TC-1200PD1

Switching Power Supply

(1200W PS2 ATX12V)

SPECIFICATION

Revision: 1.0

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1.0 INPUT:

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- 1.2 FREQUENCY
- 1.3 CURRENT
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- 1.5 POWER EFFICIENCY
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7.0 MTBF at 25^0C (demonstrated)

1.0 INPUT:

1.1 VOLTAGE

MINIMUM	NOMINAL	MAXIMUM	UNITS
90	100~240	264	Vrms

1.2 FREQUENCY

47Hz ~ 63Hz

1.3 CURRENT

100Vac / 15A max.

1.4 INRUSH CURRENT

65A max. when AC input 115Vac at 25^0C cold start.

AC input 230Vac at 25^0C cold start power no damage.

1.5 POWER EFFICIENCY

80% (min.) at full load(typical) and 115Vac input.

1.6 LEAKAGE CURRENT

3.5mA max.

1.7 POWER FACTOR

PF > 0.9

2.0 OUTPUT:

Voltage	+12V1	+12V4	+3.3V	+12V2	+12V3	+5V	-12V	+5Vsb
Max load	20.0A	36.0A	30.0A	20.0A	36.0A	30.0A	0.8A	3.5A
Min load	1A	1A	0.5A	1A	1A	0.5A	0.0A	0.0A
＊**Ripple & Noise**	120mV	120mV	50mV	120mV	120mV	50mV	120mV	50mV
＊＊**Regulation**	+3,-3%	+3,-3%	+3,-3%	+3,-3%	+3,-3%	+3,-3%	+10,-10%	+3,-5%
Max output	600W			600W			9.6W	17.5W
Total	1200W							

＊ Add 0.1uF and 47uF capacitors across output terminal during ripple & noise test.

＊＊+5Vsb operate at 3.5A max load base on PS-ON mode. If PS-OFF +5Vsb only operate at 3A max load.

The all of output can not connect use because they all work are independent.

LOAD REGULATION TEST TABLE:

	+12V1	+12V2	+12V3	+12V4	+5V	+3.3V	-12V	+5Vsb
LOAD1	1A	1A	1A	1A	0.5A	0.5A	0A	0.1A
LOAD2	3A	3A	5A	5A	5.5A	5.5A	0.15A	0.5A
LOAD3	4.5A	4.5A	7A	7A	9A	9A	0.25A	1A
LOAD4	5.5A	5.5A	10A	10A	11A	12A	0.35A	1.3A
LOAD5	7.5A	7.5A	12A	12A	15A	14A	0.4A	1.7A
LOAD6	8.5A	8.5A	14.5A	14.5A	19A	18A	0.5A	2A
LOAD7	9.5A	9.5A	17.5A	17.5A	21A	21A	0.6A	2.3A
LOAD8	10.5A	10.5A	20A	20A	25A	25A	0.7A	2.8A
LOAD9	12.5A	12.5A	22A	22A	27.5A	27.5A	0.7A	3.1A
LOAD10	13.5A	13.5A	22A	28A	30A	30A	0.8A	3.5A
LOAD11	20A	20A	16A	21A	30A	30A	0.8A	3.5A
LOAD12	1A	1A	36A	36A	30A	30A	0.8A	3.5A

2.1 REMOTE ON/OFF

TTL High/PS-OFF; TTL Low/PS-ON

V_{IL}=0.8Vmax, I_{IL}=-1.6mAmax @Vin=0.4V

V_{IH}=2.0Vmin @Iin=-200uA, V_{IH}=5.25Vmax @open ckt.

2.2 HOLD-UP TIME

16msec (minimum) 80% load at 115Vac input.

2.3 POWER GOOD DELAY

100-500 msec.

2.4 POWER FAIL DELAY

>1 msec.

2.5 TURN-ON DELAY TIME

2000 msec max. at Nominal Line Full Load.

2.6 TRANSIENT OVERSHOOT

+/- 10% max with 20% load change on all outputs are 50% of the rated. Load slew rated 0.5A/uS and capacitive load as below:

+5V	+3.3V	$+12V_1$	$+12V_2$	$+12V_3$	$+12V_4$	-12V	+5Vsb
1000uF	1000uF	2200uF	2200uF	2200uF	2200uF	NA	1uF

2.7 RISE TIME

20ms max at full load.

3.0 PROTECTION:

When OCP, OVP, UVP, OTP, OPP, or short protection is triggered, the main outputs will be latched off. The main outputs can be reset by cycling the DC remote on/off or AC power. +5Vsb output is auto recovery when fault condition removed.

3.1 OVER CURRENT PROTECTION

+12V1 & +12V2	22A~35A
+12V3 & +12V4	39A~55A
+5V	33A~50A
+3.3V	33A~50A

3.2 OVER VOLTAGE PROTECTION

+3.3V output	4.5 Vmax.
+5.0V output	7.0 Vmax.
+12.0V output	15.6 Vmax.

3.3 SHORT PROTECTION

All output to GND.

3.4 UNDER VOLTAGE PROTECTION

+3.3V output	2.0 Vmin.
+5.0V output	3.3 Vmin.
+12.0V output	8.5 Vmin.

4.0 ENVIRONMENT:

4.1 OPERATING TEMP.	10 °C to +50 °C
4.2 STORAGE TEMP.	-20 °C to +70 °C
4.3 OPERATING HUMIDITY	20% to 90%, non-condensing
4.4 STORAGE HUMIDITY	5% to 95%, non-condensing
4.5 OPERATING ALTITUDE	0 to 10,000 feet
4.6 STORAGE ALTITUDE	0 to 50,000 feet

5.0 HI-POT :(Input/Output isolation)

5.1 PRIMARY TO SECONDARY

3535Vdc for 3 seconds

5.2 INSULATION RESISTANCE

Primary to earth ground 500Vdc, 50M ohms Min.

6.0 CE REQUIREMENTS

6.1 CONDUCTED EMI

1. MEET FCC： Class B
2. MEET CISPR 22： Class B
3. MEET BSMI： Class B

6.2 SAFETY STANDARDS

1. MEET CUL (UL 60950)
2. MEET TUV EN60950
3. MEET CB (IEC60950)
4. MEET CE
5. MEET CCC

6.3 HARMONIC

MEET IEC1000-3-2, Class D

7.0 MTBF at 25°C (demonstrated)

100K hrs minimum