



SPECIFICATION

For

SWITCHING POWER ADAPTER

M/N: MPE-CG70 Series

Revision history

REV.	Aug. 10 th 2011	Updated the efficiency.

**FEATURES**

- 70W switching adapter
- Meet CEC V safety requirement
- High Efficiency $\geq 87\%$ (average efficiency)
- Meet 55022 Class "B", conducted.

1. Description

MPE-CG70 series are 70W switching adapter for IT applications. It meet CEC V requirement.

Model	Output Voltage	Mini. Output Current	Rated Output Current	Line Regulation ^(Note 1)	Load Regulation ^(Note 2)	Voltage Setting ^(Note 3)	Ripple & Noise p-p ^(Note 4)	Average Efficiency ^(Note 5)
MPE-CG70-12 ^(Note 6)	+12V	0A	5.5A	$\pm 1\%$	$\pm 5\%$	$\pm 2\%$	1%	
MPE-CG70-15 ^(Note 6)	+15V	0A	4.6A	$\pm 1\%$	$\pm 3\%$	$\pm 2\%$	1%	
MPE-CG70-18	+18V	0A	3.9A	$\pm 1\%$	$\pm 2\%$	$\pm 2\%$	1%	87%
MPE-CG70-19	+19V	0A	3.7A	$\pm 1\%$	$\pm 2\%$	$\pm 2\%$	1%	
MPE-CG70-24	+24V	0A	3A	$\pm 1\%$	$\pm 2\%$	$\pm 2\%$	1%	
MPE-CG70-48	+48V	0A	1.5A	$\pm 1\%$	$\pm 2\%$	$\pm 2\%$	1%	

Note: 1) Line regulation is measuring from 100VAC to 240VAC with rated load.

2) Load regulation is measuring from 60% to 100% rated load and from 60% to 20% full load (60% \pm 40% rated load).

3) The output at 60% rated load and input is nominal 110/220VAC.

4) Measured by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10 μ F Electrolytic Capacitor and a 0.1 μ F Ceramic Capacitor.

5) Measuring at Input 115VAC, and average efficiency at 25%, 50%, 75%, and 100% rated load.

6) For MPE-CG70-12 is 720mm/16AWG; MPE-CG70-15 of output cable length is max. 1220mm/16AWG.

7) Suffix "Y" (ex. MPE-CG70-XX-Y) means add a Y capacitor in between Earth GND to Return voltage of output in order to isolated the Earth GND to output side.

2. Input Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Input Voltage	Continuous input range.	90	115/230	264	VAC
Input Frequency	AC input.	47	50/60	63	Hz
Hold Up Time	Nominal AC Input Voltage (230VAC), rated load.		8		ms
Input Current	Nominal AC Input Voltage (115VAC/230VAC), rated load.			1.5	A
Inrush Current	Nominal AC Input Voltage (115VAC/230VAC), one cycle at 25°C.			50	A
Leakage current				3.5	mA

3. Output Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Efficiency	Measuring at input 115Vac for average efficiency.	See Chart of Description			
Minimum load		See Chart of Description			
Ripple & Noise	Rated load, 20MHz bandwidth	See Chart of Description			
Output Power	Continuous output power.	See Chart of Description			
Line Regulation	Less than $\pm 1\%$ at rated load with $\pm 10\%$ changing in input voltage.	See Chart of Description			
Load Regulation	Measured from 60% to 100% rated load and from 60% to 20% rated load (60% \pm 40% rated load).	See Chart of Description			

4. Interface Signals and Internal Protection

Parameter	Conditions/Description
Short Circuit Protection	Fully protected against short circuit. Automatic recovery upon of overload condition.
Over Voltage Protection	Option



5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Safety	UL, UL 60950-1 CEC				Approved
Hi-Pot	Input to output	4242			VDC
Radiation	EN 55022 / CISPR 22 & FCC Part 15	B			Class
Conduction	EN 55022 / CISPR 22 & FCC Part 15	B			
EMS	IEC 61000-4-2, 8KV air discharge and 6KV contact discharge	3			Level
	IEC 61000-4-3, 3V/M	3			
	IEC 61000-4-4, 2KV line & PE	3			
	IEC 61000-4-5, 2KV	3			
	IEC 61000-4-6, 10V	3			
	IEC 61000-4-8, 10A/M	3			
	IEC 61000-4-11	3			

6. Environment Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature	At Rated load. Derating from 40 degree C as below.	0		+60	°C
Storage Temperature		-20		+85	°C
Relative Humidity	Non-condensing.	5		95	%RH

7. Mechanical

Parameter	Conditions/Description
Dimension	132 x 58 x 30.5 mm, tolerance +/- 0.5mm.
Connector	AC inlet : IEC 60320/C14 DC output connector: 5.5 (outer) x 2.1 (inner) x 12 (length) mm Output cable ^(Note 1.) : 1800mm ±50mm

Note. 1: For MPE-CG70-12 is 720mm/16AWG; MPE-CG70-15 of output cable length is max. 1220mm/16AWG.

