



SURE STAR COMPUTER CO., LTD 添誠資訊股份有限公司
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NO.2-1, DAAN ROAD, SHULIN .DIST., NEW TAIPEI CITY 238, TAIWAN

SPECIFICATION

Model Name :

TC2BPS22Y *series*

Description :

500W 、 600W 2U Redundant Power Supply

Version : A0

Issued Date : 20250919



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1. General Description

This specification defines the characteristic of 1 + 1 redundant power supply with 2 Unit high. And **SURE STAR** model name is TC2BPS22Y501 for 500W 、TC2BPS22Y601 for 600W output.

2. Input Characteristic

2.1. Input connector

The input connector shall be an IEC60320 C14 inlet, rated for 15A/250Vac.

2.2. Input Voltage and Frequency

<i>Minimum</i>	<i>Nominal</i>	<i>Maximum</i>	<i>Measure</i>
90	100~240	264	Vac
47	50~60	63	Hz

2.3. Input Current and Inrush Current

<i>Input Voltage</i>	<i>Max. Input Current</i>	<i>Inrush Current</i>
115Vac	6.5A/7A	30A
230Vac	3.5A	60A

2.4. Power Factor

The minimum power factor shall be 0.9 with 50% load and input 230Vac/50Hz.

3. Output Characteristic

3.1. DC Output Characteristic

<i>Output Voltage</i>	<i>Min. Current</i>	<i>Max. Current</i>	<i>Regulation</i>	<i>Ripple & Noise</i>
+3.3V	1A	25A	±5%	50mV
+5V	1A	25A	±5%	50mV
+12V	1A	41A/49A	±5%	120mV
-12V	0A	0.5A	±5%	120mV
+5VSB	0.1A	3A	±5%	50mV

Note :

1. The combined power from +3.3V and +5V shall not exceed 120W.
2. The max total power shall not exceed 500W/600W
3. Ripple and noise bandwidth is set to 20MHz.
4. Add a 0.1uF ceramic capacitor in parallel with a 10uF tantalum capacitor at output connector terminals for ripple and noise measurement.



3.2. Efficiency

The power efficiency shall meet 80plus Platinum.

3.3. Hold up Time

The output voltages stay in regulation at least 18ms with 75% load after loss of AC input.

3.4. Rise Time

The output voltages rise from 10% to 90% with full load shall be in 5ms to 70ms.

3.5. Dynamic Loading

The output voltages shall remain in regulation for the step loading, and in the limits for the capacitive loading specified below :

<i>Output</i>	<i>Step Load Size</i>	<i>Load Slew Rate</i>	<i>Capacitive Load</i>
+3.3V	30% of max load	0.5A / μ sec	1000uF
+5V	30% of max load	0.5A / μ sec	1000uF
+12V	65% of max load	0.5A / μ sec	2200uF
+5VSB	25% of max load	0.5A / μ sec	1uF

3.6. PSON Remote on/off Control

The PSON signal is required to remotely turn on/off the power supply.

PSON is an active low TTL compatible signal that turns on the main power rails.

	<i>PSU On</i>	<i>PSU Off</i>
PSON Signal	LOW (0.8V max.)	HI (3.8V min.)

3.7. Power Good Signal

Power Good, also called PG or PWOK, is an active high TTL compatible signal.

PG signal is to indicate that all output voltages are in regulation and ready for use.

Below is for a representation of the timing characteristics of PG signal.

Power Good on delay time	100ms to 500ms
Power Good off delay time	1ms (min.)



4. Protection

4.1. Over Current Protection

<i>Output</i>	<i>Min.</i>	<i>Max.</i>	<i>Comment</i>
+3.3V	110%	150%	PSU shutdown
+5V	110%	150%	PSU shutdown
+12V	110%	150%	PSU shutdown

4.2. Over Voltage Protection

<i>Output</i>	<i>Min.</i>	<i>Max.</i>	<i>Comment</i>
+3.3V	3.9V	4.5V	PSU shutdown
+5V	5.7V	6.5V	PSU shutdown
+12V	13.3V	14.5V	PSU shutdown

4.3. Short Circuit Protection

<i>Output</i>	<i>Comment</i>
+3.3V	PSU shutdown
+5V	PSU shutdown
+12V	PSU shutdown

4.4. Over Temperature Protection

The power supply would be protected against over temperature condition by loss of cooling or excessive ambient temperature. The PSU will shutdown in an OTP condition.



5. Power System Signal Status

5.1. Buzzer Status

<i>Power Supply Condition</i>	<i>Buzzer Status</i>
No input power to PSU	OFF
Input present/ only standby output on	OFF
Power supply outputs ON and OK	OFF
Power supply failure	Beeping

5.2. LED Indicator

<i>Power Supply Condition</i>	<i>Module LED</i>
No input power to PSU	OFF
Input present/ only standby output on	Red
Power supply outputs ON and OK	Green
Power supply failure	Red

5.3. TTL Signal

<i>Power Supply Condition</i>	<i>Output Condition</i>	
	<i>Min.</i>	<i>Max.</i>
Normal (Power Supply ON)	3V	5.25V
Failure (Power Supply OFF)	0V	1V

6. Insulation

6.1. Dielectric Withstand Voltage

Primary to Ground	1500Vac (10mA) for 1 second
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6.2. Leakage Current

Leakage current is 3.5mA maximum at 240Vac/50Hz.

7. Safety

CB、CE、TUV、UL。

Please visit our website and get the latest safety certificate.



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8. EMC

CE 、 FCC ◦ (Class B)

Please visit our website and get the latest EMC certificate.

9. Environmental Requirement

9.1. Temperature

Operating : 0°C to +50°C.

Non-Operating : -20°C to +70°C.

9.2. Humidity

Operating : 20% to 90% , non-condensing.

Non-Operating : 5% to 95% , non-condensing.

9.3. Altitude

Operating : Up to 5000m.

9.4. Cooling Method

By DC fan.

10. Reliability

10.1. MTBF

Using MIL - HDBK -217F the calculated MTBF > 100,000 hours at 25°C.



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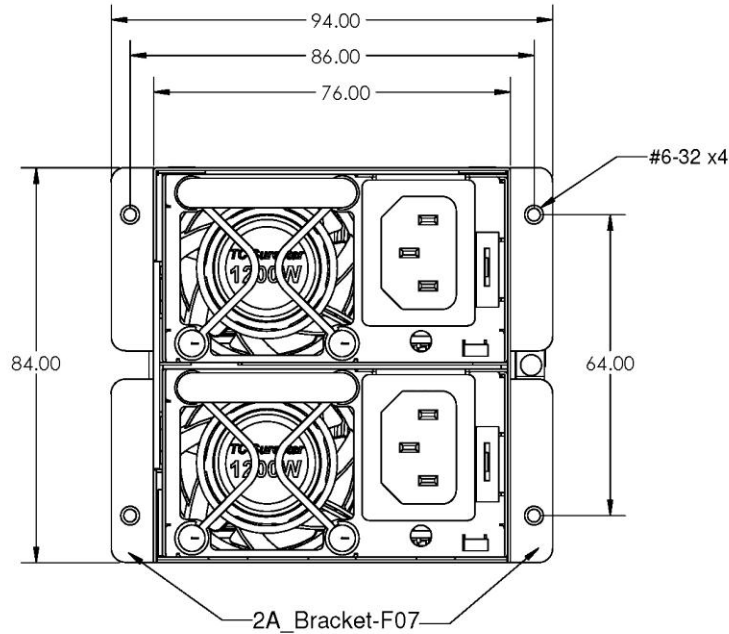
11.1. Outline (bracket optional) : W76 * H84 * D180mm.

TBD.



Bracket front for CRPS 2U redundant.

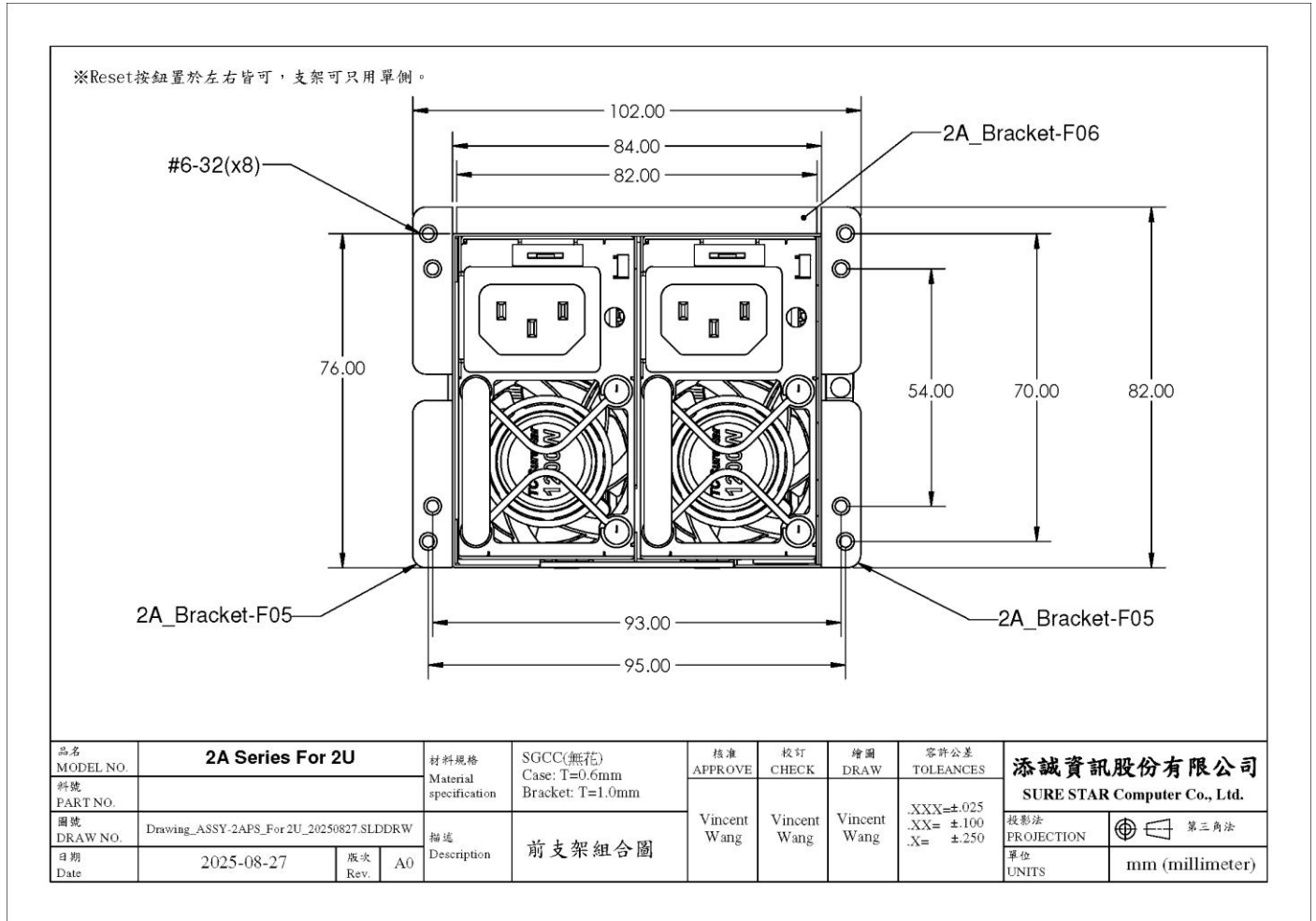
※Reset按鈕置於左右皆可，支架可只用單側。



品名 MODEL NO.	2A Series For 2U(CRPS)		材料規格 Material specification	SGCC(無花) Case: T=0.6mm Bracket: T=1.0mm	核准 APPROVE	校訂 CHECK	繪圖 DRAW	容許公差 TOLERANCES	添誠資訊股份有限公司 SURE STAR Computer Co., Ltd.	
料號 PART NO.					Vincent Wang	Vincent Wang	Vincent Wang	.XXX=±.025 .XX= ±.100 .X= ±.250	投影法 PROJECTION	第三角法
圖號 DRAW NO.	Drawing_ASSY-2AFS_For 2U(CRPS)_20250827.SLDDRW		描述 Description	前支架組合圖					單位 UNITS	mm (millimeter)
日期 Date	2025-08-27	版次 Rev.	A0							

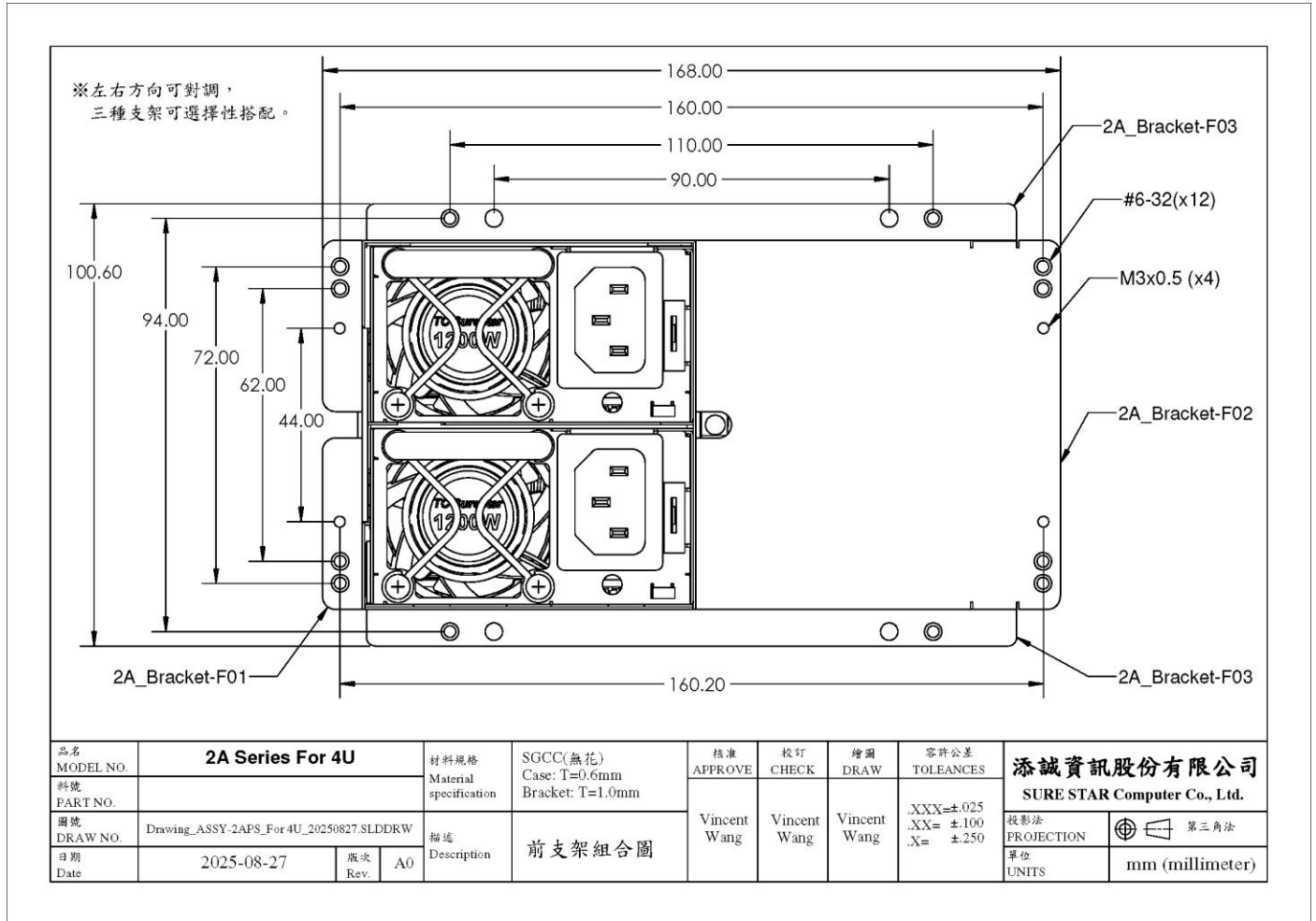


Bracket front for 2U redundant.



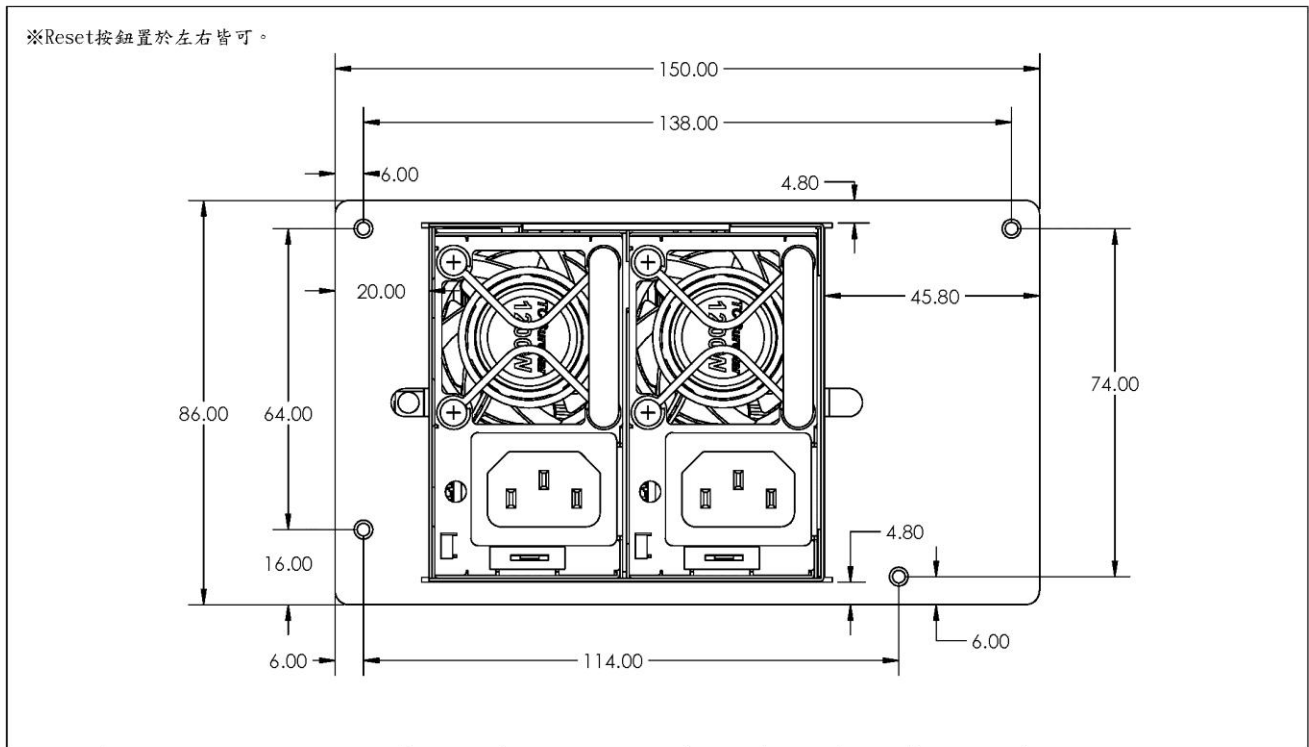


Bracket front for 4U mini redundant.





Bracket front for ATX PS2.



品名 MODEL NO.	2A Series For ATX		材料規格 Material specification	SGCC(無花) Case: T=0.6mm Bracket: T=1.0mm	核准 APPROVE	校訂 CHECK	繪圖 DRAW	容許公差 TOLERANCES	添誠資訊股份有限公司 SURE STAR Computer Co., Ltd.	
料號 PART NO.					Vincent Wang	Vincent Wang	Vincent Wang	.XXX=±.025 .XX= ±.100 .X= ±.250	投影法 PROJECTION	第三角法
圖號 DRAW NO.	Drawing_ASSY-2APS_For ATX_20250827_SLDDKW		描述 Description	前支架組合圖					單位 UNITS	mm (millimeter)
日期 Date	2025-08-27	版次 Rev.	A0							



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12.2. Output Wire (could be customization) :

TBD.

13. Customization Note

Customization note shall be listed here.

End of File

NOTE : This data is subject to change without notice.