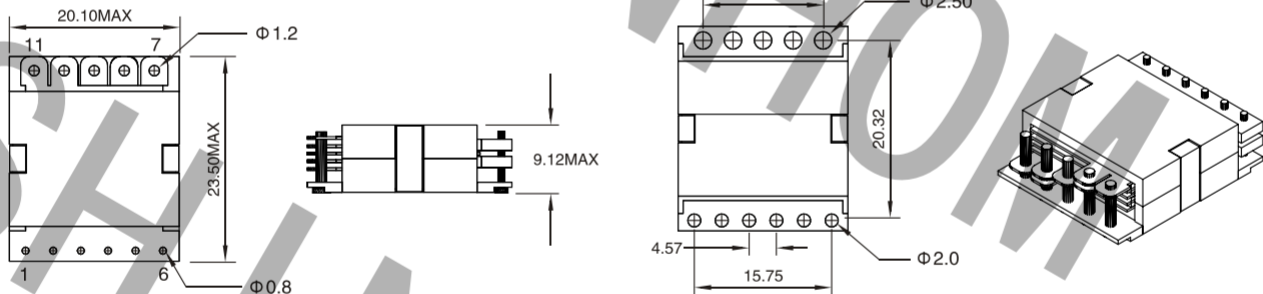
ELECTRICAL CHARACTERISTICS:

Part Number	Primary Inductance (uH Min)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)				Turns Ratio		Primary Second Hi-Pot	Figure	M. Height
			Primary			Secondary	Primary	Secondary			
			A	B	AUX.		(A/B)				
TP25D0802	161.0	0.43	18.0	18.0	N/A	0.85&0.85	4T/4T	1T&1T	1500VDC	A	9.12mm
TP25D0902	204.0	0.43	18.0	20.0	N/A		4T/5T	1T&1T	1500VDC	A	9.12mm
TP25D1002	252.0	0.48	20.0	20.0	N/A		5T/5T	1T&1T	1500VDC	A	9.12mm
TP25D1102	304.0	0.55	20.0	25.0	N/A		5T/6T	1T&1T	1500VDC	A	9.12mm
TP25D1202	362.0	0.60	25.0	25.0	N/A		6T/6T	1T&1T	1500VDC	A	9.12mm
TP25D0803	161.0	0.43	18.0	18.0	N/A	1.70&1.70	4T/4T	2T&1T	1500VDC	B	9.12mm
TP25D0903	204.0	0.43	18.0	20.0	N/A		4T/5T	2T&1T	1500VDC	B	9.12mm
TP25D1003	252.0	0.48	20.0	20.0	N/A		5T/5T	2T&1T	1500VDC	B	9.12mm
TP25D1103	304.0	0.55	20.0	25.0	N/A		5T/6T	2T&1T	1500VDC	B	9.12mm
TP25D1203	362.0	0.60	25.0	25.0	N/A		6T/6T	2T&1T	1500VDC	B	9.12mm
TP25D0804	161.0	0.43	18.0	18.0	N/A	7.00	4T/4T	(1T:1T:1T:1T)	1500VDC	C	9.12mm
TP25D0904	204.0	0.43	18.0	20.0	N/A		4T/5T		1500VDC	C	9.12mm
TP25D1004	252.0	0.48	20.0	20.0	N/A		5T/5T		1500VDC	C	9.12mm
TP25D1104	304.0	0.55	20.0	25.0	N/A		5T/6T		1500VDC	C	9.12mm
TP25D1204	362.0	0.60	25.0	25.0	N/A		6T/6T		1500VDC	C	9.12mm

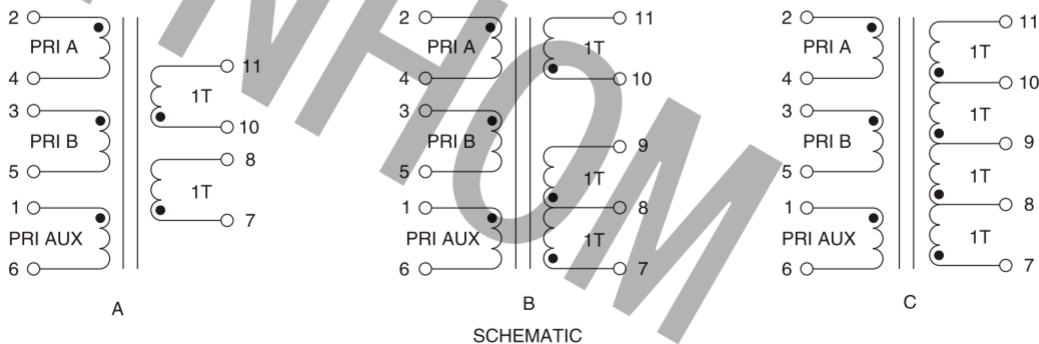
TECHNICAL INFORMATION

1. The inductance is measured with both primary windings connected in series Pin(2–5) with Pin(3–4) shorted.
2. The leakage inductance is measured in winding Pin(2–4) with all other winding shorted.
3. All specifications typical at TA=25°C.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY-OUT



Note: All specifications subject to change without notice.

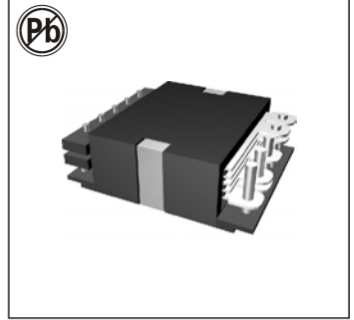
HIGH FREQUENCY 140W PLANAR TRANSFORMERS TP25F SERIES

FEATURES:

- Power Rating Up to 140 Watts
- High Efficiency of Over 98%
- High Power Density of 600 Watts Per Cubic Inch
- Footprint 23.5 mm × 20.10 mm
- Lower Profile of 9.12 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

COMMON APPLICATIONS:

- High performance DC/DC converters.
- High efficiencies up to over 98 percent, high power density of 600 watts per cubic inch DC/DC converters.
- For forward, full-bridge, half-bridge and push-pull DC/DC converters.
- Adding a primary auxiliary winding or a small gap to be have more expanding of configurations.
- Input voltages between 18V and 75V, and output voltages from 52V down to 1.0V DC/DC converters.
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



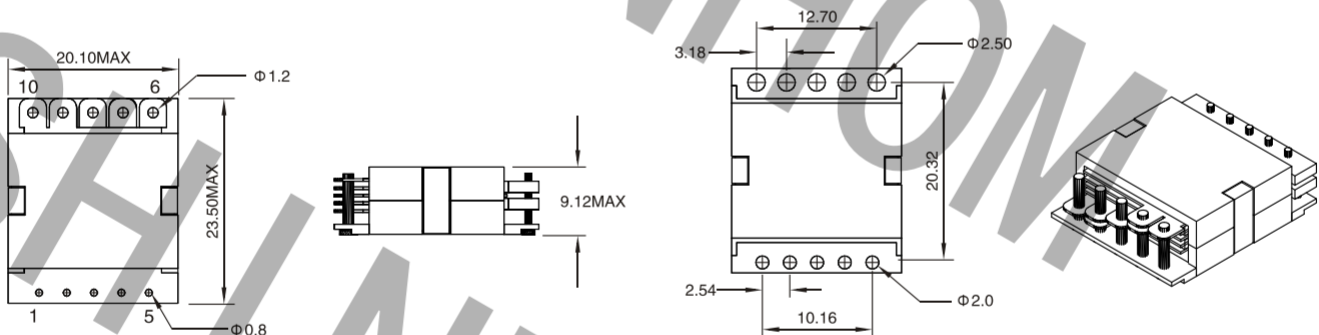
ELECTRICAL CHARACTERISTICS:

Part Number	Primary Inductance (uH Min)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)			Secondary	Turns Ratio		Primary Second Hi-Pot	Figure	M. Height
			A	B	AUX.		Primary (A/B)	Secondary			
TP25F0802	161.0	0.43	18.0	18.0	N/A	0.58:0.5	4T/4T	1T&1T	1500VDC	A	9.12mm
TP25F0902	204.0	0.43	18.0	20.0	N/A		4T/5T	1T&1T	1500VDC	A	9.12mm
TP25F1002	252.0	0.45	20.0	20.0	N/A		5T/5T	1T&1T	1500VDC	A	9.12mm
TP25F1102	304.0	0.55	20.0	26.0	N/A		5T/6T	1T&1T	1500VDC	A	9.12mm
TP25F1202	362.0	0.60	26.0	26.0	N/A	1.08:1.0	6T/6T	1T&1T	1500VDC	A	9.12mm
TP25F0803	161.0	0.43	18.0	18.0	N/A		4T/4T	2T&1T	1500VDC	B	9.12mm
TP25F0903	204.0	0.43	18.0	20.0	N/A		4T/5T	2T&1T	1500VDC	B	9.12mm
TP25F1003	252.0	0.45	20.0	20.0	N/A		5T/5T	2T&1T	1500VDC	B	9.12mm
TP25F1103	304.0	0.55	20.0	26.0	N/A	4.00	5T/6T	2T&1T	1500VDC	B	9.12mm
TP25F1203	362.0	0.60	26.0	26.0	N/A		6T/6T	2T&1T	1500VDC	B	9.12mm
TP25F0804	161.0	0.43	18.0	18.0	N/A		4T/4T	(1T:1T:1T:1T)	1500VDC	C	9.12mm
TP25F0904	204.0	0.43	18.0	20.0	N/A		4T/5T	(1T:1T:1T:1T)	1500VDC	C	9.12mm
TP25F1004	252.0	0.45	20.0	20.0	N/A	4.00	5T/5T	(1T:1T:1T:1T)	1500VDC	C	9.12mm
TP25F1104	304.0	0.55	20.0	26.0	N/A		5T/6T	(1T:1T:1T:1T)	1500VDC	C	9.12mm
TP25F1204	362.0	0.60	26.0	26.0	N/A		6T/6T	(1T:1T:1T:1T)	1500VDC	C	9.12mm

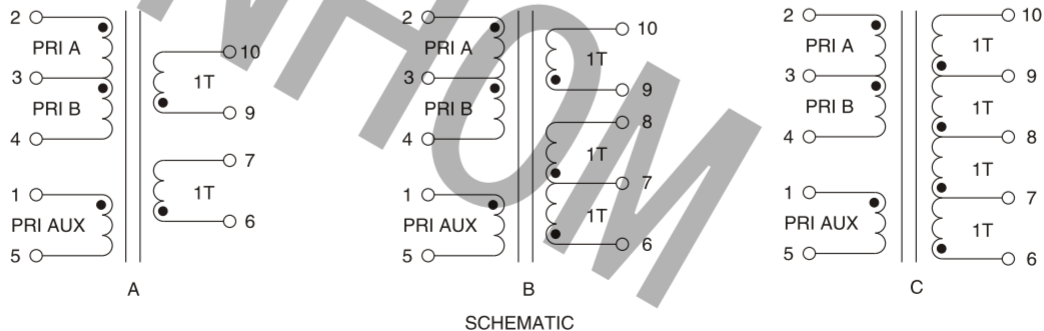
TECHNICAL INFORMATION

1. The inductance is measured on HP4284 between pins 2 – 4 at 100 kHz, 100 mVrms, 0 Adc.
2. The leakage inductance is measured between pins 2 – 4 with all other winding shorted.
3. All specifications typical at TA=25°C.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY-OUT



Note: All specifications subject to change without notice.

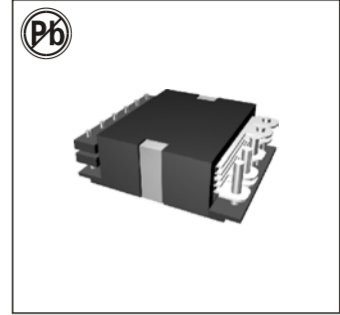
HIGH FREQUENCY 300W PLANAR TRANSFORMERS TP30 SERIES

FEATURES:

- Power Rating Up to 300 Watts
- High Efficiency of Over 98%
- High Power Density of 600 Watts Per Cubic Inch
- Footprint 29.6 mm × 25.40 mm
- Lower Profile of 9.0 mm and 10 mm
- High Isolation (operational) 1800 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

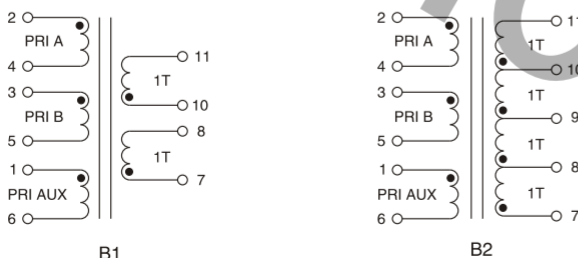
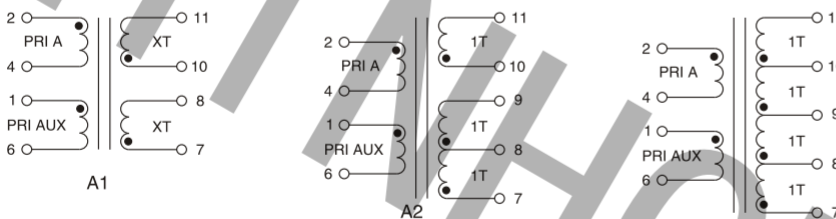
COMMON APPLICATIONS:

- High performance DC/DC converters.
- High efficiencies up to over 98 percent, high power density of 600 watts per cubic inch DC/DC converters.
- For forward, full-bridge, half-bridge and push-pull DC/DC converters.
- Adding a primary auxiliary winding or a small gap to be have more expanding of configurations.
- Input voltages between 18V and 75V, and output voltages from 52V down to 1.0V DC/DC converters.
- Telecommunications, industrial control systems.
- Automotive and heavy equipment vehicle systems



ELECTRICAL CHARACTERISTICS:

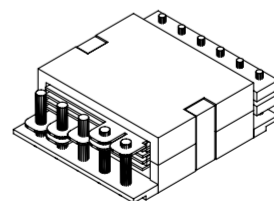
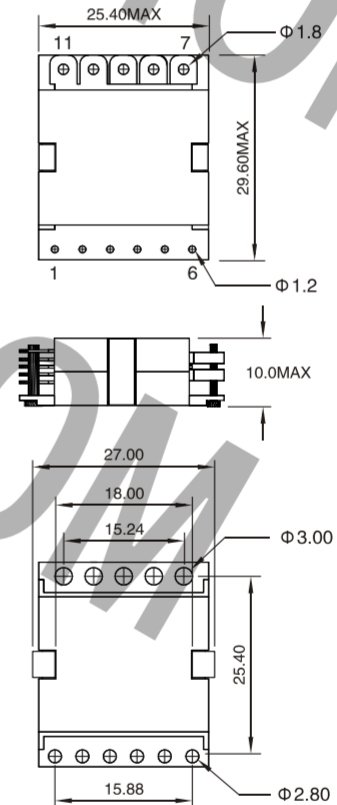
Part Number	Primary Inductance (uH Min)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)			Turns Ratio		Primary Second Hi-Pot	Figure	M. Height
			A	B	AUX.	Primary	Secondary			
TP30S0402	72.00	0.26	10			4T		1800VDC	A1	9.0mm
TP30S0502	112.5	0.26	12		468	5T (5T/aux)	1T & 1T	1800VDC		9.0mm
TP30S0602	162.0	0.26	20		154	6T (2T/aux.)		1800VDC		9.0mm
TP30S0702	220.5	0.26	48		158	7T (3T/aux.)		1800VDC		9.0mm
TP30S0802	288.0	0.26	58			8T		1800VDC	A2	9.0mm
TP30S0403	72.00	0.26	10			4T		1800VDC		9.0mm
TP30S0503	112.5	0.26	12		468	5T (5T/aux)	2T & 1T	1800VDC		9.0mm
TP30S0603	162.0	0.26	20		154	6T (2T/aux.)		1800VDC		9.0mm
TP30S0703	220.5	0.26	48		158	7T (3T/aux.)		1800VDC	A3	9.0mm
TP30S0803	288.0	0.26	58			8T		1800VDC		9.0mm
TP30S0404	72.00	0.26	10			4T		1800VDC		9.0mm
TP30S0504	112.5	0.26	12		468	5T (5T/aux)	4T (1T:1T:1T:1T)	1800VDC		9.0mm
TP30S0604	162.0	0.26	20		154	6T (2T/aux.)		1800VDC	A1	9.0mm
TP30S0704	220.5	0.26	48		158	7T (3T/aux.)		1800VDC		9.0mm
TP30S0804	288.0	0.26	58			8T		1800VDC		9.0mm
TP30S0414	72.00	0.28	10			4T		1800VDC		9.0mm
TP30S0514	112.5	0.26	12		468	5T (5T/aux)	7T & 7T	1800VDC	A1	9.0mm
TP30S0614	162.0	0.26	20		154	6T (2T/aux.)		1800VDC		9.0mm
TP30S0714	220.5	0.26	48		158	7T (3T/aux.)		1800VDC		9.0mm
TP30S0814	288.0	0.26	58			8T		1800VDC		9.0mm
TP30D0802	288.0	0.26	10	10		4T&4T		1800VDC	B1	10mm
TP30D1002	450.0	0.26	12	12	233	5T&5T (5T/aux)	1T & 1T	1800VDC		10mm
TP30D1202	648.0	0.26	20	20	76	6T&6T (2T/aux)		1800VDC		10mm
TP30D1402	882.0	0.26	48	48	78	7T&7T (3T/aux)		1800VDC		10mm
TP30D1602	1152	0.26	58	58		8T&8T		1800VDC	B2	10mm
TP30D0804	288.0	0.26	10	10		4T&4T	4T (1T:1T:1T:1T)	1800VDC		10mm
TP30D1004	450.0	0.26	12	12	233	5T&5T (5T/aux)		1800VDC		10mm
TP30D1204	648.0	0.26	20	20	76	6T&6T (2T/aux)		1800VDC		10mm
TP30D1404	882.0	0.26	48	48	78	7T&7T (3T/aux)		1800VDC	B2	10mm
TP30D1604	1152	0.26	58	58		8T&8T		1800VDC		10mm



TECHNICAL INFORMATION

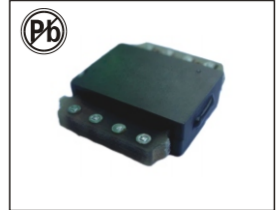
1. The inductance is measured with both primary windings connected in series where applicable (type D: 2 to 5 with 3 and 4 shorted, type S: 2 to 4 only).
2. The leakage inductance is measured with both primary windings connected in series where applicable in all other winding shorted.
3. All specifications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

PHYSICAL CHARACTERISTICS



HIGH FREQUENCY PLANAR TRANSFORMERS

TPER14 SERIES



FEATURES:

- Power rating up to 20W
- High frequency 400KHz~700KHz
- Operating temperature: -55°C to +125°C
- Insulation 1500V

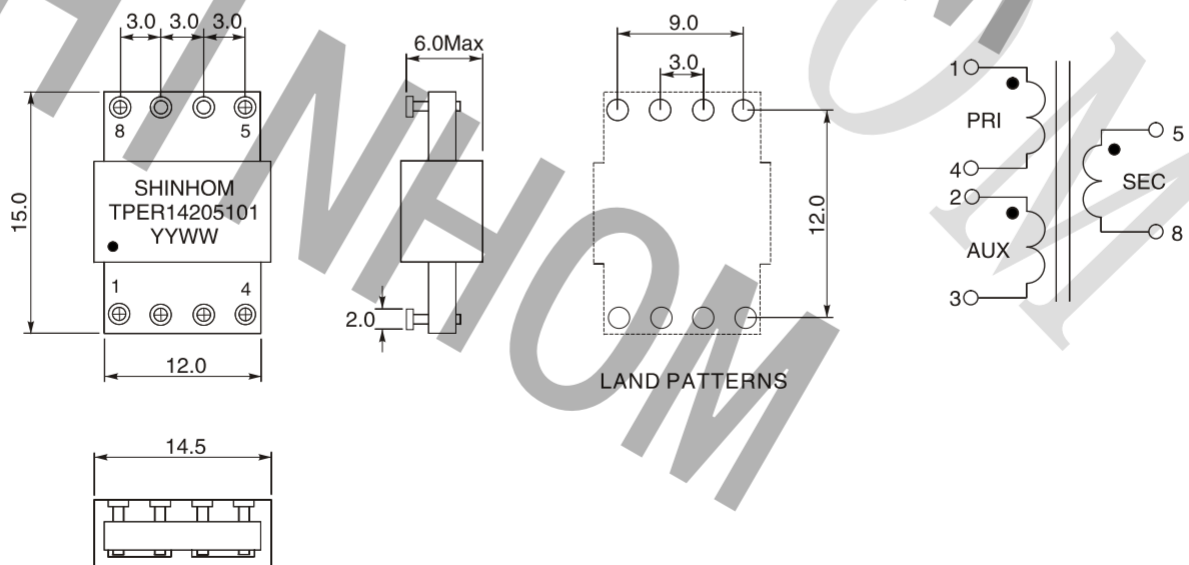
APPLICATION:

- Applied to power supply of low power module
- Applicable to aerospace, communications, rail transit, frequency converter, UPS, digital appliances, LED lighting and other fields

ELECTRICAL CHARACTERISTICS@25°C

Part Number	Power	Input voltage (V)	Output voltage (V)	Turns ratio pri:sec:aux	Inductance (uH)	Lk (uH)Max
TPER14306031	5-12W	12	3.3	6:3:12	6 ± 15%	0.3
TPER14306051			5	6:5:12	6 ± 15%	0.3
TPER14606101			12	6:10:12	6 ± 15%	0.3
TPER14311031		24	3.3	11:3:13	20 ± 15%	0.5
TPER14311051			5	11:5:13	20 ± 15%	0.5
TPER14311101			12	11:10:13	20 ± 15%	0.5
TPER14316031		48	3.3	16:3:14	65 ± 15%	0.5
TPER14316051			5	16:5:14	65 ± 15%	0.5
TPER14316101			12	16:10:14	65 ± 15%	0.5
TPER14205031	15-20W	12	3.3	5:3:N/A	>20	0.3
TPER14205051			5	5:5:N/A	>20	0.3
TPER14205101			12	5:10:N/A	>20	0.3
TPER14209031		24	3.3	9:3:N/A	>65	0.5
TPER14209041			5	9:4:N/A	>65	0.5
TPER14209101			12	9:10:N/A	>65	0.5
TPER14215031		48	3.3	15:3:N/A	>210	0.75
TPER14215041			5	15:4:N/A	>210	0.75
TPER14215101			12	15:10:N/A	>210	0.75

PHYSICAL CHARACTERISTICS & WINDING



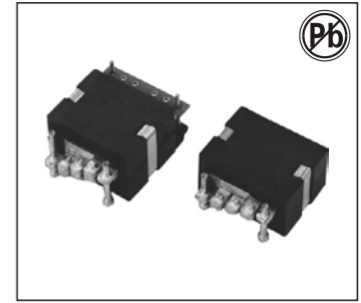
SMT HIGH CURRENT PLANAR INDUCTORS PE20 SERIES

FEATURES:

- High Thermal Efficiency & Energy Storage
- High Current Rating Up to 73 Amps
- Lower Profile of 7.4mm Max
- Wider Flexibility of Inductances
- Footprint 23.50mm × 19.50mm
- Operating Temperature -40°C to +130°C

COMMON APPLICATIONS:

- High density and high energy efficiency.
- High current DC/DC power supplies high current.
- The main windings inductor serves as an output choke, While the auxiliary windings controls, Input current to the PM(TI25S1604).
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



ELECTRICAL CHARACTERISTICS:

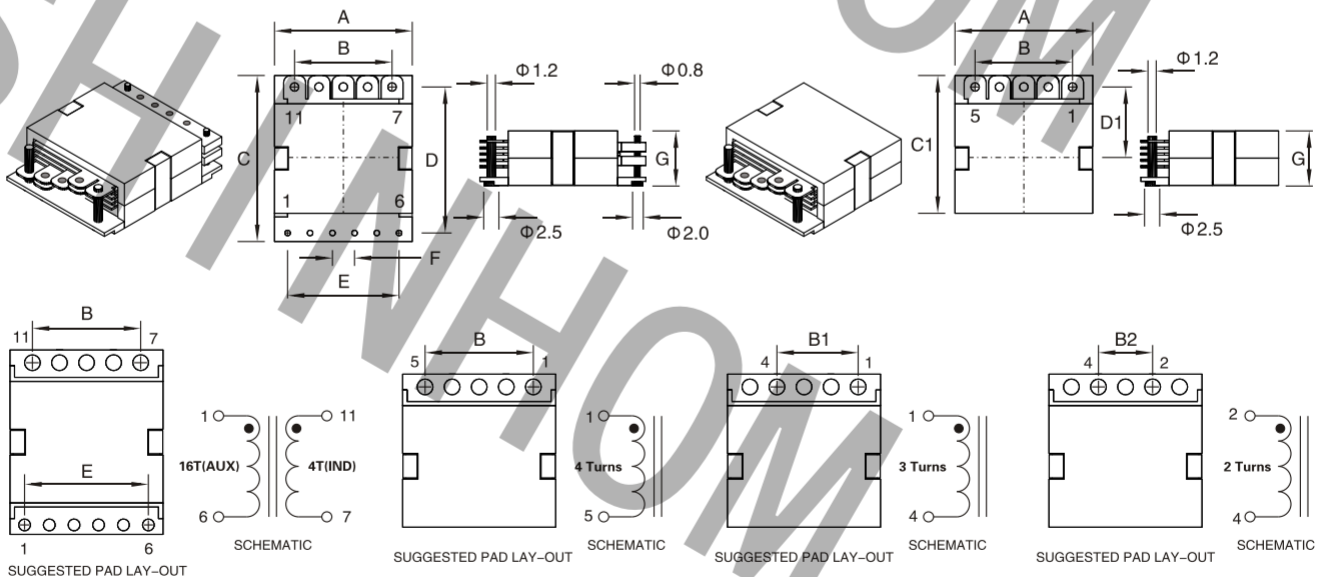
Part Number	Inductance @ 0 Adc (uH ± 10%)	Inductance @ 10 Adc (uH ± 15%)	IDC rated A dc	DCR (mΩ)Max		Turns Ratio		Main Aux. Hi-pot	IDC saturation (Amps)		IDC heating (Amps)
				Main	Aux.	Main	Aux.		@25°C	@100°C	
PE 20S1604	2.10	2.00	30.0	2.00	1500	4	16	1500	45	40	37.0
2 1/2 Turns											
PE 20D221	0.46	0.45	73.0	0.40	N/A	2	N/A	N/A	95	80	73
PE 20D222	0.67	0.63	55.0	0.40	N/A	2	N/A	N/A	63	53	73
PE 20D223	0.90	0.85	39.0	0.40	N/A	2	N/A	N/A	46	37	73
PE 20D224	1.12	1.05	30.0	0.40	N/A	2	N/A	N/A	35	30	73
PE 20D225	1.35	1.25	25.0	0.40	N/A	2	N/A	N/A	29	26	73
PE 20D226	1.56	1.45	21.0	0.40	N/A	2	N/A	N/A	24	22	73
2 Turns											
PE 20S121	0.46	0.45	53.0	0.8	N/A	2	N/A	N/A	95	80	52
PE 20S122	0.67	0.63	52.0	0.8	N/A	2	N/A	N/A	63	53	52
PE 20S123	0.90	0.85	39.0	0.8	N/A	2	N/A	N/A	46	37	52
PE 20S124	1.12	1.05	30.0	0.8	N/A	2	N/A	N/A	35	30	52
PE 20S125	1.35	1.25	26.0	0.8	N/A	2	N/A	N/A	29	26	52
PE 20S126	1.56	1.45	22.0	0.8	N/A	2	N/A	N/A	24	22	52
3 Turns											
PE 20S131	1.00	0.95	42.0	1.20	N/A	3	N/A	N/A	68	54	42
PE 20S132	1.50	1.45	36.0	1.20	N/A	3	N/A	N/A	43	35	42
PE 20S133	2.00	1.95	25.0	1.20	N/A	3	N/A	N/A	29	25	42
PE 20S134	2.50	2.45	20.0	1.20	N/A	3	N/A	N/A	23	21	42
PE 20S135	3.00	2.85	15.0	1.20	N/A	3	N/A	N/A	18	16	42
PE 20S136	3.50	3.45	12.0	1.20	N/A	3	N/A	N/A	15	13	42
4 Turns											
PE 20S141	1.78	1.65	37.0	1.60	N/A	4	N/A	N/A	55	43	37
PE 20S142	2.66	2.45	30.0	1.60	N/A	4	N/A	N/A	35	27	37
PE 20S143	3.55	3.35	17.0	1.60	N/A	4	N/A	N/A	20	18	37
PE 20S144	4.45	4.00	14.0	1.60	N/A	4	N/A	N/A	16	15	37
PE 20S145	5.33	4.85	11.0	1.60	N/A	4	N/A	N/A	13	12	37
PE 20S146	6.21	5.80	9.0	1.60	N/A	4	N/A	N/A	11	10	37

TECHNICAL INFORMATION

- Inductance of PE 20s1604 measured on Agilent/HP4284 between pins 7 & 11 at 100kHz, 0.1 Vrms.
- The IDC rated is either 85% of the IDC saturation or the IDC heating depending which is lower.
- The IDC saturation is the current which causes the inductance to drop by 15% of its nominal value.
- The IDC heating is the current which causes the temperature of the part to increase by approximately 45°C.

Note: All specifications subject to change without notice.

PHYSICAL CHARACTERISTICS



Dimensions

A	B	B1	B2	C	C1	D	D1	E	F	G
19.5MAX	12.70	9.53	6.35	23.5MAX	19.5	20.32	9.91	15.75	4.57	7.40MAX

HIGH FREQUENCY 60W PLANAR TRANSFORMERS

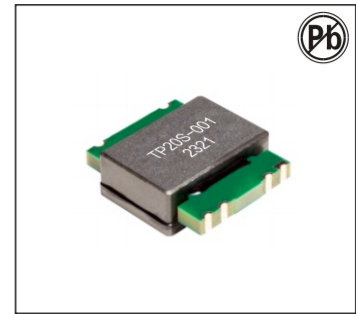
TP20S SERIES

FEATURES:

- Power Rating Up to 60 Watts
- High Efficiency
- Footprint 22 mm × 23.5 mm
- Lower Profile of 9.0 mm
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

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.
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



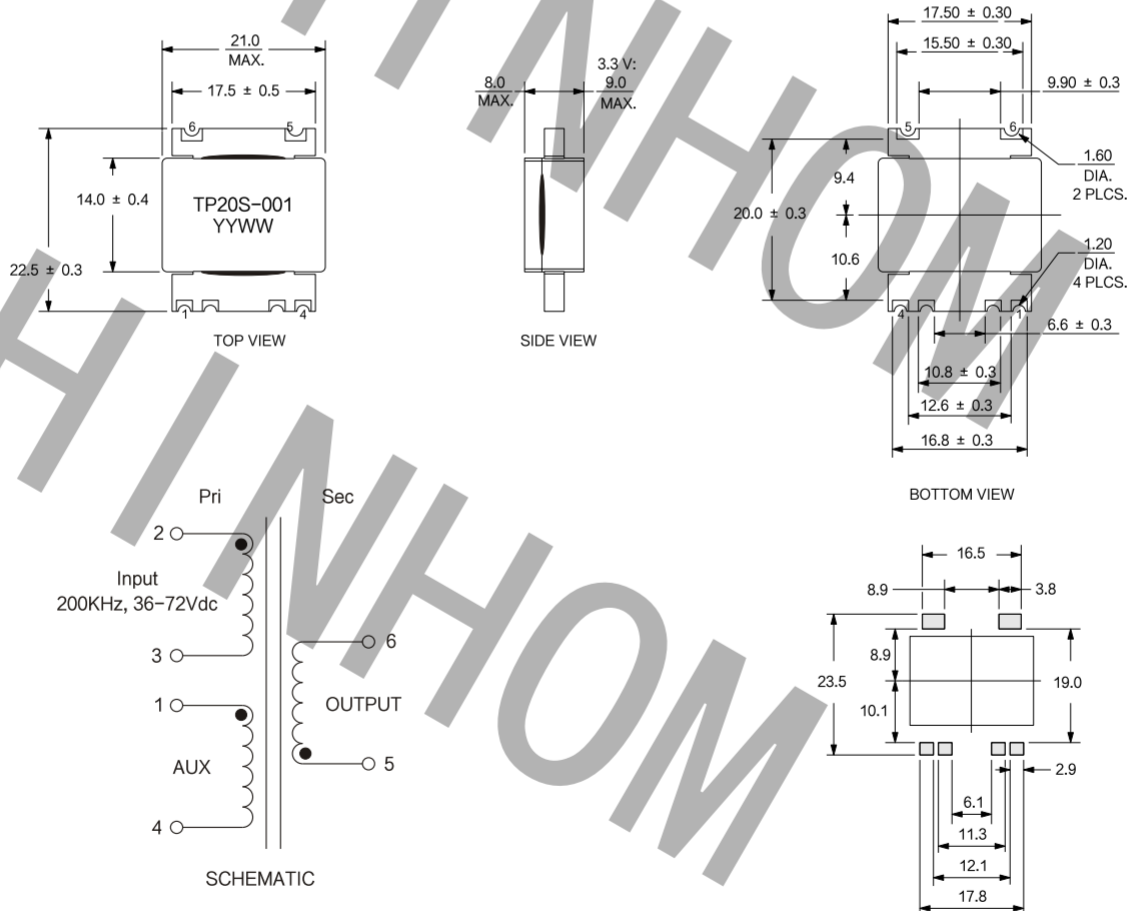
ELECTRICAL CHARACTERISTICS:

Part Number	Pri Inductance (uH ± 10%)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)			Turns Ratio			Isat (A)	Output	Power (W)
			Pri	Sec	Aux	Pri	Sec	Aux			
TP20S001	21.0	0.5	90	11	350	1	0.166	0.666	5.4	3.3V/18A	60
TP20S002	21.0	0.5	40	8	220	1	0.25	0.5	5.4	5.0V/12A	60
TP20S003	21.0	0.5	40	14	220	1	0.5	0.5	6.0	12V/5.0A	60
TP20S004	21.0	0.5	40	33	220	1	1	0.5	6.0	24V/2.4A	60

Notes:

- 1.Measuring conditions 100 kHz, 1V.
- 2.Leakage inductance is for the primary and is measured with the secondary winding shorted.
- 3.DC current at 25°C that causes an inductance drop of <15% from its value without current.
- 4.HI-POT: Pri---Sec:1500VAC/2mAV5S, Pri,Sec-Core:500VAC/2mA/5S.
- 5.Output is for the sec. Output of the aux winding is 12 V.30mA

PHYSICAL CHARACTERISTICS



Note: All specifications subject to change without notice.

HIGH FREQUENCY 71W PLANAR TRANSFORMERS

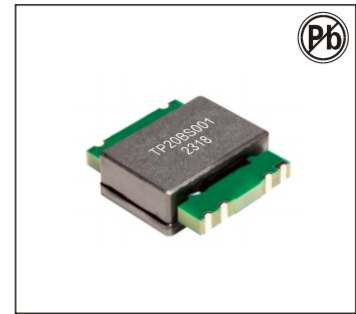
TP20BS SERIES

FEATURES:

- Power Rating Up to 71 Watts
- High Efficiency
- Footprint 22 mm × 23.5 mm
- Lower Profile of 9.0 mm
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

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.
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



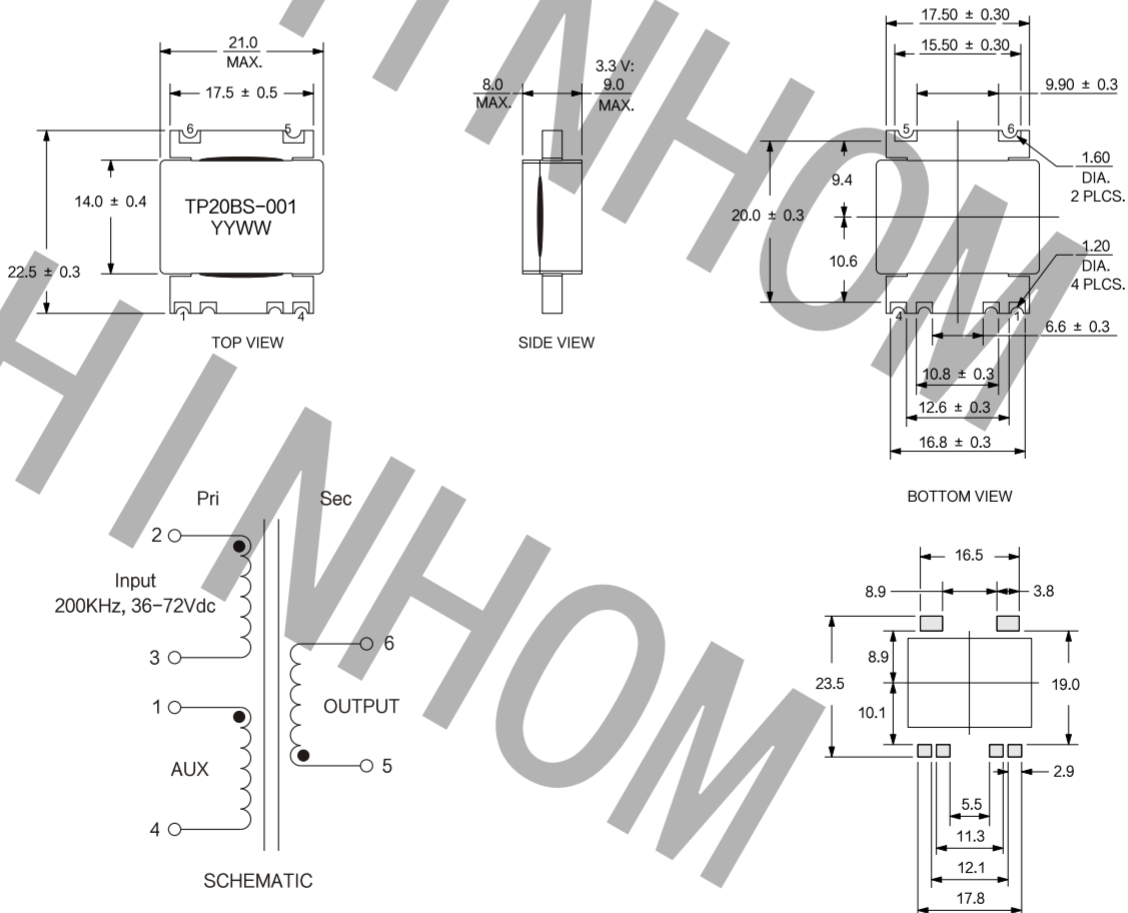
ELECTRICAL CHARACTERISTICS:

Part Number	Pri Inductance (uH ± 10%)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)			Turns Ratio			Isat (A)	Output	Power (W)
			Pri	Sec	Aux	Pri	Sec	Aux			
TP20BS001	18.0	0.5	90	9	350	1	0.166	0.666	6.3	3.3V/21A	71
TP20BS002	18.0	0.5	40	8	220	1	0.25	0.5	6.3	5.0V/14A	71
TP20BS003	18.0	0.5	40	14	220	1	0.5	0.5	6.6	12V/5.9A	71
TP20BS004	18.0	0.5	40	33	220	1	1	0.5	6.6	24V/2.9A	71

Notes:

- 1.Measuring conditions 100 kHz, 1V.
- 2.Leakage inductance is for the primary and is measured with the secondary winding shorted.
- 3.DC current at 25°C that causes an inductance drop of <15% from its value without current.
- 4.HI-POT: Pri---Sec: 1500VAC/2mA/5S, Pri, Sec-Core: 500VAC/2mA/5S.
- 5.Output is for the sec. Output of the aux winding is 12 V.30mA

PHYSICAL CHARACTERISTICS



Note: All specifications subject to change without notice.

HIGH FREQUENCY 90W PLANAR TRANSFORMERS

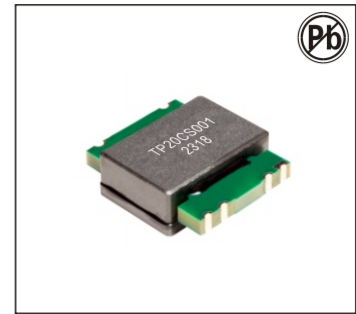
TP20CS SERIES

FEATURES:

- Power Rating Up to 90 Watts
- High Efficiency
- Footprint 22 mm × 23.5 mm
- Lower Profile of 9.0 mm
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

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.
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



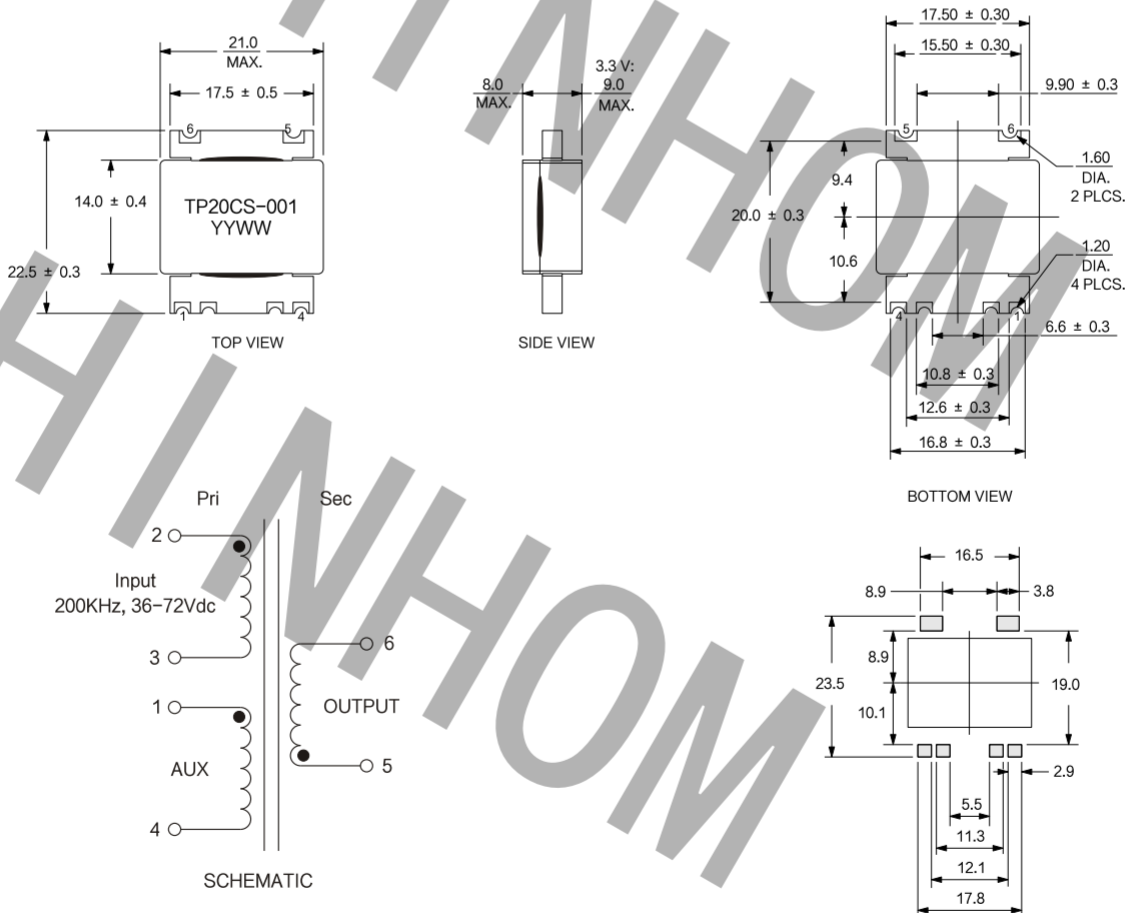
ELECTRICAL CHARACTERISTICS:

Part Number	Pri Inductance (uH Min)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)			Turns Ratio			Output	Power (W)
			Pri	Sec	Aux	Pri	Sec	Aux		
TP20CS001	280	0.5	90	8	350	1	0.166	0.666	3.3V/27A	90
TP20CS002	280	0.5	40	2.5	220	1	0.25	0.5	5.0V/18A	90
TP20CS003	280	0.5	40	8	220	1	0.5	0.5	12V/7.5A	90
TP20CS004	280	0.5	40	33	220	1	1	0.5	24V/3.7A	90

Notes:

- 1.Measuring conditions 100 kHz, 1V.
- 2.Leakage inductance is for the primary and is measured with the secondary winding shorted.
- 3.DC current at 25°C that causes an inductance drop of <15% from its value without current.
- 4.HI-POT: Pri---Sec:1500VAC/2mA/5S, Pri,Sec-Core:500VAC/2mA/5S.
- 5.Output is for the sec. Output of the aux winding is 12 V.30mA

PHYSICAL CHARACTERISTICS



Note: All specifications subject to change without notice.

HIGH FREQUENCY 120W PLANAR TRANSFORMERS

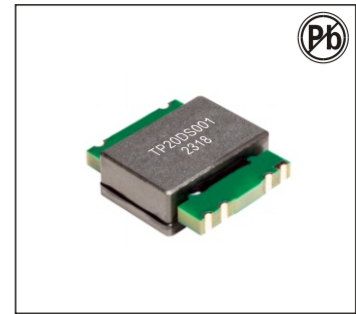
TP20DS SERIES

FEATURES:

- Power Rating Up to 120 Watts
- High Efficiency
- Footprint 22 mm × 23.5 mm
- Lower Profile of 9.0 mm
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40°C to +125°C

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.
- Telecommunications, industrial control systems,
- Automotive and heavy equipment vehicle systems



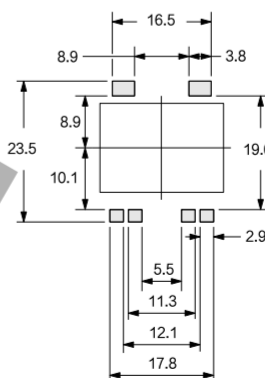
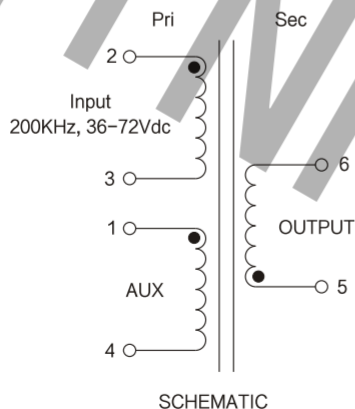
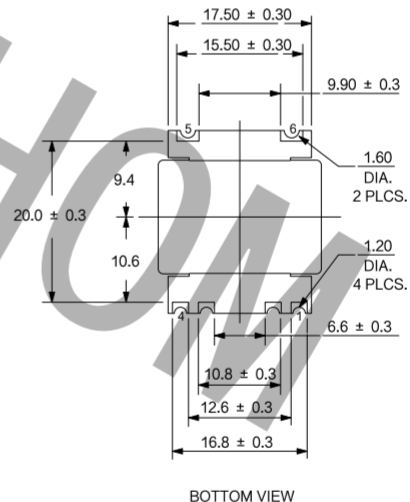
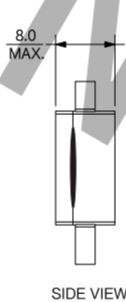
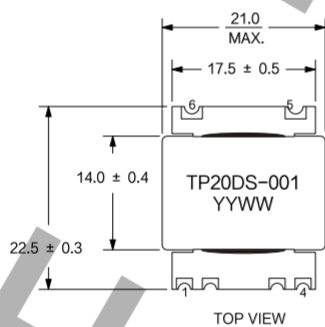
ELECTRICAL CHARACTERISTICS:

Part Number	Pri Inductance (uH Min)	Leakage Inductance (uH Max)	DC Resistance (mΩ Max)			Turns Ratio			Output	Power (W)
			Pri	Sec	Aux	Pri	Sec	Aux		
TP20DS001	280	0.5	90	8	350	1	0.166	0.666	3.3V/36A	120
TP20DS002	280	0.5	40	2.5	220	1	0.25	0.5	5.0V/24A	120
TP20DS003	280	0.5	40	8	220	1	0.5	0.5	12V/10A	120
TP20DS004	280	0.5	40	33	220	1	1	0.5	24V/5.0A	120

Notes:

- 1.Measuring conditions 100 kHz, 1V.
- 2.Leakage inductance is for the primary and is measured with the secondary winding shorted.
- 3.DC current at 25°C that causes an inductance drop of <15% from its value without current.
- 4.HI-POT: Pri---Sec: 1500VAC/2mA/5S, Pri, Sec-Core: 500VAC/2mA/5S.
- 5.Output is for the sec. Output of the aux winding is 12 V.30mA

PHYSICAL CHARACTERISTICS



Note: All specifications subject to change without notice.