

CUS30M

SPECIFICATIONS

CA851-01-01

MODEL			CUS30M -12	CUS30M -24	CUS30M -48
ITEMS					
1	Nominal Output Voltage	V	12	24	48
2	Maximum Output Current	A	2.5	1.25	0.63
3	Maximum Output Power	W	30	30	30.24
4	Efficiency (Typ.)	%	87 / 88	88 / 90	88 / 90
5	Active Average Efficiency related to Erp	%	87 / 87		88 / 89
6	No Load Power Consumption	W	< 0.3 , Ta=25°C, Nominal Input and Output Voltage		
7	Input Voltage Range	-	85 ~ 265 VAC (47-63Hz)		
8	Input Current (Typ.)	A	0.6 / 0.4		
9	Inrush Current (Typ.)	A	30 / 60 at Cold Start		
10	Output Voltage Range	-	Fixed (shipment condition : ±2.5%)		
11	Maximum Ripple & Noise(Ta>0°C/Ta<=0°C)(*)(*4)(*5)	mV	120 / 200	150 / 200	200 / 300
12	Maximum Ripple & Noise (0%~35% Load) (*4)(*5)	mV	280	280	480
13	Maximum Line Regulation (*4)(*6)	mV	48	96	192
14	Maximum Load Regulation (*4)(*7)	mV	120	192	384
15	Temperature Coefficient (*4)	-	Less than 0.02% / °C		
16	Over Current Protection (*8)	-	>105% of Maximum Output Current . Class 2 limited power source		
17	Over Voltage Protection (*9)	-	Above 115% ~ , shutdown		
18	Hold-up time (Typ.)	ms	20 / 100		
19	Earth Leakage Current (*10)	-	0.25mA max @265VAC,60Hz		
20	Patient Leakage Current	-	100uA max @265VAC , 60Hz , Input to Output		
21	Parallel Operation	-	No		
22	Series Operation	-	Possible		
23	Operating Temperature (*11)	-	-20°C ~ +70°C		
24	Operating Humidity	-	10 ~ 90%RH (No condensing)		
25	Storage Temperature	-	-40°C ~ +85°C		
26	Storage Humidity	-	10 ~ 90%RH (No condensing)		
27	Operating Altitude	-	5000m, derating 5°C/1000m above 3000m		
28	Isolation Class / Class of Protection	-	Class I (L,N,FG) or ClassII (L,N)		
29	Cooling	-	Convection Cooling		
30	Withstand Voltage	-	Input-Output : 4kVAC (20mA) 2xMOPP, Input-FG : 2kVAC (20mA) 1xMOPP, 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, 10-500Hz (Sweep for 1min.) Maximum 19.6m/s ² X,Y,Z 1 hour each		
33	Shock	-	Less than 196m/s ² , MIL-STD-810F		
34	Safety	-	Approved by IEC60601-1 3rd Edition, EN60601-1 3rd Edition, ANSI/AAMI ES60601-1, CAN/CSA-C22.2 No.60601-1 3rd Edition(cTUVus), IEC/EN60950-1 2nd Edition, UL/CSA60950-1 2nd Edition(cTUVus)		
35	Pollution	-	Degree 2, material group 3		
36	EMI (*1)	-	Designed to meet EN55011-B, EN55032-B, FCC-Class B		
37	Immunity	-	Designed to meet IEC61000-4-2 (Level 4,3), 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), IEC60601-1-2 Ed.4, Criteria A SEMI47 (Input Voltage: 200VAC~240VAC)		
38	Line voltage dip	-	Designed to meet IEC61000-4-11 (Class 3) :		
		-	Criteria A : 200VAC~240VAC Criteria B : 100VAC~120VAC		
		-	Designed to meet IEC61000-4-11 (Class 2) : IEC60601-1-2 Ed.4 Criteria A : Input Voltage above 120VAC or output below 70% of Maximum Output Current Criteria B : Input Voltage below 120VAC and Output Current more than 70%		
39	Weight (Typ.)	g	65		
40	Size (L x W x H)	inch	3 x 2 x 0.95 (Refer to Outline Drawing)		

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

=NOTES=

*1. At 115VAC/230VAC, 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 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 47uF capacitor.

*6. 85~265VAC, constant load.

*7. No load - full load, constant input voltage.

*8. Hiccup with automatic recovery. Avoid operating at over load or short circuit condition.

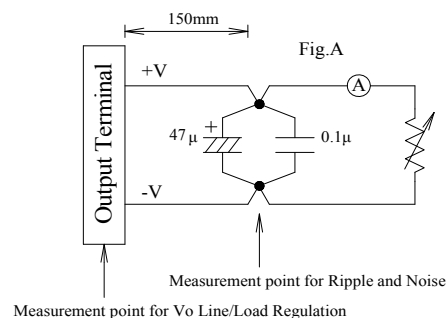
*9. OVP circuit shut down the output, manual reset (Re power on) to get output voltage.

*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 -30°C is possible. However, it may not fulfill all the specifications.



CUS30M

OUTPUT DERATING

CA851-01-02

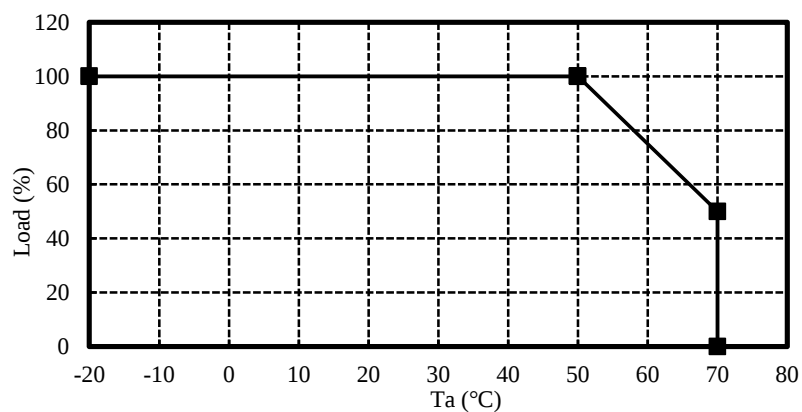
OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE(Ta)

1. CUS30M-12,-24

* COOLING: CONVECTION COOLING

FOR STANDARD MOUNTING

Ta (°C)	Load (%)
-20 - +50	100
70	50



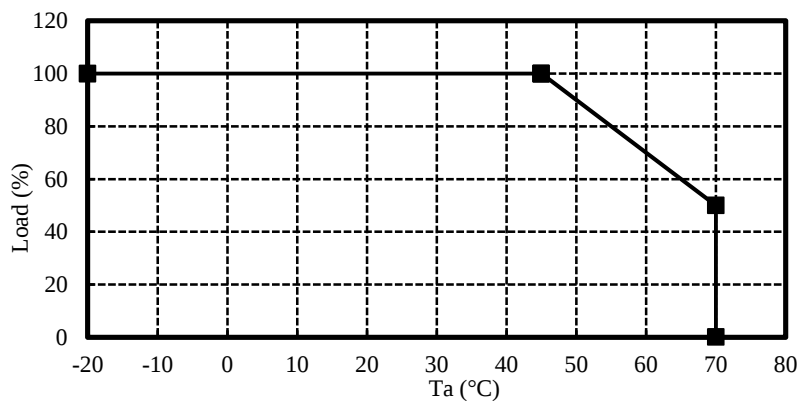
—■— MOUNTING A,B,C,D,E

2. CUS30M-48

* COOLING: CONVECTION COOLING

FOR STANDARD MOUNTING

Ta (°C)	Load (%)
-20 - +45	100
70	50



—■— MOUNTING A,B,C,D,E

CUS30M

OUTPUT DERATING

CA851-01-03

OUTPUT DERATING VERSUS INPUT VOLTAGE

CUS30M-12,-24,-48

FOR STANDARD MOUNTING AND ALL MODELS

Input Voltage (VAC)	Load (%)
85	80
115~265	100

