

**CUS90E****SPECIFICATIONS**

CA824-01-01A

ITEMS		MODEL	CUS90E -5	CUS90E -12	CUS90E -24
1	Nominal Output Voltage	V	5	12	24
2	Maximum Output Current	A	16.0	7.5	3.75
3	Maximum Output Power	W	80.0	90.0	90.0
4	Efficiency @ DC input (Typ)	110/220VDC (*1)	%	83 / 84	86 / 87
	Efficiency @ AC input (Typ)	115/230VAC (*1)	%	83 / 84	86 / 87
5	Input Voltage Range	(*) <sup>2)(*)11)</sup>	-	85 ~ 265VAC (47 - 63Hz) or 85 - 300VDC	
6	Input Current @ DC input (Typ)	110/220VDC (*1)	A	1.0 / 0.5	
	Input Current @ AC input (Typ)	115/230VAC (*1)	A	1.2 / 0.6	
7	In-rush Current @ DC input (Typ)	110/220VDC (*1)(*3)	-	10A / 20A	
	In-rush Current @ AC input (Typ)	115/230VAC (*1)(*3)	-	13A / 26A	
8	Adjustable Output Voltage Range	V	4.5 - 5.5	10.8 - 13.2	21.6 - 26.4
9	Maximum ripple & noise	(*) <sup>1)(*)4)</sup>	mV	100	120
10	Maximum Line Regulation	(*) <sup>4)(*)5)</sup>	mV	50	100
11	Maximum Load Regulation	(*) <sup>4)(*)6)</sup>	mV	100	200
12	Temperature Coefficient	(*) <sup>4)</sup>	-	Less than 0.02% / °C	
13	Over Current Protection	(*) <sup>7)</sup>	A	>16.8	>7.9
14	Over Voltage Protection	(*) <sup>8)</sup>	V	5.75 - 7.00	13.8 - 16.2
15	Hold-up Time @ DC input (Typ)	110/220VDC (*1)	-	190ms	
	Hold-up Time @ AC input (Typ)	115/230VAC (*1)	-	190ms	
16	Remote Control	-	-	-	
17	Parallel Operation	-	-	-	
18	Series Operation	-	-	Possible	
19	Operating Temperature	(*) <sup>9)</sup>	-	100% load @ -40~65°C, 70% load @ 80°C	
20	Operating Humidity	-	-	10 - 90%RH (No Condensing)	
21	Storage Temperature	-	-	-40 - +85°C	
22	Storage Humidity	-	-	10 - 90%RH (No Condensing)	
23	Cooling	-	-	Convection	
24	Withstand Voltage	-	-	Input - FG : 2kVAC (5mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (20mA) for 1min	
25	Isolation Resistance	-	-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC	
26	Vibration	-	-	At no operating, 10 - 500Hz (Sweep for 1min) 19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each. GB/T 11287-2000 Level 1	
27	Shock	-	-	Less than 196.1m/s <sup>2</sup>	
28	Safety	(*) <sup>10)</sup>	-	Designed to meet UL60950-1	
29	EMI	-	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B	
30	Immunity	-	-	Designed to meet IEC61000-4-2 (Level 4), IEC61000-4-3 (Level 3), IEC61000-4-4 (Level 4), IEC61000-4-5 (Level 3,4), IEC61000-4-6 (Level 3), IEC61000-4-8 (Level 4), IEC61000-4-11	
31	Weight (Typ)	g	-	370	
32	Size (L x W x H)	mm	-	195 x 80 x 28 ( Refer to Outline Drawing )	

\*Read instruction manual carefully, before using the power supply unit.

=NOTES=

\*1. At 115/230VAC &amp; 110/220VDC, Ta=25°C, nominal output voltage and maximum output power.

\*2. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC(50-60Hz).

\*3. Not applicable for the in-rush current to noise filter for less than 0.2ms.

\*4. Please refer to Fig. A for measurement of Vo, line &amp; load regulation and ripple voltage.

Ripple &amp; noise are measured at 100MHz by using a 150mm twisted pair of load wires terminated with a 0.1uF and 100uF capacitor.

\*5. 85 ~ 265VAC &amp; 85 - 300VDC, constant load.

\*6. No load-Full load, constant input voltage.

\*7. Hiccup with automatic recovery.

Avoid to operate at over load or short circuit condition for more than 30seconds.

\*8. OVP circuit will shut down output , manual reset (Re power on) to get output voltage.

\*9. Output Deratings

- Derating at standard mounting. Refer to output derating curve (CA824-01-02\_).

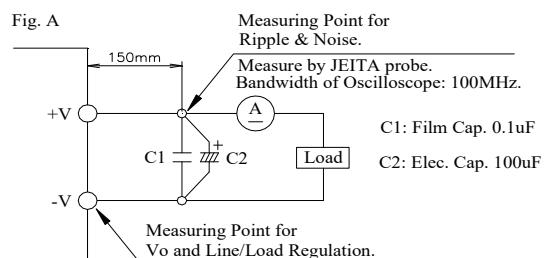
- Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.

\*10. The outputs of this product may, under fault conditions, exceed SELV voltage limits.

Therefore the outputs must be earthed in the end equipment to maintain SELV.

If the outputs are not earthed, they must be considered hazardous and must not be made user accessible.

\*11. Output Derating needed when input voltage less than 100VAC. Refer to output derating vs. input voltage (CA824-01-03\_).



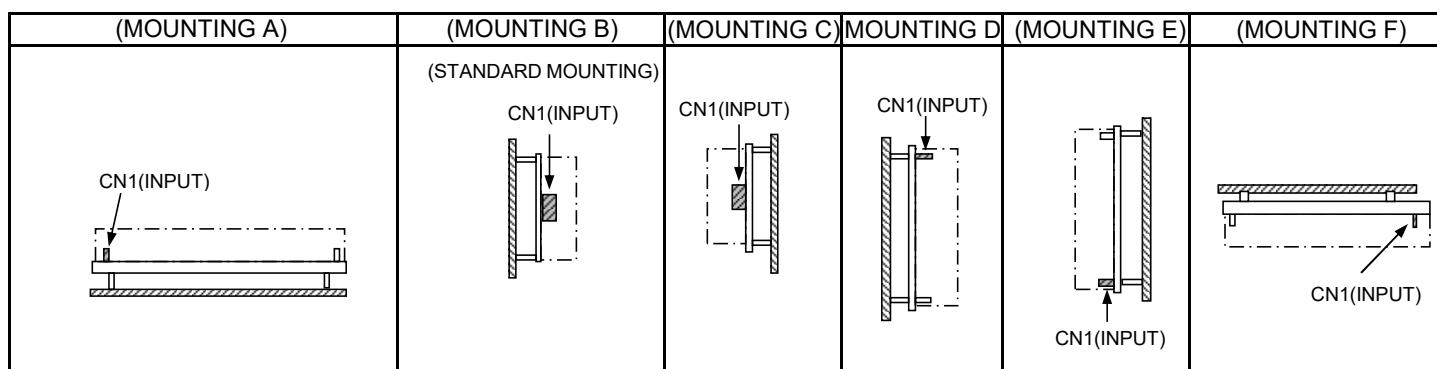
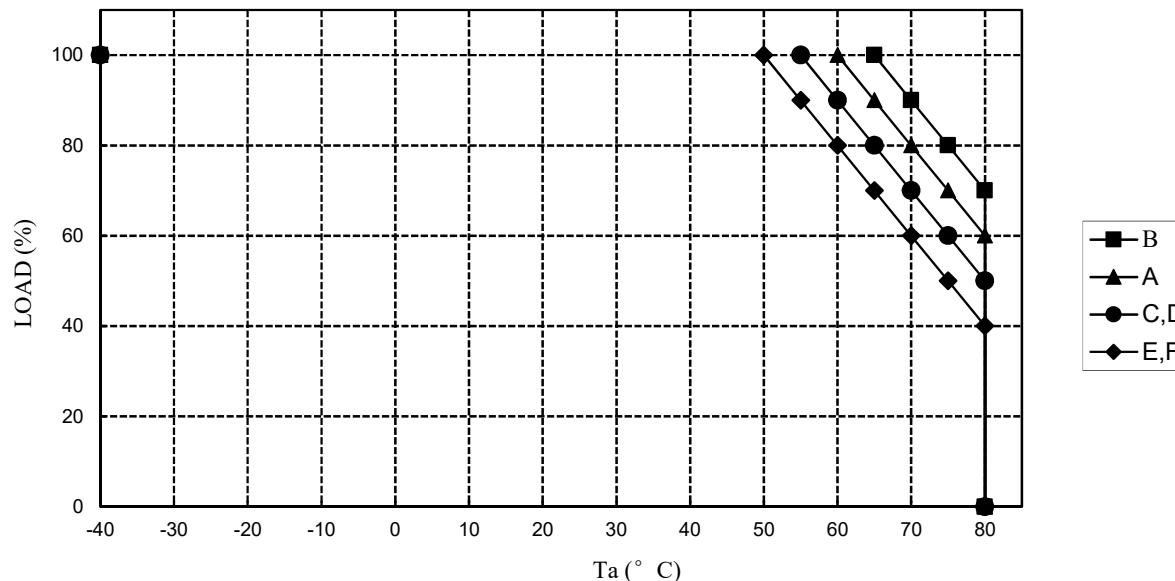
**CUS90E****OUTPUT DERATING**

CA824-01-02

\*COOLING: CONVECTION COOLING

Ta (°C)	LOADING CONDITION(%)			
	Mounting B	Mounting A	Mounting C,D	Mounting E,F
-40~50	100	100	100	100
55	100	100	100	90
60	100	100	90	80
65	100	90	80	70
70	90	80	70	60
75	80	70	60	50
80	70	60	50	40

\*COOLING: CONVECTION COOLING

**OUTPUT DERATING VS. AMBIENT TEMPERATURE**

**CUS90E****OUTPUT DERATING**

CA824-01-03

\*COOLING: CONVECTION COOLING

Input voltage	LOADING CONDITION(%)
	All Mounting (A,B,C,D,E,F)
85VAC / 85VDC	80
100VAC-265VAC / 110VDC-300VDC	100

\*COOLING: CONVECTION COOLING

**OUTPUT DERATING VS. INPUT VOLTAGE**