

CUS200M

SPECIFICATIONS

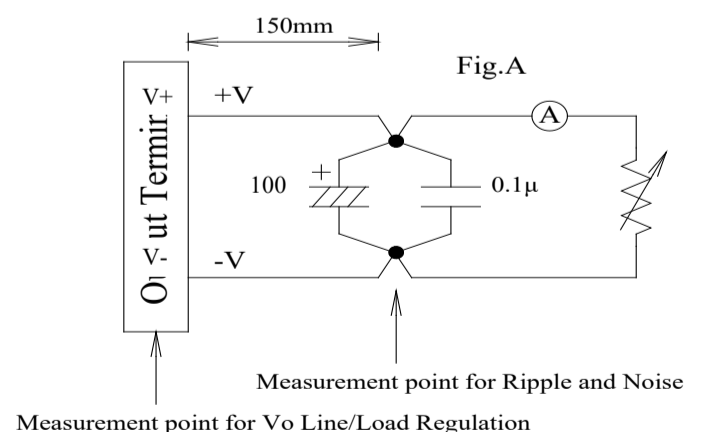
CA811-01-01G

ITEMS		MODEL	CUS200M-12	CUS200M-18	CUS200M-24	CUS200M-36	CUS200M-48
1	Nominal Output Voltage	V	12	18	24	36	48
2	Maximum Output Current @ Convection cooling	A	16.7	11.2	8.4	5.5	4.2
	Maximum Output Current @ Forced air cooling (*12)	A	16.7	14.0	10.5	7.0	5.3
3	Maximum Output Power @ Convection cooling	W	200.4	201.6	201.6	198.0	201.6
	Maximum Output Power @ Forced air cooling (*12)	W	200.4	252.0	252.0	252.0	254.4
4	Standby Mode Power	-	5V @ 0.6A(max) at convection cooling, 5V @ 1A(max) at forced air cooling				
5	Efficiency @ Convection cooling (Typ.)	115/230 VAC (*1) %	92 / 93	92 / 94	92 / 94	92 / 94	92 / 94
	Efficiency @ Forced air cooling (Typ.)	115/230 VAC (*1) %	91 / 93	92 / 94	92 / 94	92 / 94	92 / 94
6	Input Voltage Range (*2)	-	85 - 265 VAC (47-63Hz)				
7	Input Current @ Convection cooling (Typ.)	115/230 VAC (*1) A	2.2/ 1.1				
	Input Current @ Forced air cooling (Typ.)	115/230 VAC (*1) A	3.0/ 1.5				
8	In-rush Current (Typ.)	115/230 VAC (*1)(*3) -	35A / 70A at Cold Start				
9	PFHC	-	Built to meet IEC61000-3-2,Class A				
10	Power Factor (Typ.)	115/230 VAC (*1) -	0.99/0.95				
11	Output Voltage Range	V	11.7 ~ 12.6	17.6 ~ 18.9	23.5 ~ 25.2	35.2 ~ 37.8	47 ~ 50.4
12	Maximum Ripple & Noise@ Convection cooling 115/230 VAC(*1)(*4)(*5)	mV	180	180	240	360	480
	Maximum Ripple & Noise@ Forced air cooling 115/230 VAC(*1)(*4)(*5)	mV	180	200	240	360	480
13	Maximum Line Regulation (*4)(*6)	mV	60	90	120	180	240
14	Maximum Load Regulation (*4)(*7)	mV	120	180	240	360	480
15	Remote Off Power Consumption (*13)	-	<0.5W @ 230VAC				
16	Temperature Coefficient (*4)	-	Less than 0.02% / °C				
17	Over Current Protection (*8)	A	>17.5	>14.7	> 11	>7.4	>5.5
18	Over Voltage Protection (*9)	V	13.2 - 16.2	19.8 - 24.3	26.4 - 32.4	39.6 - 48.6	52.8 - 64.8
19	Hold-up time (Typ.)	(*1) -	16ms @ 200W, 12ms @ 250W				
20	Leakage Current (*10)	-	0.3mA max @ 265VAC,60Hz				
21	Remote ON/OFF control	-	Possible				
22	DC-OK	-	Possible				
23	Parallel Operation	-	-				
24	Series Operation	-	Possible				
25	Operating Temperature (*11)	-	-20°C - +70°C				
26	Operating Humidity	-	10 - 95%RH (No condensing)				
27	Storage Temperature	-	-40°C - +85°C				
28	Storage Humidity	-	10 - 95%RH (No condensing)				
29	Cooling (*12)	-	Convection or Forced Air Cooling				
30	Withstand Voltage	-	Input-FG : 2kVAC (20mA) 1x MOPP Input-Output : 4kVAC (20mA) 2x MOPPs Output-FG : 1.5kVAC (20mA) 1xMOPP				
31	Isolation Resistance	-	More than 100MΩ at 25°C,70%RH, Output - FG : 500VDC				
32	Vibration	-	At no operating, 10-55Hz (Sweep for 1min.) Maximum 19.6m/s <sup>2</sup> X,Y,Z 1 hour each				
33	Shock	-	Less than 196m/s <sup>2</sup> and MIL-STD-810F				
34	Safety	-	Approved by IEC/EN62368-1,UL62368-1,CSA62368-1 Approved by IEC/EN60601-1,ES60601-1,CSA-C22.2 No.60601-1				
35	EMI (*1)	-	Designed to meet EN55011-B, EN55032-B, FCC-Class B				
36	Immunity	-	Designed to meet IEC61000-4-2 (Level 2,3), IEC61000-4-3 (Level 3), IEC61000-4-4 (Level 3), IEC61000-4-5 (Level 3,4), IEC61000-4-6 (Level 3), IEC61000-4-8 (Level 4), IEC61000-4-11, IEC60601-1-2 Ed.4.1				
37	Weight (Typ.)	g	350				
38	Size ( L x W x H )	mm	127 x 76.2 x 34 (Refer to Outline Drawing)				

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

=NOTES=

- \*1. Ta=25°C, Nominal output voltage and maximum output power.
- \*2. For cases where conformance to various safety specs (UL, CSA, EN) are required, input voltage range will be 100 ~ 240VAC (50-60Hz).  
Output derating required when Vin is less than 115VAC, refer to output derating curve for details.
- \*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 and load regulation and ripple voltage.
- \*5. Ripple & noise are measured at 20MHz by using a 150mm twisted pair of load wires terminated with a 0.1uF and 100uF capacitor.
- \*6. 85~265VAC, constant load.
- \*7. No load - full load, constant input voltage.
- \*8. Hiccup with automatic recovery, however power supply may be latched for protection when output is shorted and manual reset is required (Repower on) .  
Avoid to operate at over load or short circuit condition for more than 30 seconds.
- \*9. OVP circuit shut down the output, manual reset (Repower on) to get output voltage.
- \*10. Measured by the each measuring method of UL, CSA, and EN (at 60Hz), Ta=25°C.
- \*11. Refer to Output Derating Curve for details of output derating versus input voltage, ambient temperature and mounting method .  
- Load (%) is percent of maximum output power or maximum output current.  
Do not exceed its derating of Maximum Load.  
- maximum load start up at -40°C is possible. However, it may not fulfill all the specifications.
- \*12. Forced air cooling with air velocity more than 1.5m/s and air volume more than 15.9CFM (measured at component side, air must flow through component side).
- \*13. The power consumption refers to input power during remote off and standby 5V is at no load condition.



**CUS200M**

OUTPUT DERATING

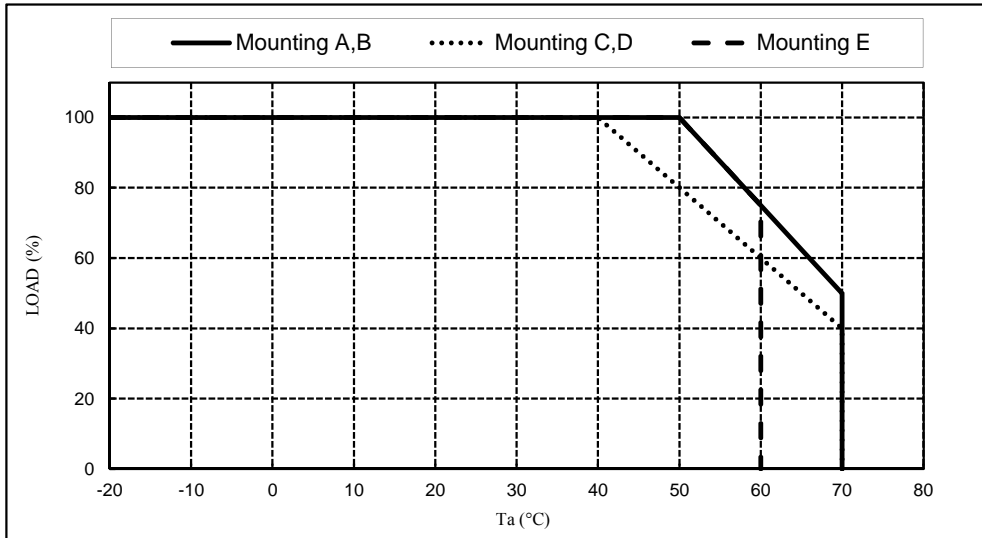
CA811-01-02A

**OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)**

\*COOLING : CONVECTION COOLING

MODEL: CUS200M-18, CUS200M-24, CUS200M-36, CUS200M-48

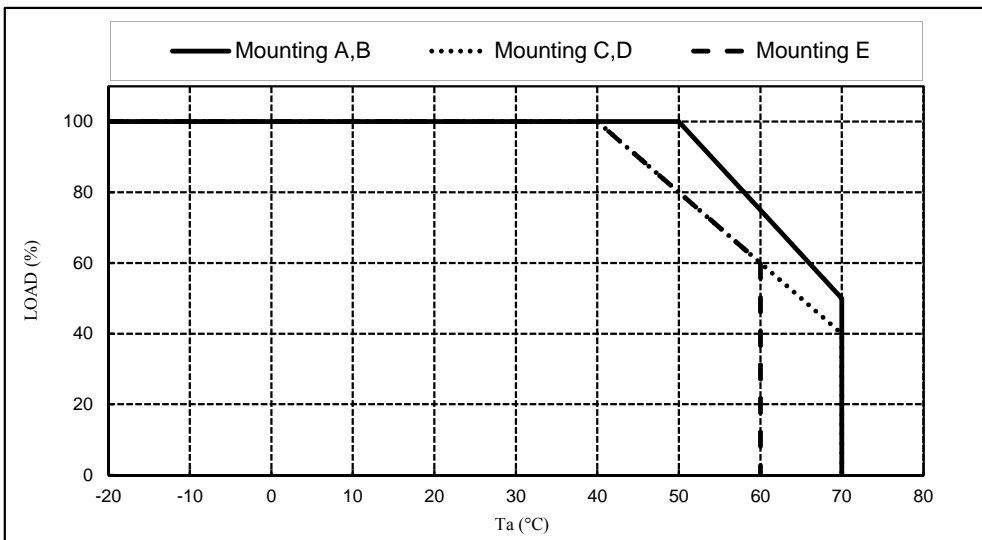
Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +40	100	100	100
50	100	80	100
60	75	60	75
65	63	50	-
70	50	40	-



\*COOLING : CONVECTION COOLING

MODEL: CUS200M-12

Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +40	100	100	100
50	100	80	80
60	75	60	60
65	63	50	-
70	50	40	-



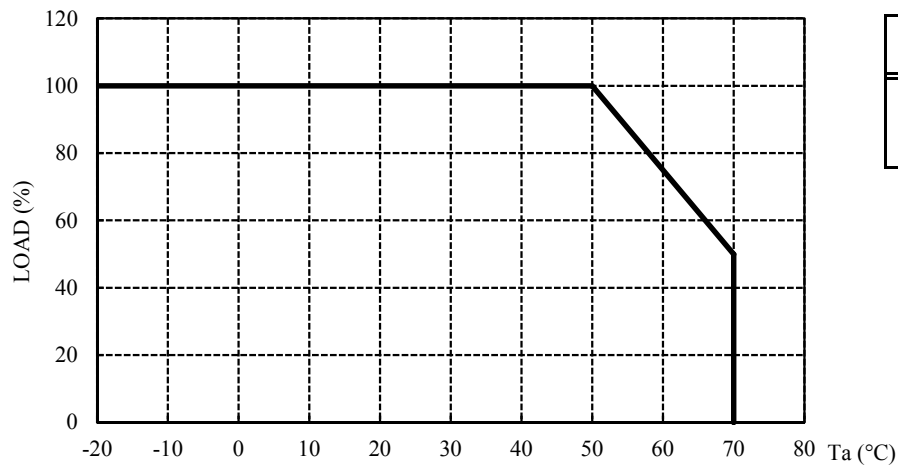
**CUS200M**

OUTPUT DERATING

CA811-01-03

**OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)**

\* COOLING: FORCED AIR COOLING  
FOR ALL MOUNTINGS AND ALL MODELS

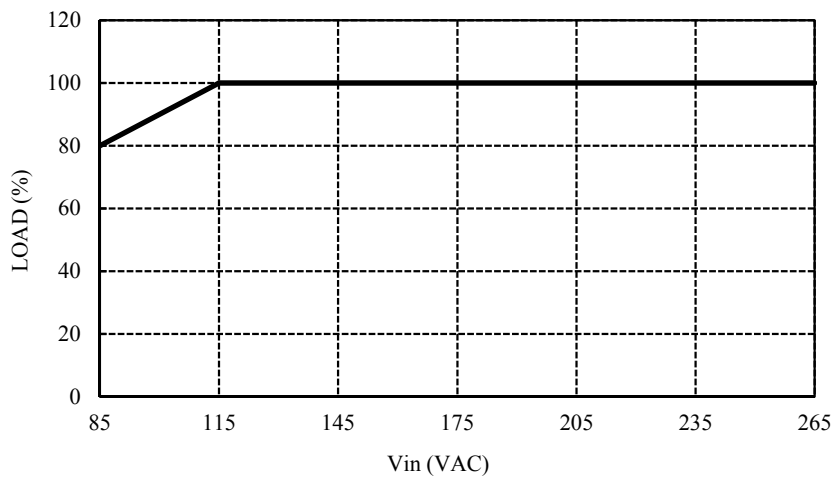


Ta (°C)	LOAD (%)
-20 - +50	100
60	75
70	50

**OUTPUT DERATING VERSUS INPUT VOLTAGE**

FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



**MOUNTING METHOD**

