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℃ to +130℃

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 @ IDC rated (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℃	@100℃	
PE 20S1604	2.10	2.00	30.0	2.00	1500	4	16	1500	45	40	37.0
2//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

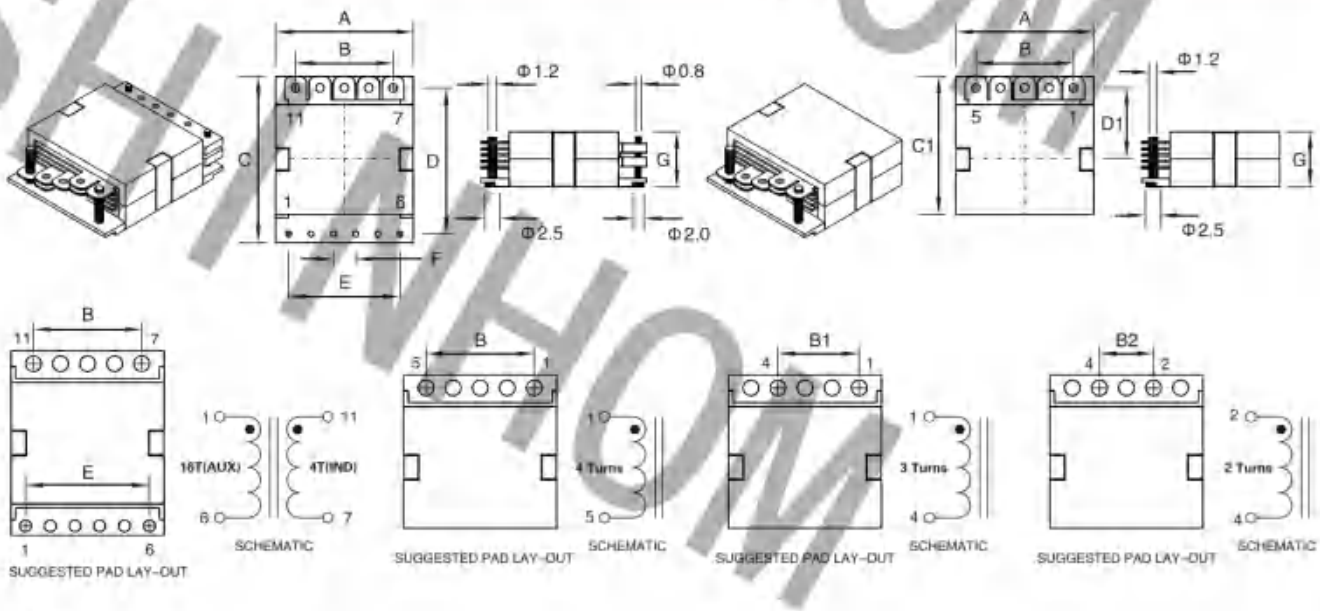
Part Number	Inductance @ 0 Adc (uH ± 10%)	Inductance @ IDC rated (uH ± 15%)	IDC rated A.dc	DCR (mΩ) Max		Turns Ratio		Main Aux. Hi-pot	IDC saturation (Amps)		IDC heating (Amps)
				Main	Aux.	Main	Aux.		@25℃	@100℃	
PE 20S1604	2.10	2.00	30.0	2.00	1500	4	16	1500	45	40	37.0
3 Turns											
PE 20S131	1.00	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	15	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 Agilient/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℃.

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 15W PLANAR TRANSFORMERS
TP14 SERIES

FEATURES:

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

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

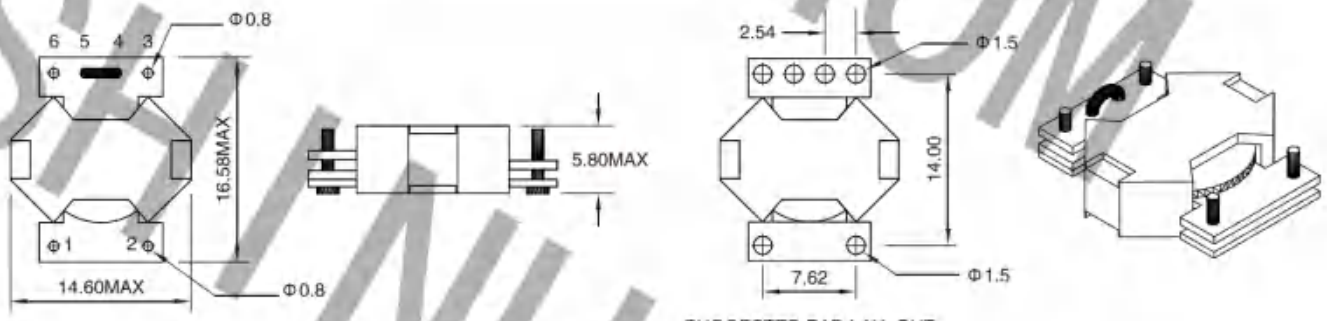
Part Number	Vin	Vout & Iout
TP14D0601	18–36Vdc	1.2V@12.5A–1.8V@8.33A
TP14D0602	18–36Vdc	2.5V@6.00A–3.3V@4.55A
TP14D0603	18–36Vdc	5.0V@3.00A
TP14D0606	18–36Vdc	8.0V@1.85A–10V@1.50A
TP14D0608	18–36Vdc	12V@1.25A–15V@1.00A
TP14D0610	18–36Vdc	16V@0.93A–18V@0.833A
TP14D1201	36–75Vdc	1.2V@12.5A–1.8V@8.33A
TP14D1202	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.

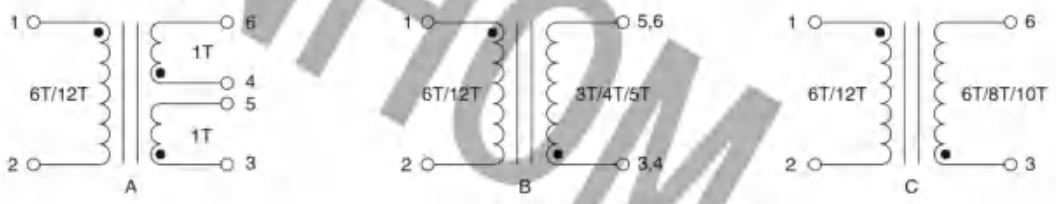
TECHNICAL INFORMATION

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 TA=25℃ ± 5℃.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY–OUT



SCHEMATIC

Note:All specifications subject to change without notice.

SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086–29–87851838 Fax:0086–29–87851840

SHINHOM

HIGH FREQUENCY 30W PLANAR TRANSFORMERS

TP18 SERIES

FEATURES:

- Power Rating Up to 30 Watts
- High Efficiency
- Footprint 19.60 mm × 18.0 mm
- Lower Profile of 7.4 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 300 kHz–3.0 MHz
- Operating Temperature –40℃ to +125℃

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.						
TP18D0601	48.0	0.50	50.0	N/A	N/A	1.50	6T	1T//1T	1500VDC	A	7.4mm
TP18D0602	48.0	0.50	50.0	N/A	N/A	3.00	6T	1T+1T	1500VDC	A	7.4mm
TP18D0603	48.0	0.40	50.0	N/A	N/A	20.0	6T	3T	1500VDC	B	7.4mm
TP18D0606	48.0	0.40	50.0	N/A	N/A	40.0	6T	6T	1500VDC	C	7.4mm
TP18D0608	48.0	0.30	50.0	N/A	N/A	60.0	6T	8T	1500VDC	C	7.4mm
TP18D0610	48.0	0.30	50.0	N/A	N/A	80.0	6T	10T	1500VDC	C	7.4mm
TP18D1201	190	1.50	156	N/A	N/A	1.50	12T	1T//1T	1500VDC	A	7.4mm
TP18D1202	190	1.50	156	N/A	N/A	3.00	12T	1T+1T	1500VDC	A	7.4mm
TP18D1203	190	1.30	156	N/A	N/A	20.0	12T	3T	1500VDC	B	7.4mm
TP18D1206	190	1.30	156	N/A	N/A	40.0	12T	6T	1500VDC	C	7.4mm
TP18D1208	190	1.15	156	N/A	N/A	60.0	12T	8T	1500VDC	C	7.4mm
TP18D1210	190	1.15	156	N/A	N/A	80.0	12T	10T	1500VDC	C	7.4mm

APPLICATION OF CONFIGURATION

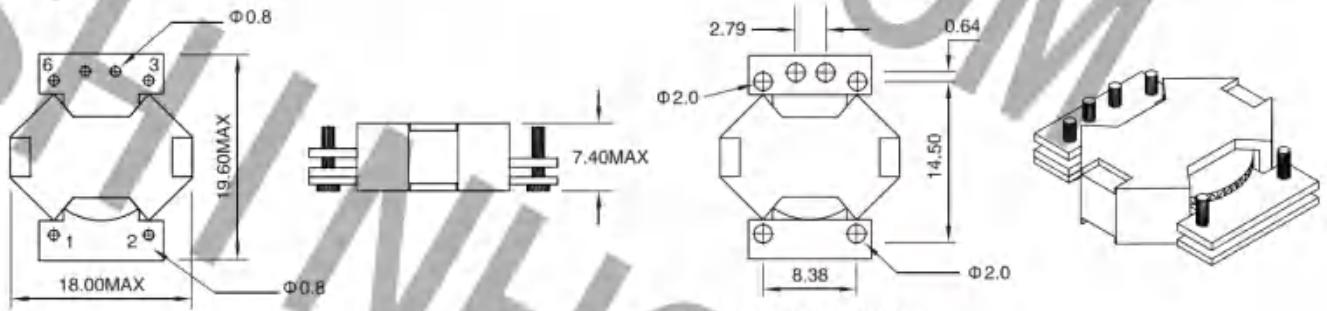
Part Number	Vin	Vout & Iout
TP18S0601	18–36Vdc	1.2V@25.0A–1.8V@16.7A
TP18S0602	18–36Vdc	2.5V@12.0A–3.3V@9.00A
TP18D0603	18–36Vdc	5.0V@6A
TP18D0606	18–36Vdc	8.0V@3.75A–10V@3.00A
TP18D0608	18–36Vdc	12V@2.50A–15V@2.00A
TP18D0610	18–36Vdc	16V@1.88A–18V@1.67A
TP18D1201	36–75Vdc	1.2V@25.0A–1.8V@16.7A
TP18D1202	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.

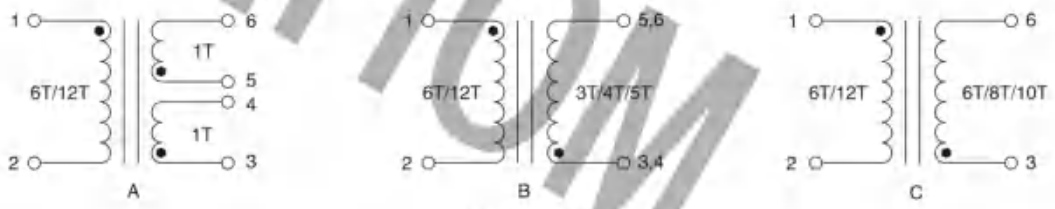
TECHNICAL INFORMATION

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℃.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY–OUT



SCHEMATIC

Note:All specifications subject to change without notice.

SHINHOM

HIGH FREQUENCY 100W PLANAR TRANSFORMERS

TP20A SERIES

FEATURES:

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

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.						
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

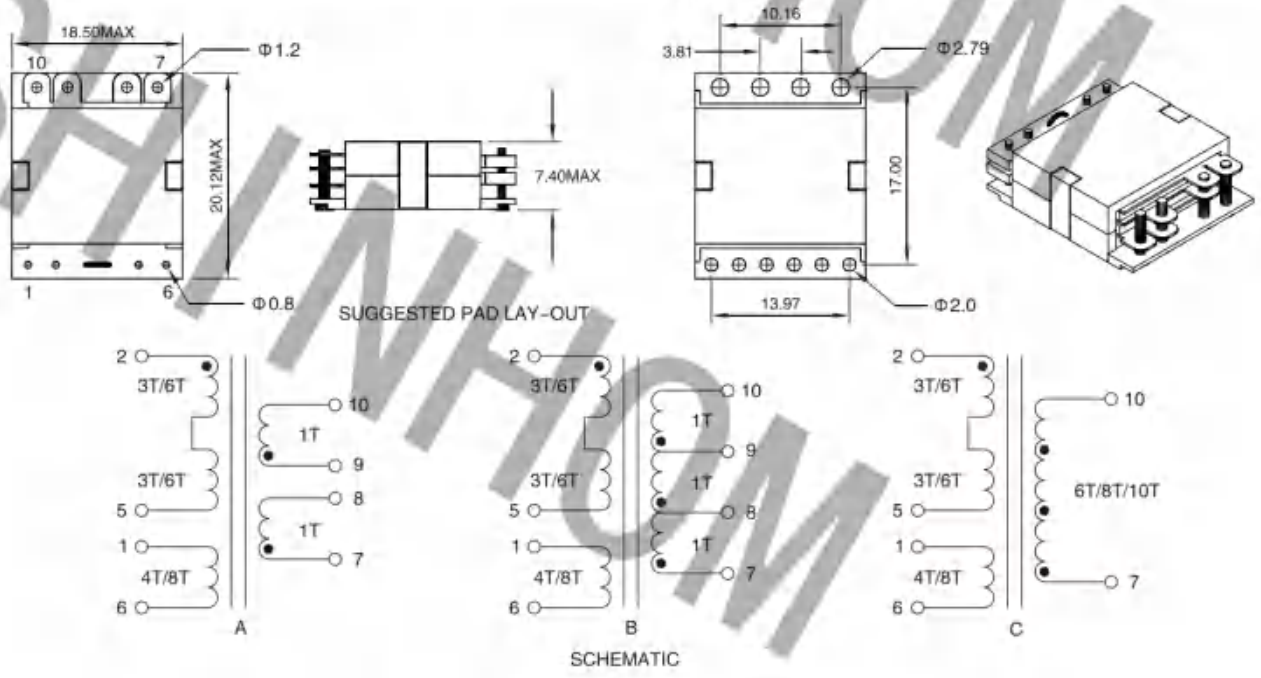
Part Number	Vin	Vout & Iout
TP20A0601	18–36Vdc	1.2V@55.0A–1.8V@50.0A
TP20A0602	18–36Vdc	2.5V@34.0A–3.3V@30.0A
TP20A0603	18–36Vdc	5.0V@20A
TP20A0606	18–36Vdc	8.0V@12.5A–10V@10.0A
TP20A0608	18–36Vdc	12V@8.33A–15V@6.67A
TP20A0610	18–36Vdc	16V@6.25A–18V@5.56A
TP20A1201	36–75Vdc	1.2V@55.0A–1.8V@50.0A
TP20A1202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

PHYSICAL CHARACTERISTICS



Note:All specifications subject to change without notice.

SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086–29–87851838 Fax:0086–29–87851840

SHINHOM

HIGH FREQUENCY 75W PLANAR TRANSFORMERS

TP20B SERIES

FEATURES:

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

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 Secend 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

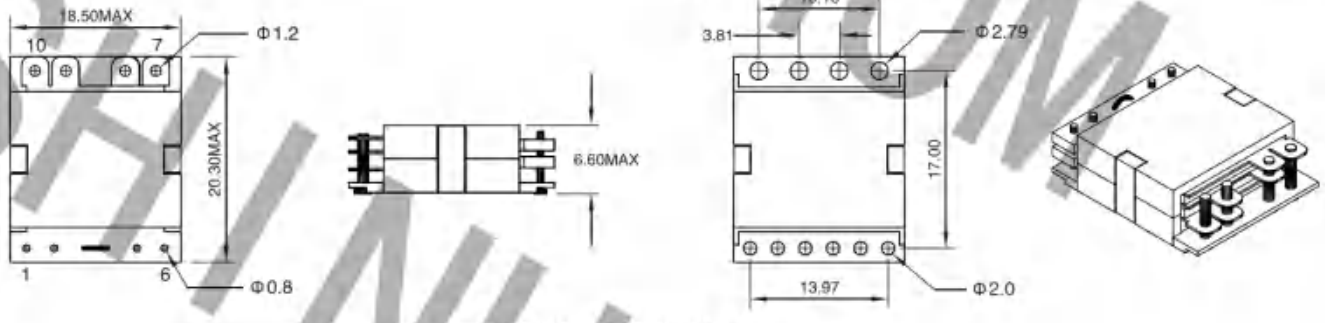
Part Number	Vin	Vout & Iout
TP20B0601	18~36Vdc	1.2V@41.6A ~1.8V@37.5A
TP20B0602	18~36Vdc	2.5V@25.5A ~ 3.3V@22.7A
TP20B0603	18~36Vdc	5.0 V @ 15 A
TP20B0606	18~36Vdc	8.0V@9.37A ~ 10V@7.50A
TP20B0608	18~36Vdc	12V@6.25A ~ 15V@5.00A
TP20B0610	18~36Vdc	16V@4.68A ~ 18V@4.16A
TP20B1201	36~75Vdc	1.2V@41.6A ~1.8V@37.5A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

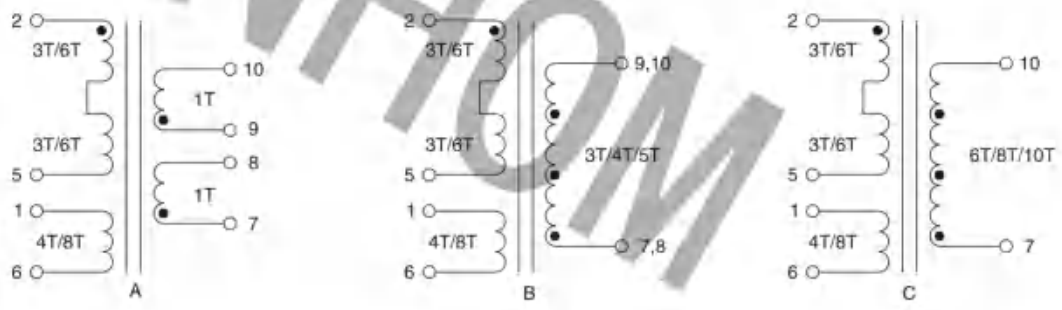
TECHNICAL INFORMATION

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℃.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY-OUT



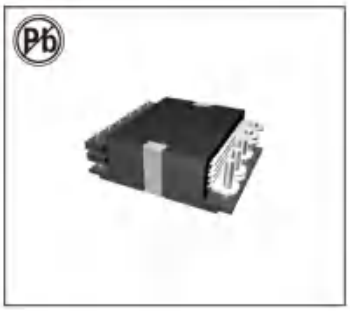
SCHEMATIC

Note:All specifications subject to change without notice.

SHINHOM

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 x 20.10 mm
- Lower Profile of 9.12 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40℃ to +125℃

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

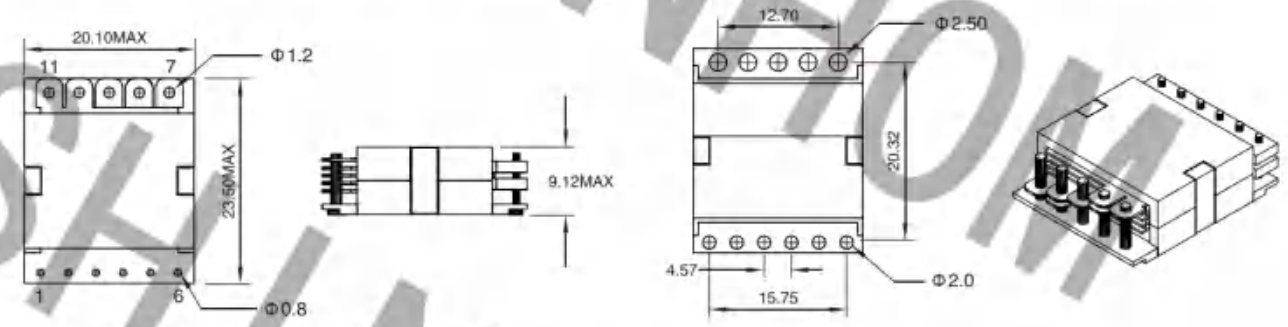
ELECTRICAL CHARACTERISTICS:

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 (A/B)	Secondary			
			A	B	AUX.						
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	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

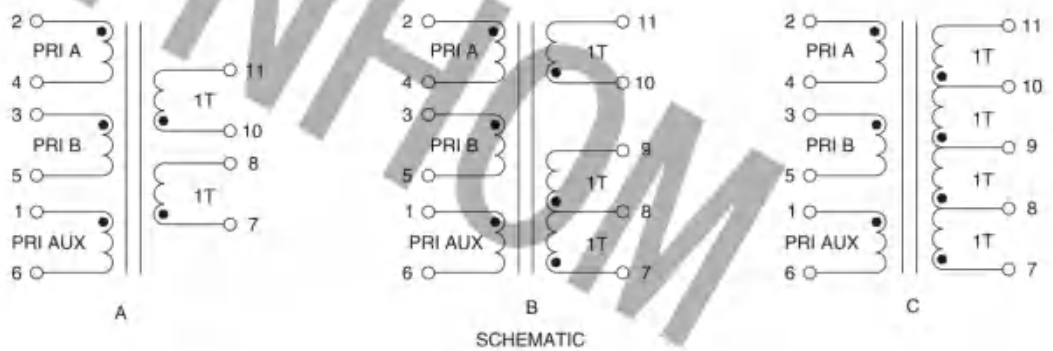
TECHNICAL INFORMATION

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℃.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY–OUT



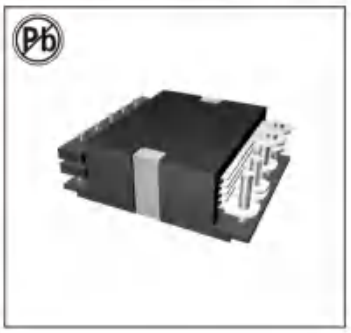
Note:All specifications subject to change without notice.

SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086–29–87851838 Fax:0086–29–87851840

SHINHOM

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 x 20.10 mm
- Lower Profile of 9.12 mm
- High Isolation (operational) 1500 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40℃ to +125℃

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

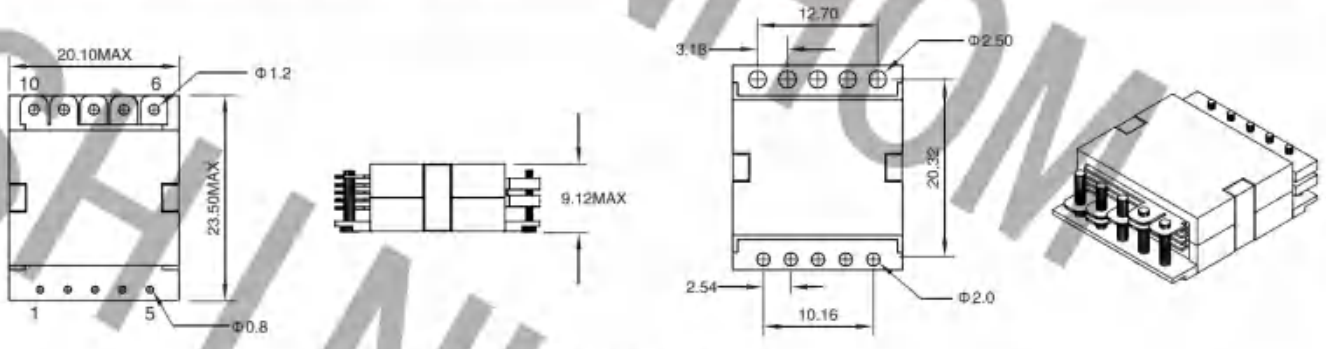
ELECTRICAL CHARACTERISTICS:

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

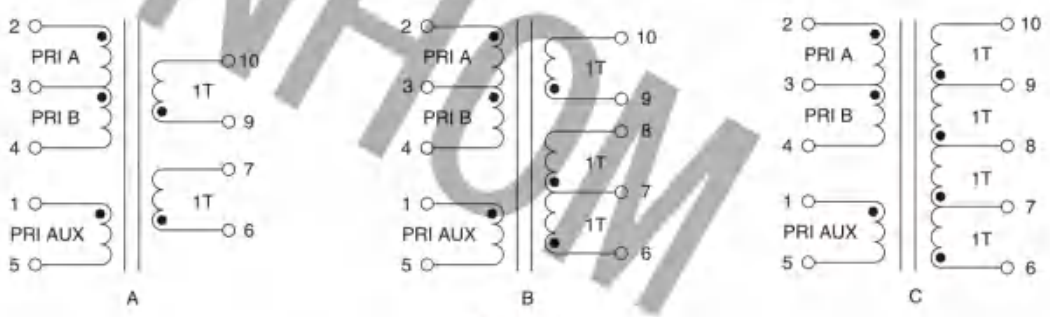
TECHNICAL INFORMATION

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℃.

PHYSICAL CHARACTERISTICS



SUGGESTED PAD LAY–OUT



SCHEMATIC

SHINHOM

Note:All specifications subject to change without notice.

HIGH FREQUENCY 300W PLANAR TRANSFORMERS

TP30 SERIES

FEATURES:

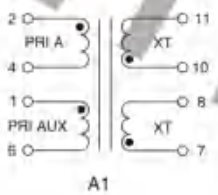
- Power Rating Up to 300 Watts
- High Efficiency of Over 98%
- High Power Density of 600 Watts Per Cubic Inch
- Footprint 29.6 mm x 25.40 mm
- Lower Profile of 9.0 mm and 10 mm
- High Isolation (operational) 1800 Vdc
- High Frequency 200 kHz–700 kHz
- Operating Temperature –40℃ to +125℃

COMMON APPLICATIONS:

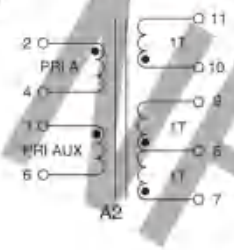
- High performance DC/DC converters.
- High efficiencies up to over 98 percent, high power density of 600 watts per cubic inch DC/DC converters.
- For forward, full–bridge, half–bridge and push–pull DC/DC converters.
- Adding a primary auxiliary winding or a small gap to be have more expanding of configurations.
- 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:

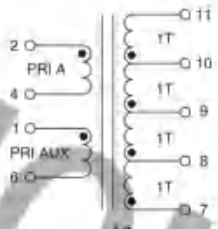
Part Number	Primary Inductance (uH Min.)	Leakage Inductance (uH Max.)	DC Resistance (mΩ Max.) Primary A	Primary B	Primary AUX.	Secondary	Turns Ratio Primary	Secondary	Primary Second Hi-Pot	Package	M. Height
TP30S0402	72.00	0.26	10			1.20&1.20	4T	1T & 1T	1800VDC	A1	9.0mm
TP30S0502	112.5	0.26	12		468		5T (5T/aux)		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		9.0mm
TP30S0403	72.00	0.26	10			1.60&0.60	4T	2T & 1T	1800VDC	A2	9.0mm
TP30S0503	112.5	0.26	12		468		5T (5T/aux)		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		9.0mm
TP30S0803	288.0	0.26	58				8T		1800VDC		9.0mm
TP30S0404	72.00	0.26	10			4.8	4T	4T (1T:1T:1T:1T)	1800VDC	A3	9.0mm
TP30S0504	112.5	0.26	12		468		5T (5T/aux)		1800VDC		9.0mm
TP30S0604	162.0	0.26	20		154		6T (2T/aux.)		1800VDC		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	0.26	10			42&42	4T	2T & 2T	1800VDC	A1	9.0mm
TP30S0514	112.5	0.26	12		468		5T (5T/aux)		1800VDC		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		0.60&0.60	4T&4T	1T & 1T	1800VDC	B1	10mm
TP30D1002	450.0	0.26	12	12	233		5T&5T (5T/aux)		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		10mm
TP30D0804	288.0	0.26	10	10		4.8	4T&4T	4T (1T:1T:1T:1T)	1800VDC	B2	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		10mm
TP30D1804	1152	0.26	58	58			8T&8T		1800VDC		10mm



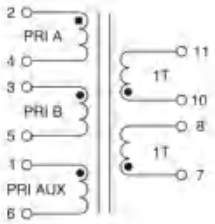
A1



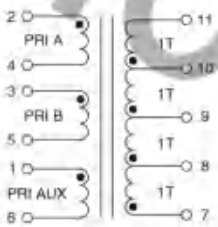
A2



A3



B1

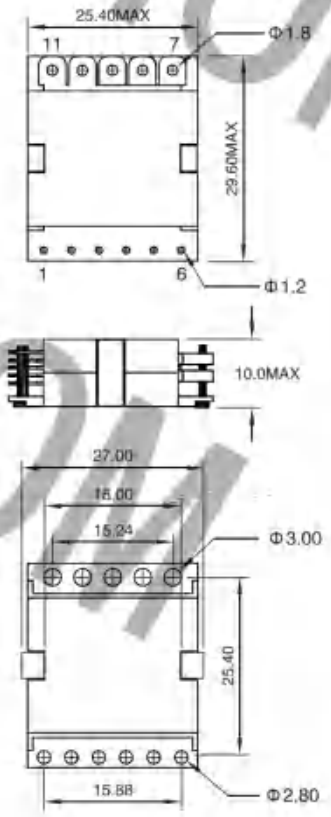


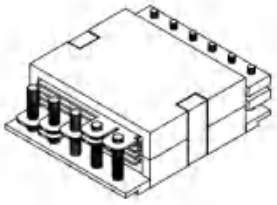
B2

TECHNICAL INFORMATION

1. The inductance is measured with both primary windings connected in series where applicable (type D: 2 to 5 with3 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℃.

PHYSICAL CHARACTERISTICS





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Note:All specifications subject to change without notice.

SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086–29–87851838 Fax:0086–29–87851840

HIGH FREQUENCY PLANAR TRANSFORMERS

TPER14 SERIES

FEATURES:

- Power rating up to 20W
- High frenquency 400HKz~700KHz
- Operating temperature: –55℃ to +125℃
- Insolation 1500V

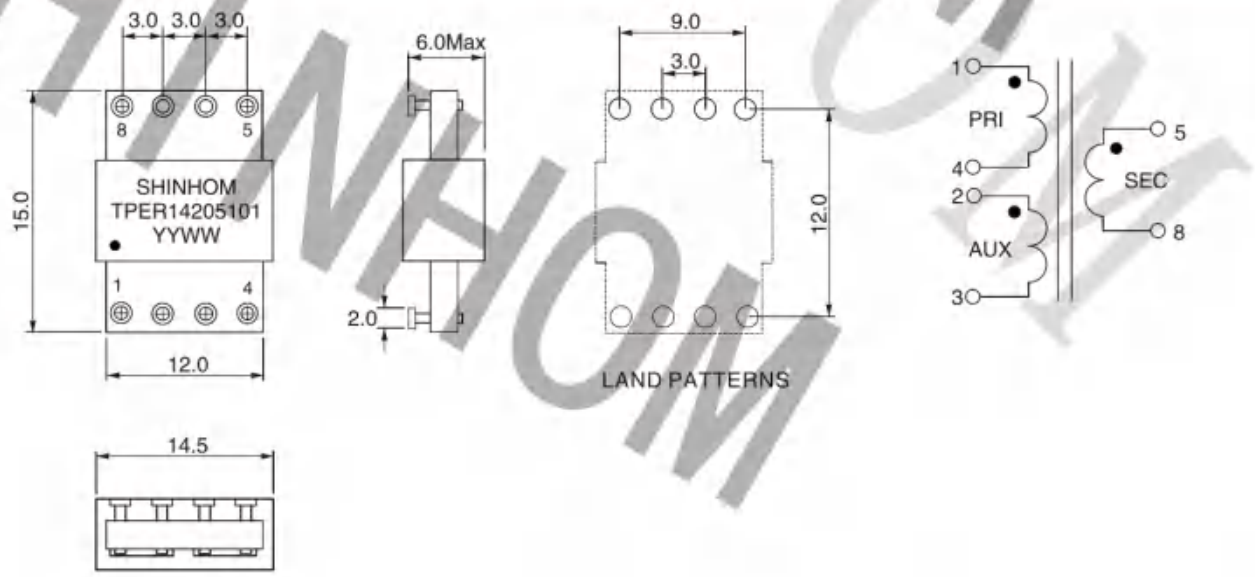
APPLICATION:

- 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℃

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



SHINHOM

MAX253 COMPATIBLE CONVERTER TRANSFORMER

HL/HS06 SERIES

FEATURES:

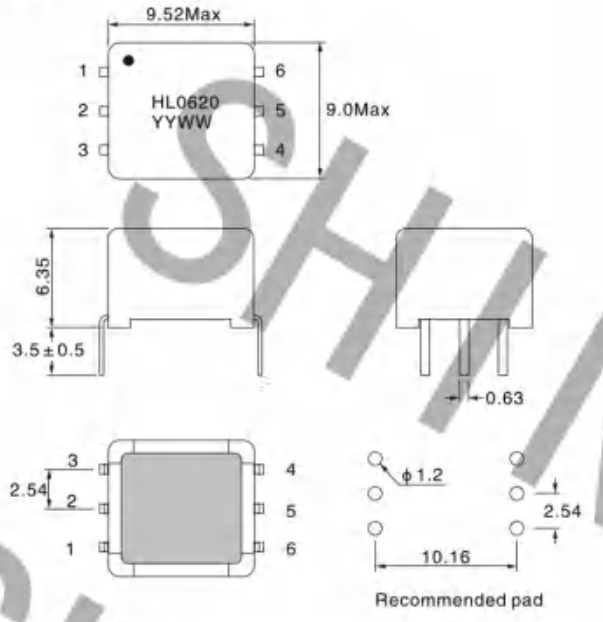
- RoHS compliant
- Maxim MAX253 compatible
- 3.3V and 5V versions
- Isolation to 4kVdc
- Frequency range to 500kHz
- Toroidal construction
- Industry–standard pinout
- UL 94 V–0 package materials
- Fully encapsulated
- Low profile

DESCRIPTION:

The HL/HS06 series of converter transformers are specifically designed for use with the MAX253 chip set to provide isolated power supplies. The 5V version can supply 1W and the 3.3V version can supply 500mW. A centre tapped Secondary winding allows for full bridge, half bridge or voltage doubling.

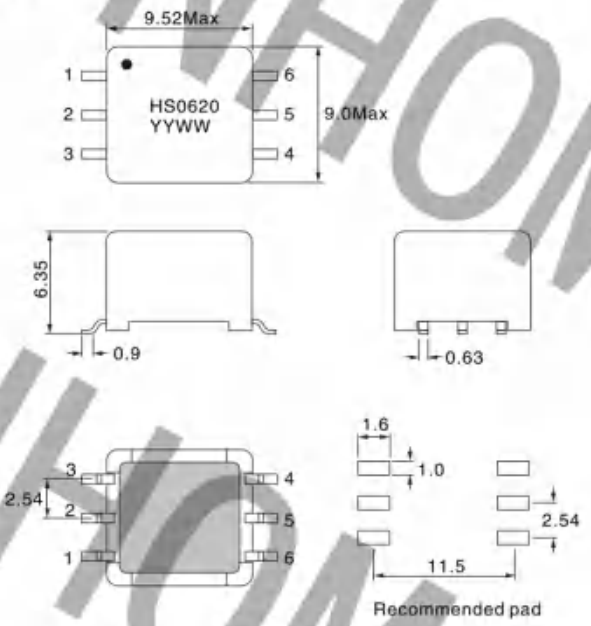
SHAPE AND DIMENSIONS Dimensions(mm)

HL06XX



Recommended pad

HS06XX



Recommended pad

ELECTRICAL CHARACTERISTICS:

Part No.	Input voltage (V)	Output voltage (V)	Max. output current (mA)	Isolation voltage (Vdc)	Turns ratio
HL0620	5.0	5.0	200	1500	1:1.31
HS0620	5.0	5.0	200	1500	1:1.31
HL0621	3.3	5.0	100	1500	1:2.27
HS0621	3.3	5.0	100	1500	1:2.27
HL0622	3.3	5.0	100	4000	1:2.14
HS0622	3.3	5.0	100	4000	1:2.14
HL0623	5.0	5.0	200	4000	1:1.33
HS0623	5.0	5.0	200	4000	1:1.33

Notes:

Operating free air temperature range .....–40℃~+85℃

Storage temperature range .....–50℃~+125℃

Lead Temperature 1.5mm from case for 10 seconds.....300℃

Peak current I_{pk}.....400mA

SHINHOM

HL/HS0620

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L_P	100KHz,250mV	0.6	0.83	1.10	mH
Secondary Inductance, L_S	100KHz,250mV	1.1	1.40	1.70	mH
Leakage Inductance, L_L	100KHz,250mV		0.35	1.00	uH
Interwinding Capacitance, C_{WW}	100KHz,250mV		30	50	pF
Primary D.C. Resistance, R_{DC}	>0.1Vdc		0.70	1.50	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	40	50		Vus

HL/HS0621

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L_P	100KHz,250mV	0.3	0.38	0.46	mH
Secondary Inductance, L_S	100KHz,250mV	1.6	2.00	2.40	mH
Leakage Inductance, L_L	100KHz,250mV		0.30	1.00	uH
Interwinding Capacitance, C_{WW}	100KHz,250mV		30	50	pF
Primary D.C. Resistance, R_{DC}	>0.1Vdc		0.40	1.00	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	30	35		Vus

HL/HS0622

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L_P	100KHz,20mV	110	142	185	uH
Secondary Inductance, L_S	100KHz,20mV	550	710	850	uH
Leakage Inductance, L_L	100KHz,250mV		3.0	5.0	uH
Interwinding Capacitance, C_{WW}	100KHz,250mV		4.2	8.0	pF
Primary D.C. Resistance, R_{DC}	>0.1Vdc		0.3	0.5	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	18	22		Vus

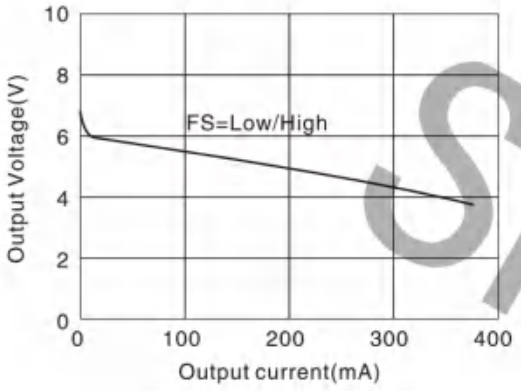
HL/HS0623

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L_P	100KHz,20mV	190	240	310	uH
Secondary Inductance, L_S	100KHz,20mV	350	444	540	uH
Leakage Inductance, L_L	100KHz,250mV		5.2	8.0	uH
Interwinding Capacitance, C_{WW}	100KHz,250mV		4.2	8.0	pF
Primary D.C. Resistance, R_{DC}	>0.1Vdc		0.4	0.6	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	25	28		Vus

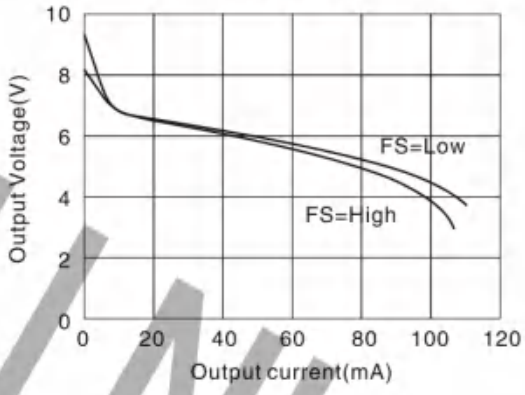
SHINHOM

VOLTAGE CURVES

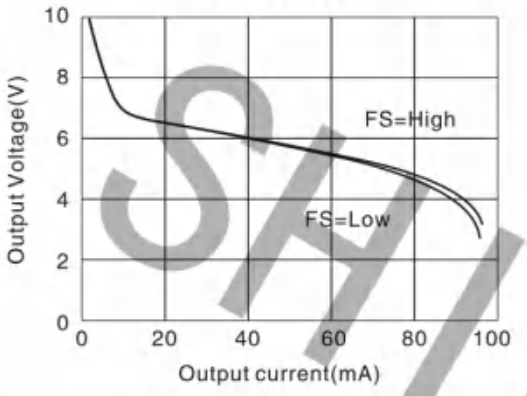
HL/HS0620



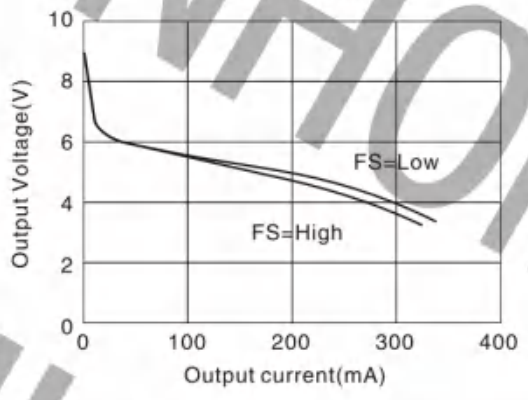
HL/HS0621



HL/HS0622

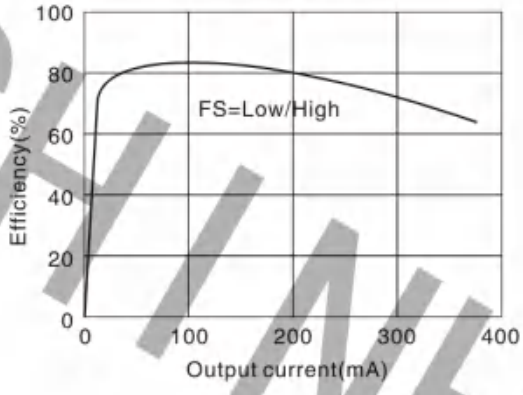


HL/HS0623

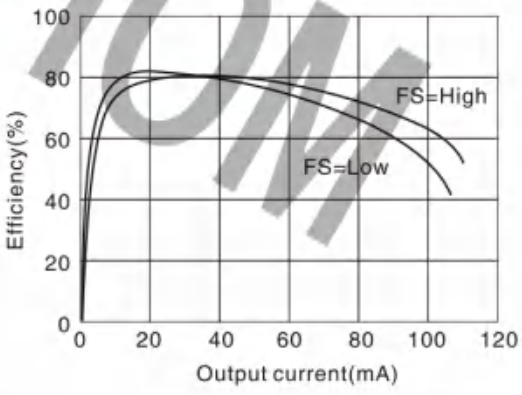


EFFICIENCY CURVES

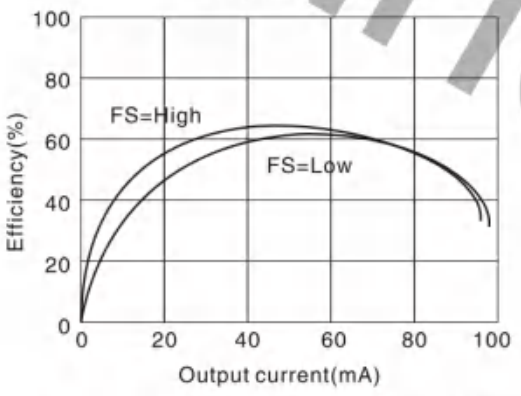
HL/HS0620



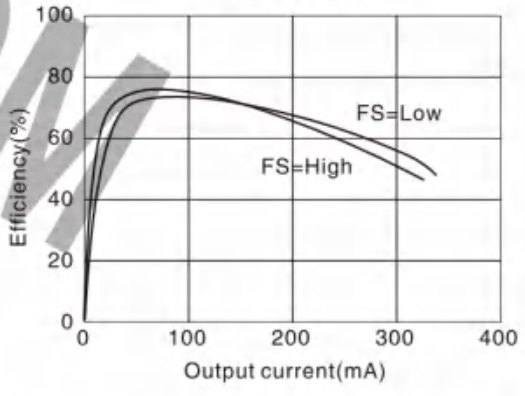
HL/HS0621



HL/HS0622



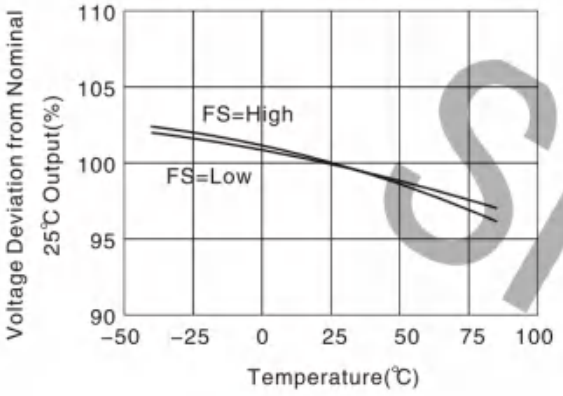
HL/HS0623



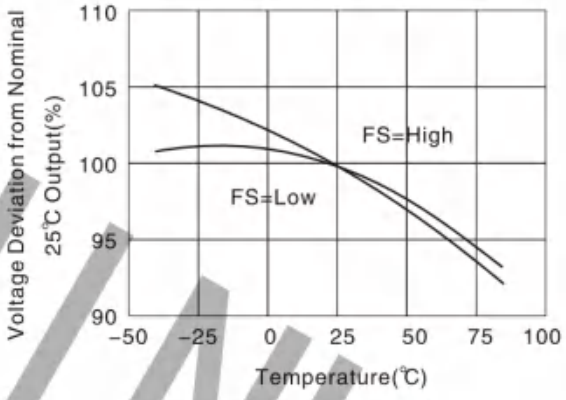
SHINHOM

VOLTAGE DEVIATION

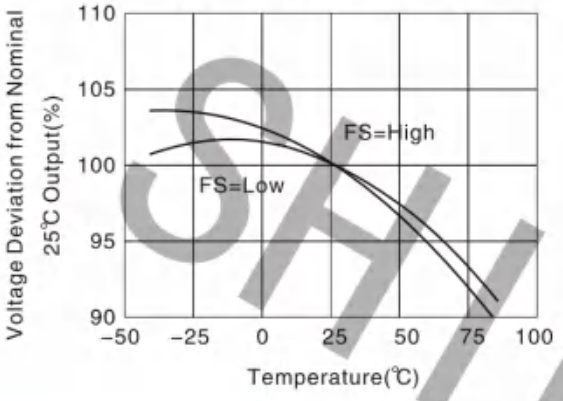
HL/HS0620



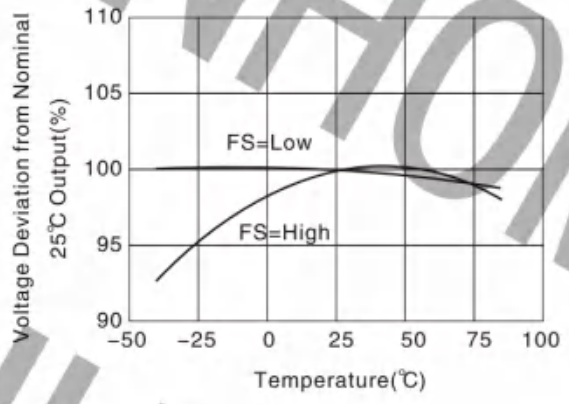
HL/HS0621



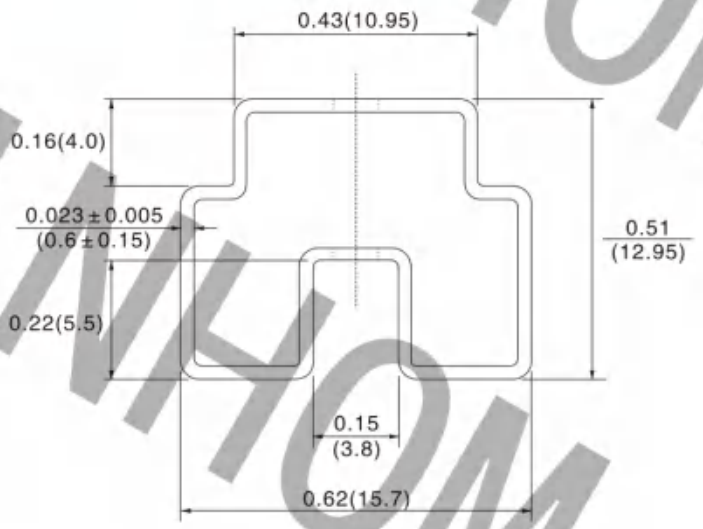
HL/HS0622



HL/HS0623



TUBE OUTLINE DIMENSIONS (HL06XX)

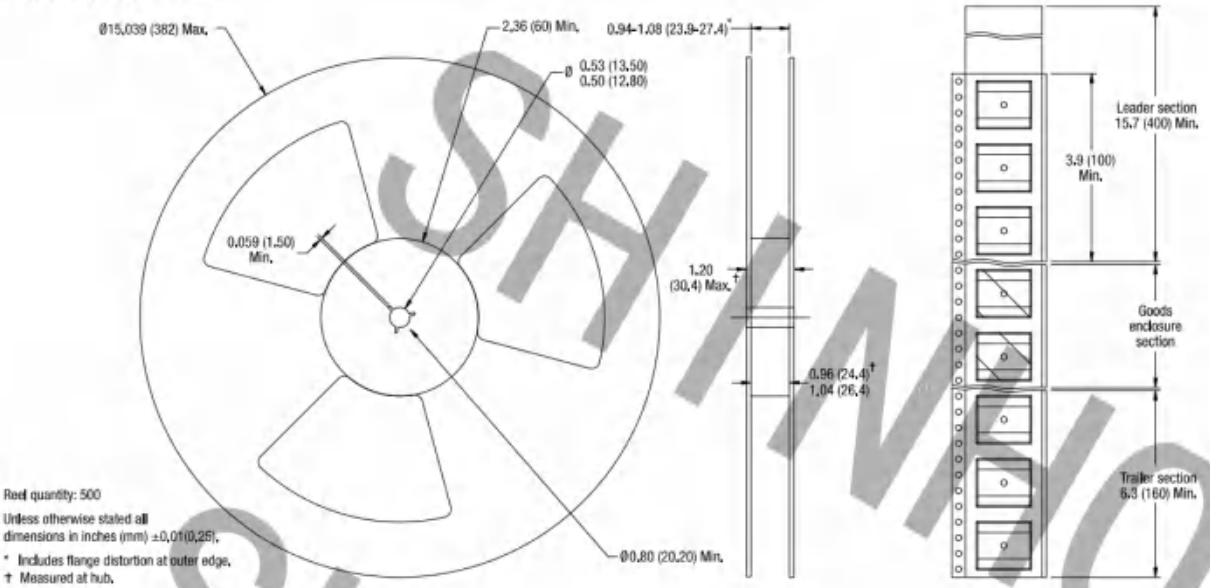


Tube length: 18.3 ± 0.08 (465 ± 2).
Tube quantity: 50.
Tube material: Antistatic coated clear pvc.
Unless otherwise stated all dimensions in inches(mm) ± 0.01 (0.25).

SHINHOM

TAPE & REEL SPECIFICATIONS(HS06XX)

REEL OUTLINE DIMENSIONS



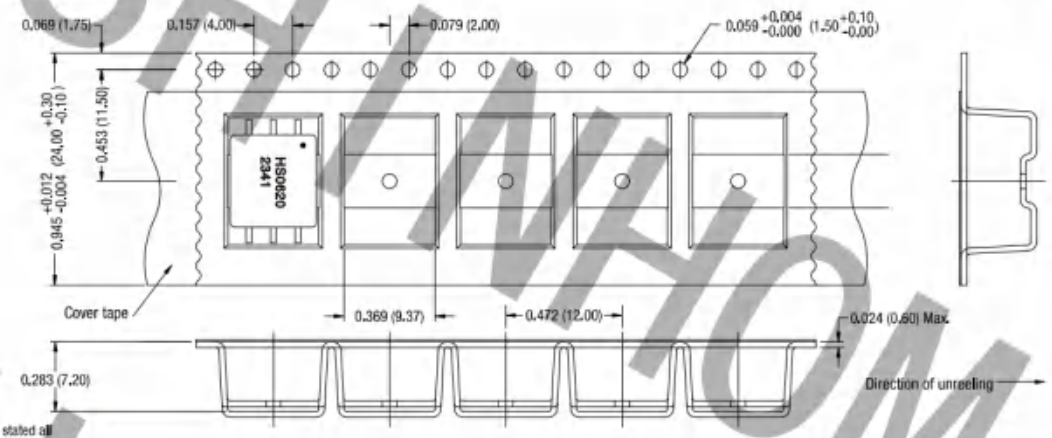
Reel quantity: 500

Unless otherwise stated all dimensions in inches (mm) ±0.01(0.25).

* Includes flange distortion at outer edge.

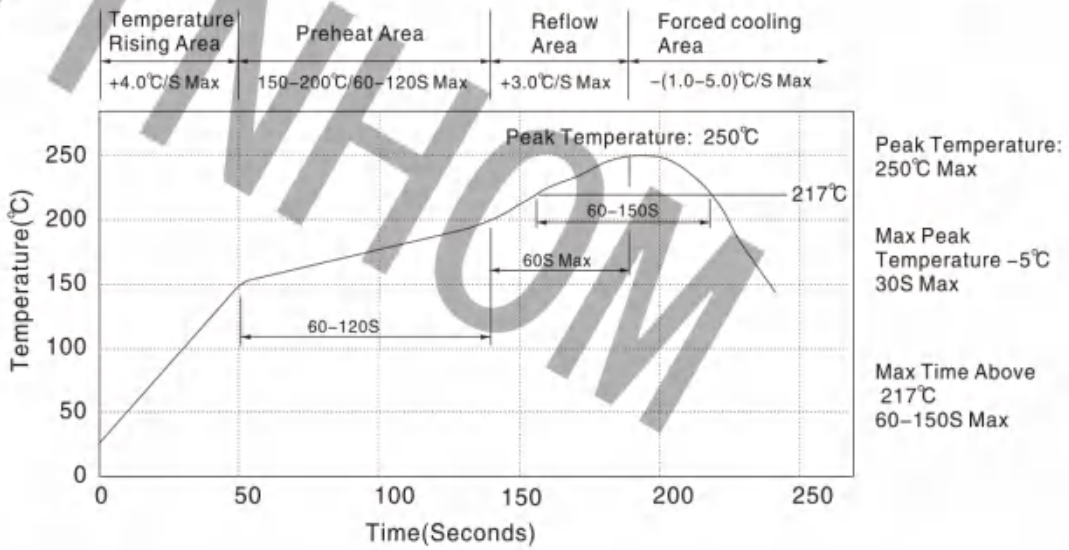
† Measured at hub.

TAPE OUTLINE DIMENSIONS



Unless otherwise stated all dimensions in inches (mm) ±0.01(0.25).

SOLDERING PROFILE

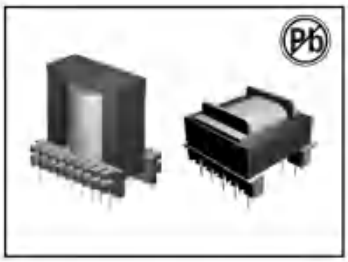


Peak Temperature: 250℃ Max

Max Peak Temperature -5℃ 30S Max

Max Time Above 217℃ 60-150S Max

SHINHOM



SWITCHING TRANSFORMERS
TEE, TEI SERIES

FEATURES:

- Possessing of high permeability
- High saturation flux density
- Low loss, at 100℃ the power loss goes bottom

OPTIONS:

- Bulk packaging is standard
- Custom design available

COMMON APPLICATIONS:

- Drive transformers
- Main transformers
- Smoothing chokes
- General purpose use

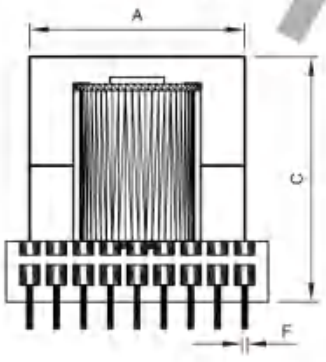
ELECTRICAL CHARACTERISTICS

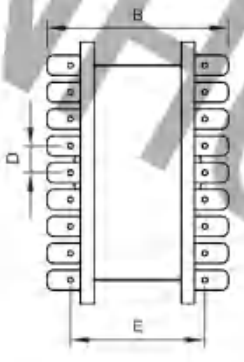
Part No.	Type	No. of Terminal pins	Dimensions(mm)						Max. output (VA)
			Max A	Max B	Max C	±0.3 D	±0.5 E	±0.1 F	
TEI 8.3-A	V	6	8.5	8.5	9.0	2.5	6.0	0.5	3
TEE 8.3-B	H	6	8.5	8.5	7.0	2.5	6.0	0.5	3
TEE 8.3-C	H	4	8.5	9.5	9.0	5.0	6.8	0.5	3
TEI 10-A	V	8	10.5	11.0	11.0	2.5	8.0	0.5	5
TEI 10-B	H	8	11.0	13.0	10.5	2.5	10.5	0.5	5
TEI 10-C	H	4	10.0	9.5	10.0	5.0	6.8	0.5	5
TEI 12.5-A	V	10	13.0	13.0	10.0	2.5	7.5	0.6	8
TEE 12-A	H	4	12.5	11.0	12.5	6.0	9.0	0.6	8
TEE 13-A	V	10	13.5	13.0	12.0	2.5	8.7	0.6	9
TEI 14-A	V	6	14.5	14.5	13.0	3.5	11.0	0.6	15
TEE 16-A	V	6	16.5	13.5	13.0	3.0	9.0	0.6	25
TEE 16-B	H	8	16.5	14.5	15.0	3.0	11.0	0.6	25
TEE 16-C	H	8	16.5	14.5	15.0	3.5	12.0	0.6	25
TEE 16-D	V	10	16.5	13.5	14.5	3.25	10.5	0.6	25
TEE 16-F	H	10	16.5	19.0	14.0	3.2	15.5	0.8	25
TEEL 16-A	V	10	22.0	16.5	30.0	4.0	10.3	0.6	25
TEE 19-A	V	6	20.0	18.0	18.0	4.1	14.0	0.7	35
TEE 19-B	V	6	20.0	16.0	18.0	4.7	11.8	0.6	35
TEE 19-C	H	8	20.0	18.0	16.5	3.8/5	12.5	0.7	35
TEEL 19-A	V	8	20.0	20.5	32.0	3.8/4.8	15.0	0.8	35
TEEL 19-B	H	6	19.5	32.0	13.0	5	24.2	0.8	35
TEEL 19-C	V	10	23.0	16.5	32.0	4	10.0	0.8	35
TEE 20-A	H	8	20.5	19.0	13.0	5	15.0	0.8	35
TEE 22-A	V	10	22.5	16.5	20.0	4	10.2	0.8	45
TEE 22-B	V	8	22.5	17.0	20.0	5	12.4	0.8	45
TEE 22-C	H	8	22.5	24.5	16.5	3.5/5	17.2	0.8	45
TEE 25-A	V	8	25.5	18.0	22.0	5	12.4	0.8	65
TEE 25-B	V	10	26.0	20.5	22.0	5	15.2	0.8	65
TEE25-C	H	10	27.0	24.0	24.0	4.0/5	14.6	0.8	65
TEEL 25-A	H	14	27.5	39.5	21.0	4.0	27.1	0.8	65

Part No.	Type	No. of Terminal pins	Dimensions(mm)						Max. output (VA)
			Max A	Max B	Max C	±0.3 D	±0.5 E	±0.1 F	
TEL 25-B	V	14	27.5	21.0	35.0	4.0	15.0	0.8	65
TEI 28-A	V	12	29.5	25.0	24.0	5.0	17.5	0.8	100
TEI 28-B	V	10	28.5	25.0	35.0	5.0	20.0	0.8	100
TEI 28-C	H	8	28.5	25.0	25.0	5.0	17.5	0.8	100
TEI 30-A	V	10	31.0	22.0	26.0	5.0	17.6	0.8	155
TEI 30-B	V	12	31.0	26.0	26.0	5.0	20.0	0.8	155
TEE 30-A	H	10	30.5	30.0	20.5	5.0	25.0	0.8	155
TEE 30-B	H	12	30.5	30.0	20.5	5.0	25.0	0.8	155
TEI 33-A	V	14	34.0	28.0	30.0	5.0	22.5	0.8	200
TEI 33-B	V	12	34.0	26.0	30.0	5.0	22.5	0.8	200
TEI 33-C	V	16	39.0	29.0	30.0	5.0	22.5	0.8	200
TEE 35-A	H	12	38.0	30.0	26.0	3.8/5.1	22.0	0.8	215
TEE 35-B	V	10	35.5	26.0	28.0	5.0	20.0	0.8	215
TEE 35-C	V	14	35.5	26.0	28.0	5.0	20.0	0.8	215
TEEL 35-A	V	15	36.5	27.5	50.0	5.0	22.5	0.8	215
TEI 35-A	V	12	35.5	28.5	29.0	5/7.5	20.0	1.0	215
TEI 40-A	V	12	40.5	29.0	32.0	5.0	22.5	0.8	345
TEI 40-B	H	12	40.5	37.0	27.0	5.0	28.2	1.0	345
TEI 40-C	V	16	42.0	28.0	35.0	5.0	22.5	0.8	345
TEI 40-D	H	14	40.5	35.0	29.0	5.0	25.8	0.8	345
TEE 42-A	H	16	44.5	42.0	41.5	5.0	34.0	1.0	400
TEE 42-B	H	12	47.0	42.0	39.5	5/7.5	33.0	1.0	400
TEE 42-C	V	18	46.0	32.5	46.0	5.0	27.5	1.0	400
TEE 42-D	V	12	46.0	42.5	37.0	7.4	36.4	1.0	420
TEE 42-E	V	12	43.0	40.5	45.0	5.0	32.5	1.0	420
TEE 42-F	H	17	43.0	47.0	45.0	3.5/5	37.7	1.0	420
TEE 42-G	V	18	46.0	38.0	47.0	5.0	30.0	1.0	420
TEE 50-A	V	18	51.0	40.0	40.0	5.0	30.5	1.0	500
TEE 55-A	H	20	56.0	55.0	50.5	5/7.5	45.2	1.0	814

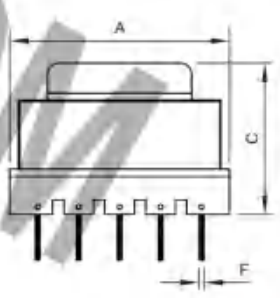
Note: The output power is only for forward model and the frequency at 100kHz

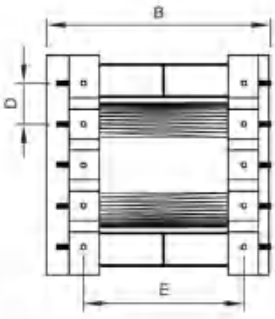
PHYSICAL CHARACTERISTICS





Type V

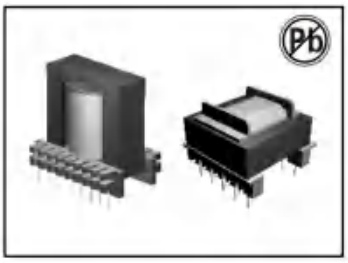




Type H

SHINHOM

SWITCHING TRANSFORMERS
TER SERIES



FEATURES:

- Centre section of the core is round easily design high-power switch transformers
- Low leakage

OPTIONS:

- Bulk packaging is standard
- Custom design available

COMMON APPLICATIONS:

- Drive transformers
- Main transformers
- Smoothing chokes
- General purpose use

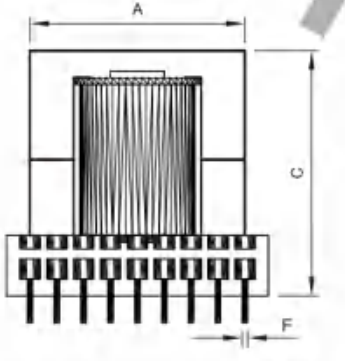
ELECTRICAL CHARACTERISTICS

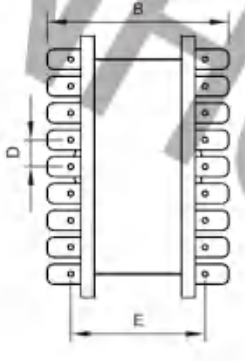
Part No.	Type	No. of Terminal pins	Dimensions(mm)						Max. output (VA)
			Max	Max	Max	± 0.3	± 0.5	± 0.1	
			A	B	C	D	E.	F	
TER 11.5-A	V	8	14	14	12	2.6	9.0	0.6	3
TER 25-A	V	8	27	22	28	5.0	12.5	0.8	87
TER 25-B	V	10	27	22	28	5.0	15.0	0.8	87
TER 28-A	H	20	35	32	25	2.54	28.0	0.5	203
TER 25-B	H	12	31	32	25	5.0	25.0	0.8	203
TER 28-C	V	10	27	25	32	5.0	17.3	0.8	203
TER 28-D	V	12	32	28	32	4.9	22.0	0.6	203
TERL 28-A	V	10	32	25	36	5.0	17.5	0.8	228
TERL 28-B	V	12	32	25	38	5.0	17.5	0.8	228
TERL 28-C	V	12	32	25	36	5.0	20.2	0.8	228
TERL 28-D	V	18	30	25	38	4.0	20.0	0.8	228
TERL 28-E	V	10	30	25	38	5.0	17.5	0.8	228
TERL 28-F	V	14	32	28	38	5.0	20.0	0.8	228
TERL 28-G	H	11	36	38	26	5.0	25.5	0.8	228
TERL 28-H	H	12	32	38	28	5.0	30.4	0.8	228
TER 33-A	V	14	37	31	40	5.0	25.0	1.0	235
TER 33-B	V	14	37	29	40	5.0	22.5	1.0	235
TER 34-A	V	14	36	29	40	5.0	22.3	1.0	240
TER 35-A	V	12	38	30	46	5.0	22.5	1.0	325
TER 35-B	V	14	37	30	44	5.0	22.5	1.0	325
TER 35-C	V	16	41	30	46	5.0	22.55	1.0	325

Part No.	Type	No. of Terminal pins	Dimensions(mm)						Max. output (VA)
			Max	Max	Max	± 0.5	± 0.5	± 0.1	
			A	B	C	D	E	F	
TER 35-D	H	16	41	45	29	5.0	35.0	1.0	325
TER 35-E	H	12	38	45	27	5.3	37.1	1.0	325
TER 35-F	H	12	45	37	30	5.4	37.1	1.0	325
TER 39-A	V	16	44	32	53	5.0	25.0	1.0	370
TER 39-B	V	14	40	32	54	5.0	25.2	1.0	370
TER 39-C	V	18	45	32	53	5.0	25.0	1.0	370
TER 39-D	H	16	43	45	35	5.0	30.6	1.0	370
TER 39-E	H	16	43	47	35	5.0	35.3	1.0	370
TER 40-A	V	16	42	33	51	5.0	25.2	1.0	421
TER 40-B	V	16	42	34	52	5.0	27.5	1.0	421
TER 40-C	V	12	42	33	48	5.0	25.0	1.0	421
TER 40-D	H	16	42	50	37	5.0	35.2	1.0	421
TER 42-A	V	18	47	33	47	5.0	27.4	1.0	433
TER 42-B	V	14	44	32	49	5.0	24.8	1.0	433
TER 42-C	V	18	47	39	52	5.0	30.2	1.0	509
TER 42-D	H	14	45	45	36	5.0	34.8	1.0	509
TER 49-A	V	22	55	37	62	5.0	27.5	1.0	680
TER 49-B	V	18	52	38	57	5.0	27.5	1.0	680
TER 49-C	V	20	55	41	60	5.0	32.5	1.0	680
TER 53-A	V	18	55	41	55	5.0	32.5	1.0	800
TER 54-B	V	18	60	42	60	5.0	32.0	1.0	850

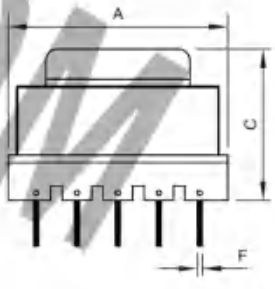
Note: The output power is only for forward model and the frequency at 100kHz

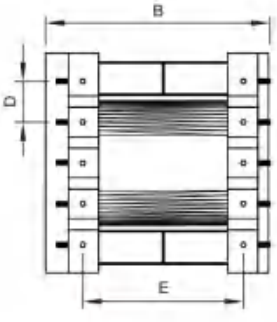
PHYSICAL CHARACTERISTICS





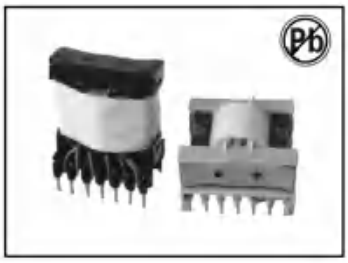
Type V





Type H

SHINHOM



SWITCHING TRANSFORMERS
TETD SERIES

FEATURES:

- Centre section of the core is round easily design high-power switch transformers

OPTIONS:

- Bulk packaging is standard
- Custom design available

COMMON APPLICATIONS:

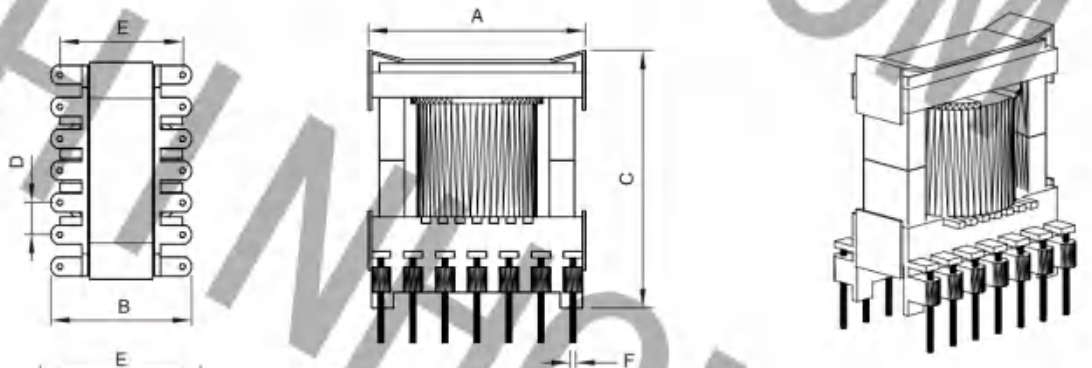
- Drive transformers
- Main transformers
- Smoothing chokes
- General purpose use

ELECTRICAL CHARACTERISTICS

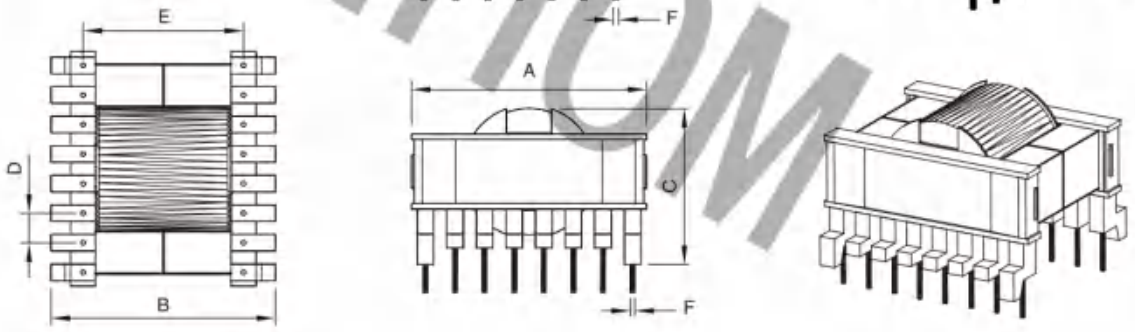
Part No.	Type	No. of Terminal pins	Dimensions(mm)						Max. output (VA)
			Max	Max	Max	±0.3	±0.5	±0.1	
			A	B	C	D	E	F	
TETD 24-A	V	12	36.5	25.0	38.0	5.08	17.8	1.1	110
TETD 29-A	H	14	36.0	36.0	25.5	5.0	25.6	0.8	170
TETD 29-B	H	13	37.0	37.0	27.0	5.0	25.8	0.8	170
TETD 29-C	V	12	42.0	24.5	43.0	5.08	20.32	0.8	170
TETD 34-A	V	12	34.5	30.0	37.0	5.0	25.5	1.0	270
TETD 34-B	H	14	41.0	41.0	27.0	5.0	25.5	2.0	270
TETD 34-C	V	14	39.0	28.0	45.0	5.0	22.9	1.0	270
TETD 39-A	V	16	46.0	30.5	49.6	5.0	25.4	1.0	380
TETD 39-B	H	16	45.0	45.0	36.0	5.0	30.2	1.0	380
TETD 44-A	H	18	50.0	51.0	40.0	5.0	35.8	1.0	520
TETD 44-B	V	18	46.0	33.0	51.0	5.0	27.5	1.0	520
TETD 49-A	V	22	55.0	37.0	55.0	5.0	27.5	1.0	680
TETD 49-B	H	20	56.0	55.0	41.0	5.0	40.4	1.0	680
TETD 54-A	H	22	61.0	60.0	47.0	5.0	44.8	1.0	750
TETD 59-A	H	24	68.0	68.0	52.5	5.0	51.0	1.0	900

Note: The output power is only for forward model and the frequency at 100kHz

PHYSICAL CHARACTERISTICS



Type V



Type H

SHINHOM

SWITCHING TRANSFORMERS
TPQ SERIES

FEATURES:

- Design in the fittest shape
- Applied in the power: (50W–1kW)100kHz
- Cut down installation cubage with multi–pluge and boobins, easily wire connection to meet the request
- Low leakage

OPTIONS:

- Bulk packaging is standard
- Custom design available

COMMON APPLICATIONS:

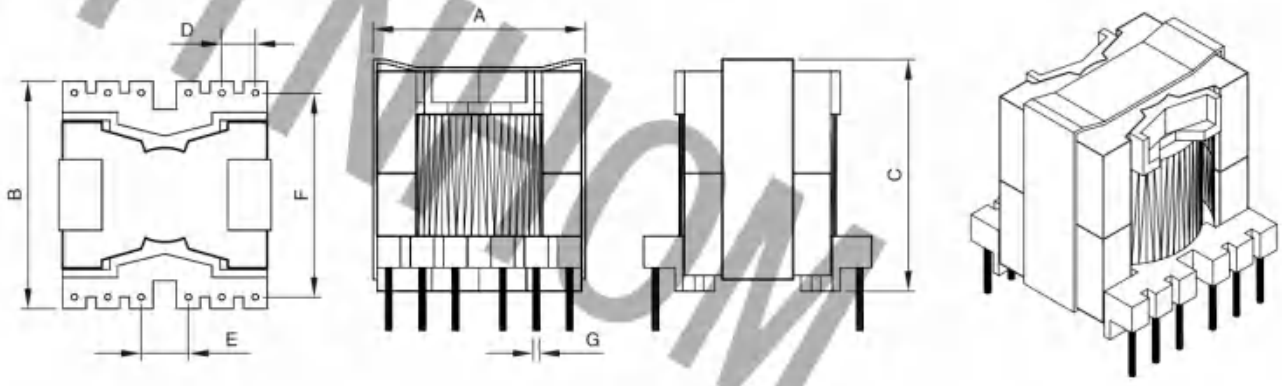
- Drive transformers
- Main transformers
- Smoothing chokes
- Switching power supplies
- AC–DC, DC–DC converters

ELECTRICAL CHARACTERISTICS

Part No.	Type	No. of Terminal pins	Dimensions(mm)							Max. output (VA)
			Max	Max	Max	±0.3	±0.4	±0.5	±0.1	
			A	B	C	D	E	F	G	
TPQ 2020–A	V	14(6+8)	24.0	24.0	22.0	3.8/2.5	5.1	20.3	0.6	92
TPQ 2620–A	V	12	28.0	32.0	22.0	3.8	7.6	25.4	0.6	170
TPQ 2620–B	V	12	28.0	32.0	21.0	3.8	7.6	25.4	0.6	170
TPQ 2625–A	V	12	28.5	31.0	28.0	3.8	7.5	25.5	0.7	195
TPQ 3220–A	V	12	33.0	35.0	24.0	5.0	7.5	30.0	0.8	232
TPQ 3220–B	V	12	33.0	36.0	22.0	5.1	7.6	30.5	0.8	232
TPQ 3225–A	V	12	35.5	35.0	27.0	5.0	7.4	30.0	0.8	280
TPQ 3230–A	V	12	33.0	36.0	32.0	5.05	7.6	30.3	0.8	331
TPQ 3535–A	V	12	37.0	41.0	38.5	5.0	10.0	35.0	0.8	452
TPQ 4040–A	V	12	41.0	44.0	43.0	5.0	15.1	38.0	0.8	596
TPQ 5050–A	V	12	52.0	53.0	54.0	7.62	15.24	45.72	1.2	1045

Note: The output power is only for forward model and the frequency at 100kHz

PHYSICAL CHARACTERISTICS



Type V

SHINHOM

SWITCHING TRANSFORMERS
TEFD SERIES

FEATURES:

- Horizontal installation
  Multi out-put applied
  in denseness installation

OPTIONS:

- Bulk packaging is standard
- Custom design available

COMMON APPLICATIONS:

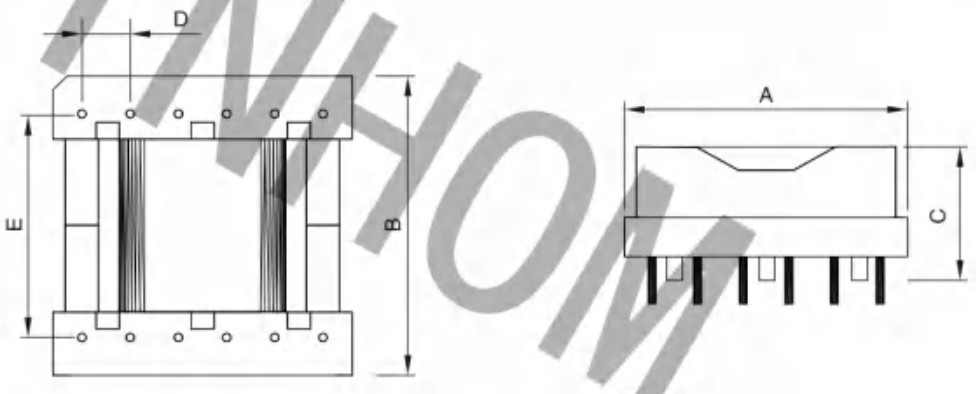
- Drive transformers
- Main transformers
- Smoothing chokes
- General purpose use
- Switching power supplies
- AC-DC, DC-DC converters

ELECTRICAL CHARACTERISTICS

Part No.	Type	No. of Terminal pins	Dimensions(mm)						Max. output (VA)
			Max	Max	Max	±0.3	±0.5	±0.1	
			A	B	C	D	E	F	
TEFD 15-A	H	8	17	18	9.5	3.7	13.7	0.6	5
TEFD 15-B	H	8	17	18	9.5	3.75	13.75	0.6	5
TEFD 15-C	H	8	17	18	9.5	3.8	13.7	0.6	5
TEFD 20-A	H	8	22	23	11.0	5.0	17.5	0.6	18
TEFD 20-B	H	9	22	23	11.0	5.0	17.5	0.6	18
TEFD 20-C	H	10	22	26	15.0	3.8	23.8	0.6	18
TEFD 25-A	H	10	27	28	13.0	5.0	22.45	0.8	45
TEFD 25-B	H	10	27	28	15.0	5.0	22.5	0.8	45
TEFD 30-A	H	12	32	33	14.0	5.0	27.4	0.8	70
TEFD 30-B	H	12	32	36	18.0	5.0	30.0	0.8	70
TEFD 30-C	H	12	32	37	14.0	5.0	32.0	0.8	70

Note: The output power is only for forward model and the frequency at 100kHz

PHYSICAL CHARACTERISTICS

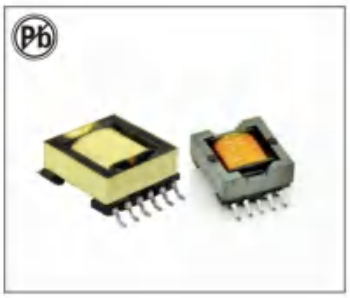


Type H

SHINHOM

SMD LOW PROFILE SWITCHING TRANSFORMER

STEFD SERIES



FEATURES:

- Multiple Combination
- Series Mode or Parallel Mode
- Low Profile

COMMON APPLICATIONS:

- SMPS DC-DC converter
- CMC,Differential
- Flyback,Boost,Buck
- ADSL/VDSL
- Switching power supplier

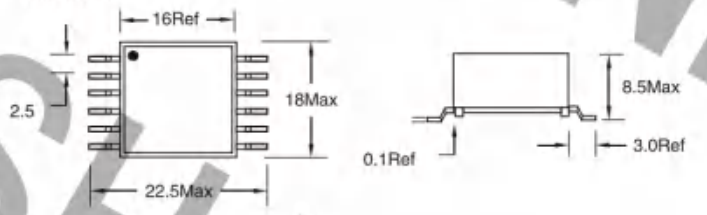
STANDARD SPECIFICATIONS @25℃

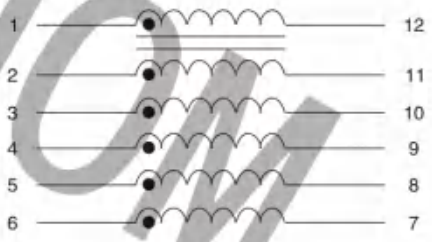
Part Number		L(μH) ±20%	Leakage (μH) Typ.	DCR Max (Ω) Max	1rms Typ (mA) Typ.
EFD15	STEFD15-3R8	3.8	0.06	0.07	1.5
	STEFD15-4R5	4.5	0.06	0.07	1.5
	STEFD15-6R8	6.8	0.06	0.07	1.5
	STEFD15-110	11.3	0.06	0.07	1.5
	STEFD15-630	63	0.06	0.07	1.5
EFD20	STEFD20-3R5	3.5	0.11	0.05	2.1
	STEFD20-4R5	4.5	0.11	0.05	2.1
	STEFD20-5R3	5.3	0.11	0.05	2.1
	STEFD20-100	10	0.11	0.05	2.1
	STEFD20-770	77	0.11	0.05	2.1

TECHNICAL INFORMATION & PHYSICAL CHARACTERISTICS

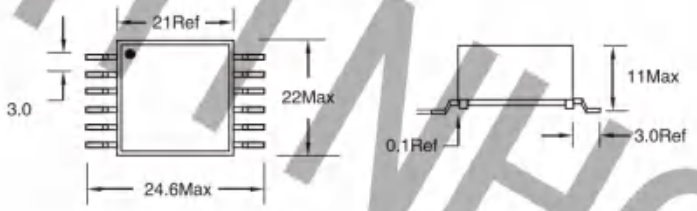
Dimensions:mm

STEFD15





STEFD20



- Inductance measure at Pin 1-2,100KHz 0.1VRms.
- DCR measure at individual winding
- Leakage measure at pin 1~12 with all other windings shorted
- Insulation Resistance: 500 VDC,1KM Ohm min.
- Turns ratio: 1:1:1:1:1:1
- Soldering temperature:260℃ for 4 ± 1 seconds
- Operating temperature:0℃ to 70℃
- Storage Temperature:-25℃ to 85℃
- Different package available per special request

Note:All specifications subject to change without notice.

SHINHOM