

CME100A

SPECIFICATIONS

CA846-01-01E

ITEMS		MODEL	CME100A -5	CME100A -12	CME100A -15	CME100A -18	CME100A -24	CME100A -28	CME100A -36	CME100A -48
1	Nominal Output Voltage	V	5	12	15	18	24	28	36	48
2	Maximum Output Current @ Convection cooling	A	12	6.7	5.4	4.5	4.2	3.6	2.8	2.1
	Maximum Output Current @ Force air cooling	A	16	8.4	6.7	5.6				
3	Maximum Output Power @ Convection cooling	W	60.0	80.4	81.0	81.0	100.8	100.8	100.8	100.8
	Maximum Output Power @ Force air cooling	W	80.0	100.8	100.5	100.8				
4	Efficiency @ Convection cooling (Typ.)	(*1) %	83 / 84	87 / 89	88 / 89	88 / 89	88 / 90	88 / 90	88 / 90	88 / 90
	Efficiency @ Force air cooling (Typ.)	(*1) %	81 / 83	87 / 88	87 / 89	87 / 89				
5	Input Voltage Range	(*2) -	85 - 265 VAC (47-63Hz)							
6	Input Current @ Convection cooling (Typ.)	(*1) A	1.2 / 0.8	1.5 / 0.9			1.8 / 1.1			
	Input Current @ Force air cooling (Typ.)	(*1) A	1.5 / 0.9	1.8 / 1.1						
7	In-rush Current (Typ.)	(*1)(*3) A	30 / 60 at Cold Start							
8	Output Voltage Range	%	-10 / +10							
9	Maximum Ripple & Noise	(*1)(*4)(*5) mV	120	120	150	150	150	200	200	200
10	Maximum Ripple & Noise (0%~35% Load)	(*4)(*5) mV	240	280	280	280	280	400	400	480
11	Maximum Line Regulation	(*4)(*6) mV	20	48	60	72	96	112	144	192
12	Maximum Load Regulation	(*4)(*7) mV	40	96	120	144	192	224	288	384
13	No Load Power Consumption(Typ.)	-	< 0.5W @ 230VAC, 25°C, Nominal Output Voltage							
14	Temperature Coefficient	(*4) -	Less than 0.02%/°C							
15	Over Current Protection	(*8) A	>16.9	> 8.7	> 7.0	> 5.8	> 4.4	> 3.7	> 2.9	> 2.2
16	Over Voltage Protection	(*9) V	5.75 - 7.25	13.8 - 17.4	17.25 - 21.75	20.7 - 26.1	27.6 - 34.8	32.2 - 40.6	41.4 - 52.2	55.2 - 69.6
17	Hold-up time (Typ.)	(*1) ms	10 / 60							
18	Leakage Current	(*10) -	0.3mA max @265VAC, 60Hz							
19	Parallel Operation	-	No							
20	Series Operation	-	Possible							
21	Operating Temperature	(*11) -	-20°C ~ +70°C							
22	Operating Humidity	-	10 - 95%RH (No condensing)							
23	Storage Temperature	-	-40°C ~ +85°C							
24	Storage Humidity	-	10 - 95%RH (No condensing)							
25	Cooling	(*12) -	Convection or Force Air Cooling							
26	Withstand Voltage	-	Input-FG : 2kVAC (20mA) 1x MOPP Input-Output : 4kVAC (20mA) 2x MOPP Output-FG : 1.5kVAC (20mA) 1x MOPP							
27	Isolation Resistance	-	More than 100MΩ at 25°C,70%RH, Output - FG : 500VDC							
28	Vibration	-	At no operating, 10-500Hz (Sweep for 1min.) Maximum 19.6m/s ² X,Y,Z 1 hour each							
29	Shock	-	Less than 196m/s ² and MIL-STD-810F							
30	Safety	-	Approved by IEC/EN62368-1, UL62368-1, CSA62368-1 Approved by IEC/EN60601-1, ES60601-1, CSA-C22.2 No.60601-1							
31	EMI	(*1) -	Designed to meet EN55011-B, EN55032-B, FCC-Class B							
32	Immunity	-	Designed to meet IEC61000-6-2 IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5 IEC61000-4-6, IEC61000-4-8, IEC61000-4-11							
33	Weight (Typ.)	g	165							
34	Size (L x W x H)	mm	101.6 x 50.8 x 25.4 (Refer to Outline Drawing)							
35	Line DIP	-	Designed to meet SEMI-F47 (200VAC Line only)							

*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 100uF 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.

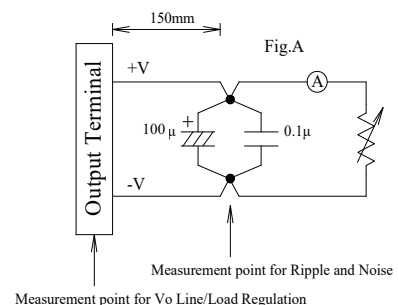
*10. Measured by the each measuring method of UL, CSA, and EN (at 60Hz), Ta=25°C.

*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.

*12. Force air cooling with air velocity more than 1.5m/s (measured at component side of PCB, air must flow through component side).



OUTPUT DERATING

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•OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

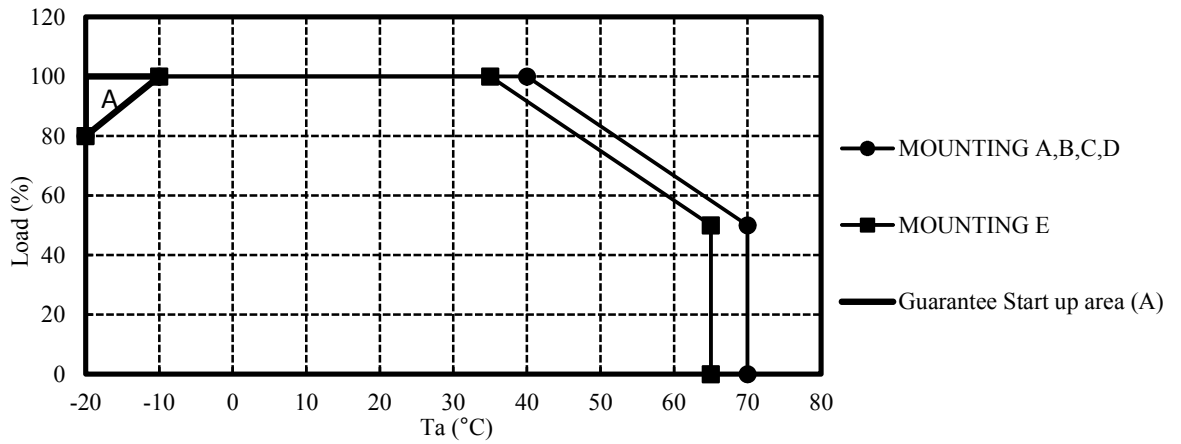
1. CME100A-5

*COOLING: CONVECTION COOLING
MOUNTING A,B,C,D

Ta (°C)	Load (%)
-20	80
-10 - +40	100
70	50

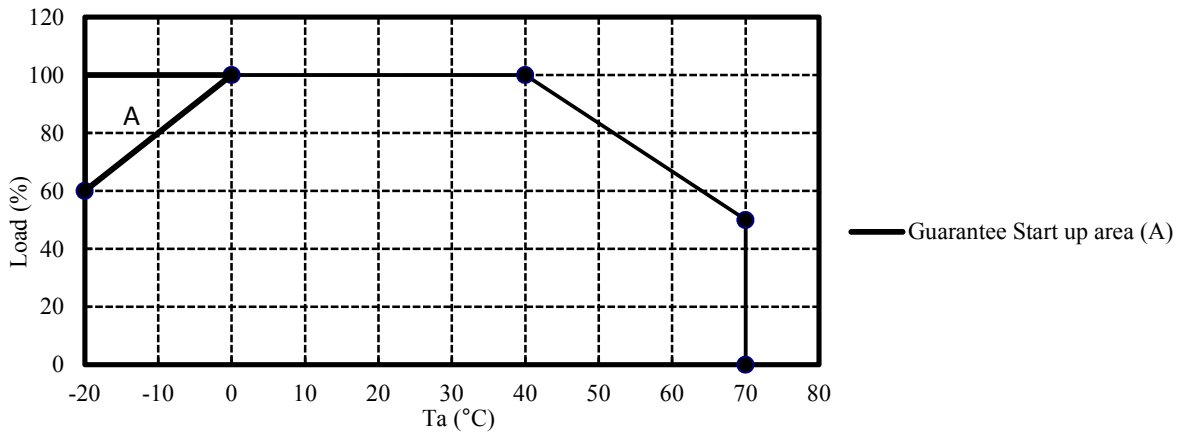
MOUNTING E

Ta (°C)	Load (%)
-20	80
-10 - +35	100
65	50



*COOLING: FORCE AIR COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +40	100
70	50

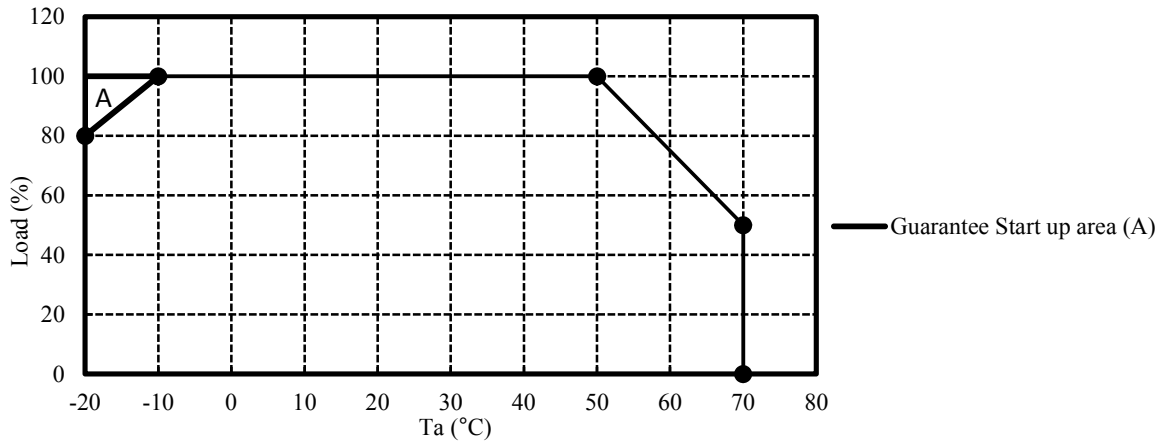


• **OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)**

2. CME100A-12,-15,-18

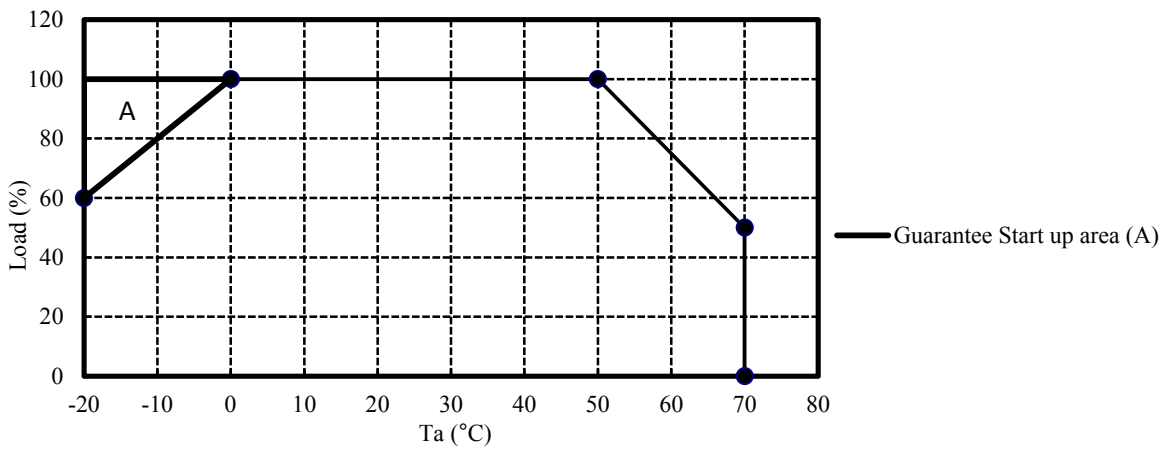
*COOLING: CONVECTION COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	80
-10 - +50	100
70	50



*COOLING: FORCE AIR COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +50	100
70	50



OUTPUT DERATING

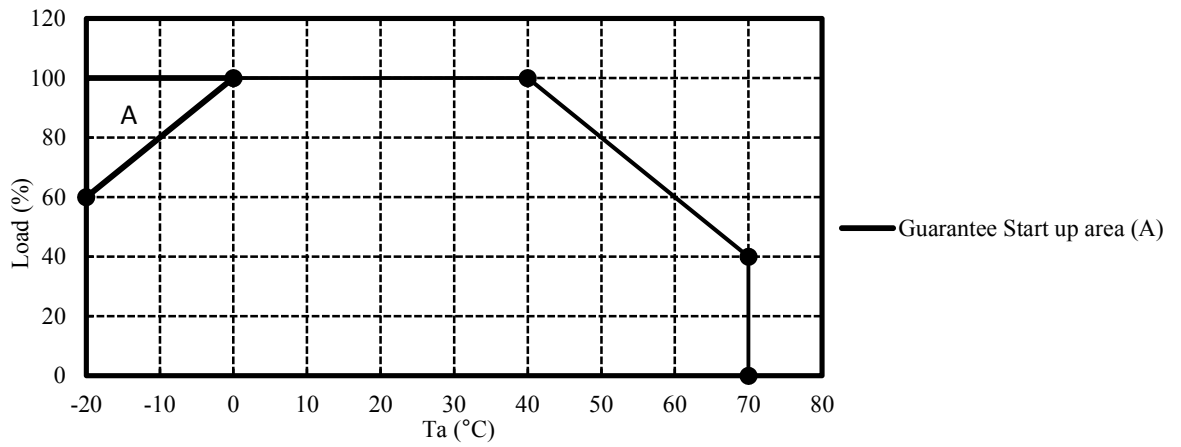
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• **OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)**

3. CME100A-24

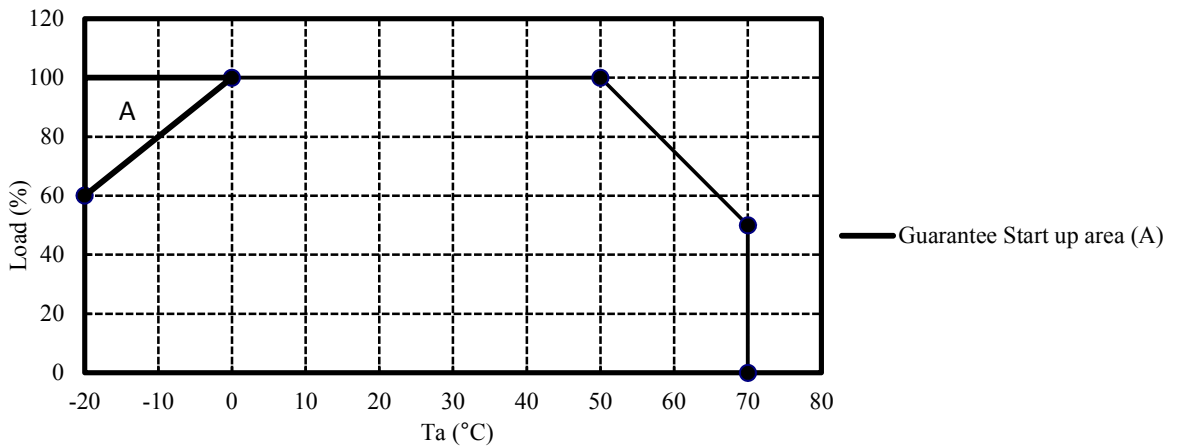
*COOLING: CONVECTION COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +40	100
70	40



*COOLING: FORCE AIR COOLING
MOUNTING A,B,C,D,E

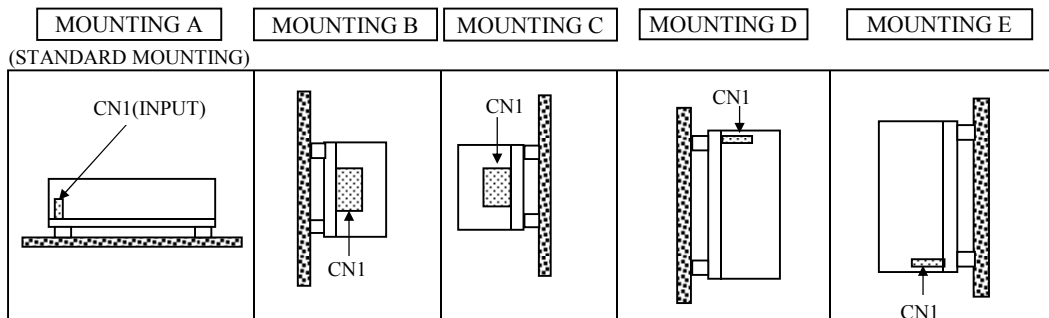
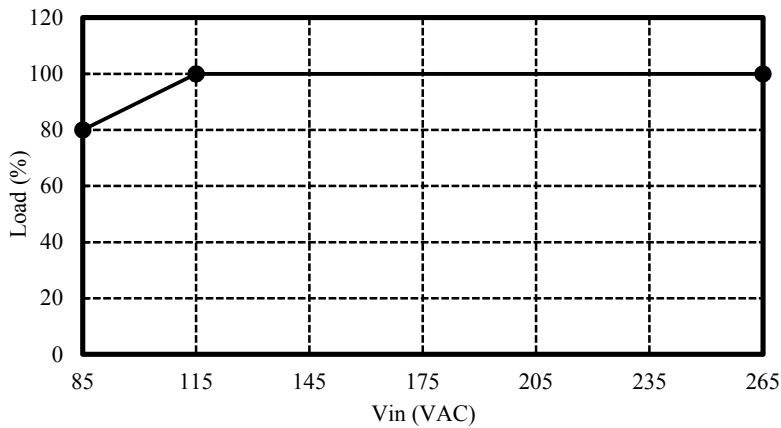
Ta (°C)	Load (%)
-20	60
0 - +50	100
70	50



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•OUTPUT DERATING VERSUS INPUT VOLTAGE

INPUT VOLTAGE (VAC)	Load (%)
	MOUNTING A,B,C,D,E
85	80
115~265	100



•LOW TEMPERATURE START UP

About Guarantee Start up area (A)

(***-01-02, ***-01-03, ***-01-04, ***-01-06, ***-01-07)

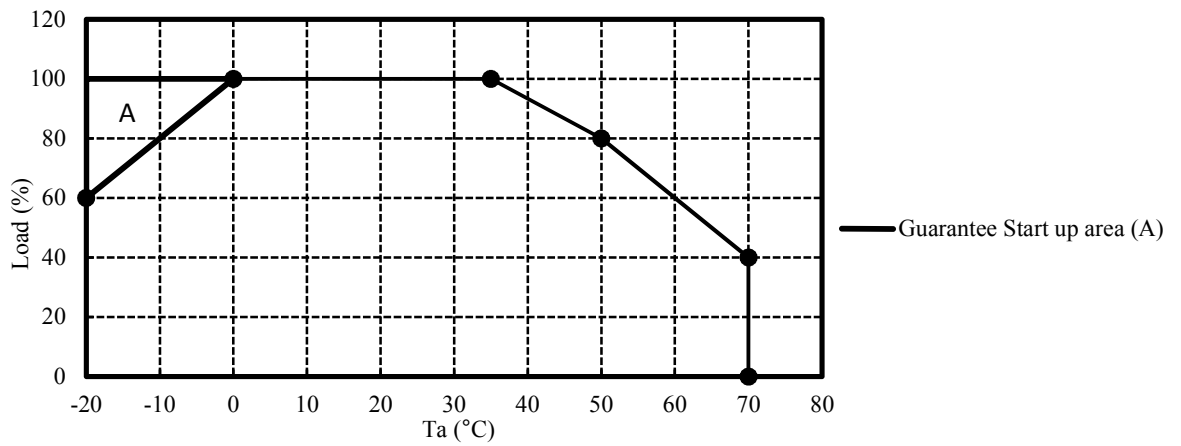
- *Input voltage : Not gradual start up.
- *Do not use the load that is constant current mode.
- *Avoid forced air cooling. It is assumed that inside of power supply is heated by self-heating within 1 minute.
- *No condensing.
- *About start up of no load and light load.
The output voltage may become unstable when increased load suddenly before warming.
- *Pay attention to above items before using the unit. Incorrect usage could lead to unstable output voltage.

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

4. CME100A-36

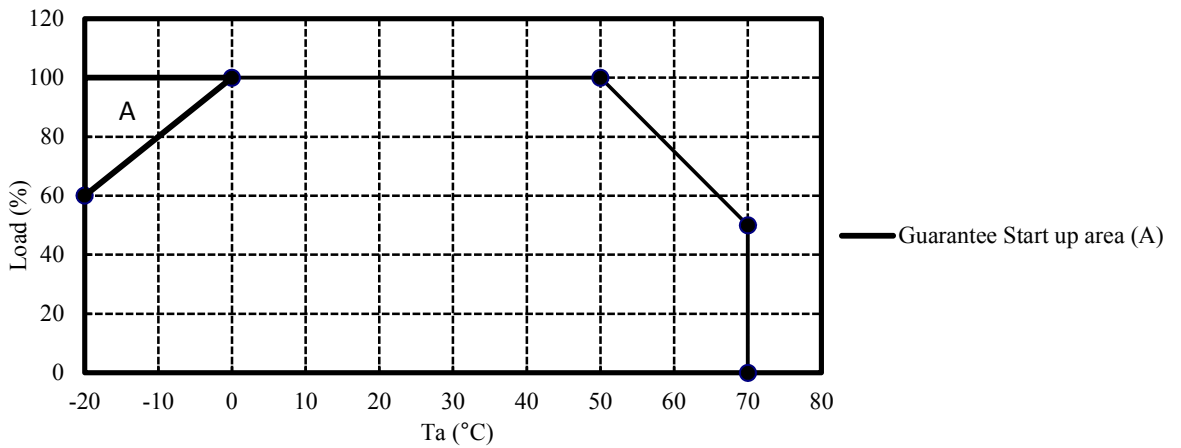
*COOLING: CONVECTION COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +35	100
50	80
70	40



*COOLING: FORCE AIR COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +50	100
70	50

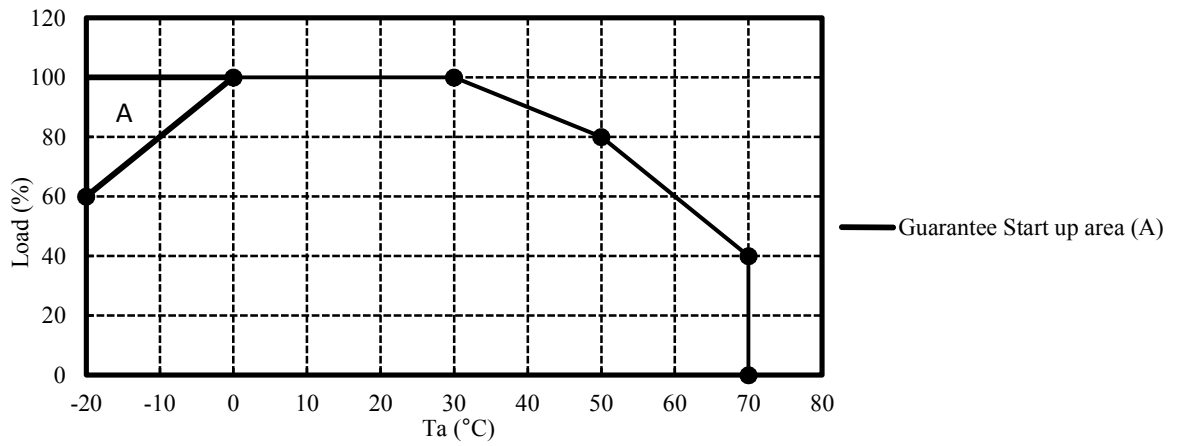


• **OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)**

5. CME100A-48

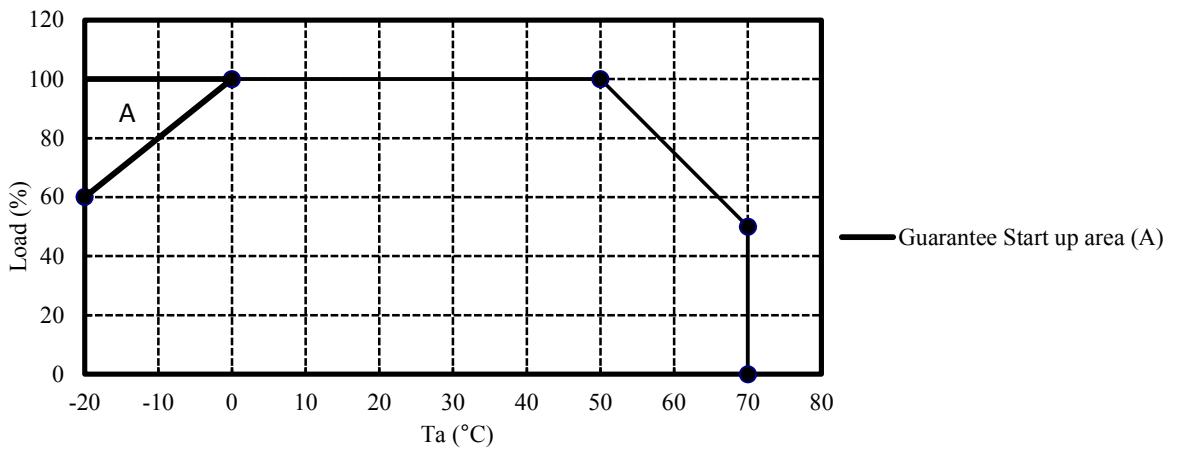
*COOLING: CONVECTION COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +30	100
50	80
70	40



*COOLING: FORCE AIR COOLING
MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +50	100
70	50



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

6. CME100A-28

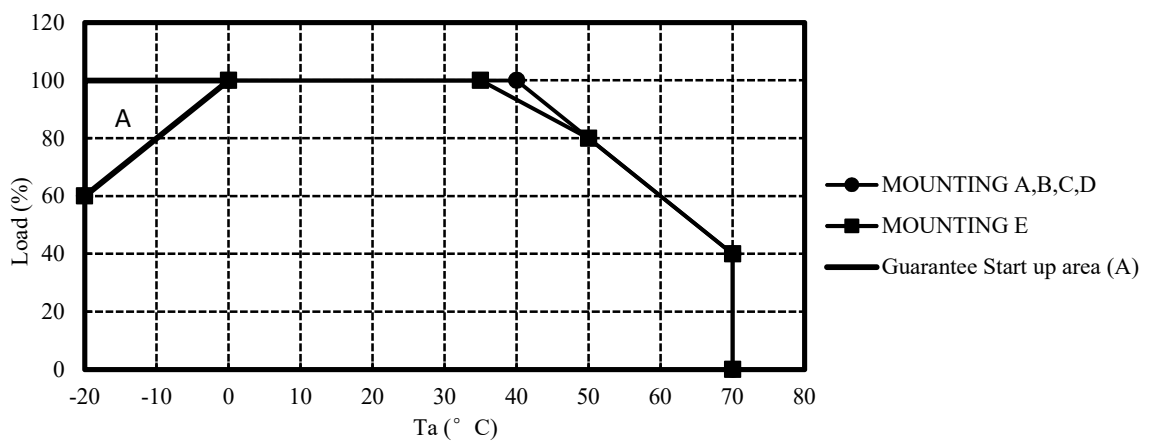
*COOLING: CONVECTION COOLING

MOUNTING A,B,C,D

Ta (°C)	Load (%)
-20	60
0 - +40	100
70	40

MOUNTING E

Ta (°C)	Load (%)
-20	60
0 - +35	100
50	80
70	40



*COOLING: FORCE AIR COOLING

MOUNTING A,B,C,D,E

Ta (°C)	Load (%)
-20	60
0 - +50	100
70	50

