SILVERSTONE®
Designing Inspiration

ESSENTIAL SERIES

SST-ET750-HG/SST-ET650-HG
SST-ET550-HG
Power for everything you need

- High efficiency with 80 PLUS Gold certification
- Semi-modular cables facilitate cable management
- 24/7 continuous power output with 40°C operating temperature
- Class-leading single +12V rail
- Silent running 140mm fan with 18 dBA
- PCIe 8pin and PCIe 6pin connectors support
- All-black flat cables design

SPECIFICATION

SilverStone Essential

ET750-HG

ET650-HG

ET550-HG

ATX12V Switching Power Supply
With Active PFC
80Plus Gold
PS/2

1.0 INPUT:

1.1 VOLTAGE

MINIMUM	NOMINAL	MAXIMUM	UNITS
103	115-230	254	Vrms

1.2 FREQUENCY

47Hz ~ 63Hz

1.3 CURRENT

115Vac/10.0A max. 230Vac/5.0A max. (ET750-HG, ET650-HG)
115Vac/8.0A max. 230Vac/4.0A max. (ET550-HG)

1.4 INRUSH CURRENT

150A max. when ac input 230Vac and 25ºC cold start.

1.5 POWER EFFICIENCY

Meet 80 Plus Gold requirement at 115Vac input.

1.6 LEAKAGE CURRENT

3.5mA max.

1.7 POWER FACTOR

PF > 0.96 at 230Vac input and full load

1.8 ErP REQUIREMENT

Meet ErP2013 requirement

2.0 OUTPUT:

ET750-HG

	Voltage	+5V	+3.3V	+12V	-12V	+5Vsb
＊①	Max load	22.0A	22.0A	62.0A	0.3A	2.5A
	Min load	0.0A	0.0A	0.0A	0.0A	0.0A
	Peak load	--	--	--	--	3.0A
＊①	Combined power	120W		--	--	--
＊③	Regulation	+5,-5%	+5,-5%	+5,-5%	+10,-10%	+5,-5%
＊②	Ripple & Noise	50mV	50mV	120mV	120mV	50mV

＊① The continuous total output power is 750W max.
・ The combined power of +5V and +3.3V is 120W max.
・ Peak currents may last up to 12 seconds with not more than one occurrence per minute.
＊②Add 0.1uF and 10uF capacitors across output terminal during ripple & noise test.
＊③ LOAD REGULATION TEST TABLE:

	+5V	+12V	+3.3V	-12V	+5Vsb
LOAD1	0.0A	0.0A	0.0A	0.0A	0.0A
LOAD2	5.0A	0.5A	5.0A	0.1A	0.1A
LOAD3	10.0A	5.0A	10.0A	0.1A	0.5A
LOAD4	22.0A	10.0A	3.0A	0.2A	1.0A
LOAD5	9.5A	15.0A	22.0A	0.2A	2.5A
LOAD6	0.0A	62.0A	0.0A	0.3A	0.5A
LOAD7	12.0A	53.0A	12.0A	0.3A	2.0A
LOAD8	0.3A	0.3A	0.3A	0.0A	0.0A

ET650-HG

	Voltage	+5V	+3.3V	+12V	-12V	+5Vsb
＊①	**Max load**	20.0A	20.0A	53.0A	0.3A	2.5A
	Min load	0.0A	0.0A	0.0A	0.0A	0.0A
	Peak load	--	--	--	--	3.0A
＊①	**Combined power**	110W		--	--	--
＊③	**Regulation**	+5,-5%	+5,-5%	+5,-5%	+10,-10%	+5,-5%
＊②	**Ripple & Noise**	50mV	50mV	120mV	120mV	50mV

＊① The continuous total output power is 650W max.
・ The combined power of +5V and +3.3V is 110W max.
・ Peak currents may last up to 12 seconds with not more than one occurrence per minute.
＊② Add 0.1uF and 10uF capacitors across output terminal during ripple & noise test.
＊③ LOAD REGULATION TEST TABLE:

	+5V	+12V	+3.3V	-12V	+5Vsb
LOAD1	0.0A	0.0A	0.0A	0.0A	0.0A
LOAD2	5.0A	0.5A	5.0A	0.1A	0.1A
LOAD3	10.0A	5.0A	10.0A	0.1A	0.5A
LOAD4	20.0A	10.0A	6.0A	0.2A	1.0A
LOAD5	11.0A	15.0A	20.0A	0.2A	2.5A
LOAD6	0.0A	53.0A	0.0A	0.3A	0.5A
LOAD7	12.0A	44.0A	12.0A	0.3A	2.0A
LOAD8	0.3A	0.3A	0.3A	0.0A	0.0A

ET550-HG

	Voltage	+5V	+3.3V	+12V	-12V	+5Vsb
＊①	**Max load**	20.0A	20.0A	45.0A	0.3A	2.5A
	Min load	0.0A	0.0A	0.0A	0.0A	0.0A
	Peak load	--	--	--	--	3.0A
＊①	**Combined power**	110W		--	--	--
＊③	**Regulation**	+5,-5%	+5,-5%	+5,-5%	+10,-10%	+5,-5%
＊②	**Ripple & Noise**	50mV	50mV	120mV	120mV	50mV

＊① The continuous total output power is 550W max.
・ The combined power of +5V and +3.3V is 110W max.
・ Peak currents may last up to 12 seconds with not more than one occurrence per minute.
＊② Add 0.1uF and 10uF capacitors across output terminal during ripple & noise test.
＊③ LOAD REGULATION TEST TABLE:

	+5V	+12V	+3.3V	-12V	+5Vsb
LOAD1	0.0A	0.0A	0.0A	0.0A	0.0A
LOAD2	5.0A	0.5A	5.0A	0.1A	0.1A
LOAD3	10.0A	5.0A	10.0A	0.1A	0.5A
LOAD4	20.0A	10.0A	3.0A	0.2A	1.0A
LOAD5	9.0A	15.0A	20.0A	0.2A	2.5A
LOAD6	0.0A	45.0A	0.0A	0.3A	0.5A
LOAD7	11.0A	37.0A	11.0A	0.3A	2.0A
LOAD8	0.3A	0.3A	0.3A	0.0A	0.0A

2.1 REMOTE ON/OFF

TTL High/PS-OFF; TTL Low/PS-ON
VIL=0.8Vmax, IIL=-1.6mAmax @Vin=0.4V
VIH=2.0Vmin @Iin=-200uA, VIH=5.25Vmax @open ckt.

2.2 HOLD-UP TIME

10msec (minimum) at 80% of full load at 230Vac 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

DC output transient step sizes as below table:

Output voltage	+5V	+3.3V	+12V
Max. step size	30%	30%	60%

Load-changing repetition rate of 10m seconds.

Load slew rated 1.0A/uS and capacitive load as below :

+5V	+3.3V	+12V	-12V	+5Vsb
10000uF	10000uF	10000uF	470uF	3300uF

2.7 RISE TIME

20ms max at full load.

3.0 PROTECTION:

When OVP ,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 VOLTAGE PROTECTION

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

3.2 SHORT PROTECTION

All output to GND.

3.3 OVER POWER PROTECTION

Foldback at 110%~150% over peak load

3.4 OVER TEMPERATURE PROTECTION

4.0 ENVIRONMENT:

4.1 OPERATING TEMP.	0 °C to +40 °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:

5.1 PRIMARY TO SECONDARY

1800Vac for 1 minute

6.0 SAFETY AND EMC REQUIREMENTS

6.1 CONDUCTED EMI

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

6.2 SAFETY STANDARDS

1.MEET CUL(UL60950)
2. MEET TUV (EN60950)
3. MEET CB (IEC 950)
4. MEET CE
5. MEET CCC

6.3 HARMONIC

MEET IEC61000-3-2,Class D

7.0 MTBF at 25°C(demonstrated)

100K hrs minimum

8.0 DIMENSIONS

W x Lx H=150mm x 160mm x 86mm

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