



SUNPOWER TECHNOLOGY CORP.  
 16F-1, No.150, Jian Yi Rd., Chung Ho City, Taipei Hsien, Taiwan, R.O.C.  
 TEL: 886-2-8226-3100 FAX: 886-2-8226-3111  
 http://www.sunpower.com.tw  
 E-mail: sunpower@sunpower.com.tw

# SDS-050L-xx Series

50W, Single Output  
 12V / 24V DC INPUT



99 x 82 x 35 mm  
 3.9 x 3.23 x 1.38 inch



## Features:

- \* DC Input 9.5 ~ 36 V
- \* Input protection: 8A/250V fuses
- \* Inrush current limitation soft start function
- \* Input & output isolation
- \* Input polarity reverse protection
- \* Over load, over voltage & short circuit protection
- \* Output voltage  $\pm 10\%$  adjustment
- \* 100% full load burn-in test
- \* Meet LVD standard
- \* 2 years warranty

## Specification:

INPUT	<b>Voltage</b>	9.5 ~ 36V DC			
	<b>Current</b>	<5.7A@12V DC input full load condition			
OUTPUT	<b>Voltage</b>	<b>5V</b>	<b>12V</b>	<b>24V</b>	<b>48V</b>
	<b>Min Load</b>	0A	0A	0A	0A
	<b>Max Load</b>	9A	4.2A	2.1A	1.1A
	<b>Output Tolerance</b> ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	<b>Ripple Noise MAX.</b> ③	70mV	120mV	150mV	240mV
	<b>Efficiency (TYP)</b>	75%	80%	82%	84%
	<b>Output MAX.</b>	45W	50W	50W	53W
PROTECTION	<b>Over Voltage</b>	5.8~7.0V	13.8~16.8V	27.6~33.6V	55.2~67.2V
		Shutdown and latch off, recover after re-start up.			
	<b>Over Load &amp; Short Circuit</b>	When power supply over 105%~ 150% max load or short circuit acted, power supply will be shutdown and recover automatically after the fault is removed.			
ELEC. CHAR.	<b>Rise time</b>	<20mS			
ENVIRONMENT	<b>Temperature</b> ④	Operating: -20 ~ +70°C ; De-rating: 45 ~ 70°C : 2.5%/°C ; Storage: -40 ~ +85°C			
	<b>Humidity</b>	Operating: 20% ~ 90% RH (non condensing); Storage: 10% ~ 95% RH (non condensing)			
SAFETY	<b>Withstand voltage</b>	I/P-O/P:2.0KVAC, I/P-PE:1.5KVAC, O/P-PE:0.5KVAC, 1minute			
	<b>Isolation resistance</b>	I/P-O/P, I/P-PE, O/P-PE > 100MΩ/500VDC at 25°C / 70% RH			
EMC	<b>EMI</b>	EN 55022 CLASS B、FCC CFR 47 PART 15 CLASS B、CNS 13438 CLASS B.			
	<b>EMS</b>	EN 55024 : EN 61000-4-2,3,4,5,6,8 ; ENV 50204			
OTHERS	<b>Cooling</b>	Natural cooling			
	<b>M.T.B.F.</b>	417 K hours			
	<b>Dimension</b>	99 x 82 x 35 mm (L*W*H)			
	<b>Packing</b>	N.W.:0.34Kg / 1pc; 46pcs / 1.22 CUFT / 1 CTN			

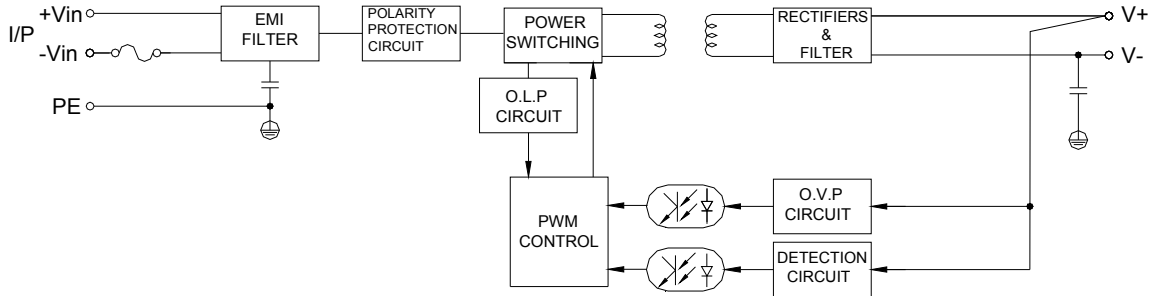
NOTE	① All measurements which not mentioned are based on 12VDC input, <b>output Max</b> at ambient 25°C / 70%RH
	② Output tolerance included set up voltage, line regulation and load regulation.
	③ Ripple & noise are measured at 12~36VDC input with 0~50°C condition and 20MHz of bandwidth by using a 10" ~ 15" twisted pair-wire terminated with a 0.1uF & a 47uF parallel capacitor.
	④ The operating temperature shall follow the de-rating curve in spec
	⑤ The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.



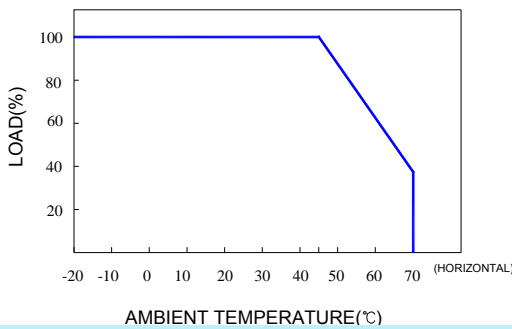
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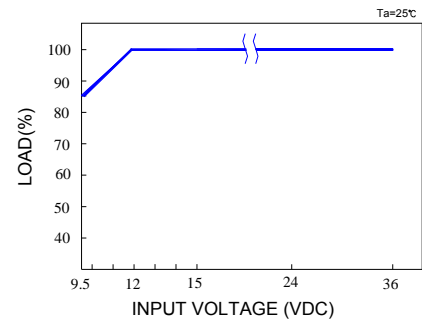
## Block Diagram : DS2



## De-rating Curve :

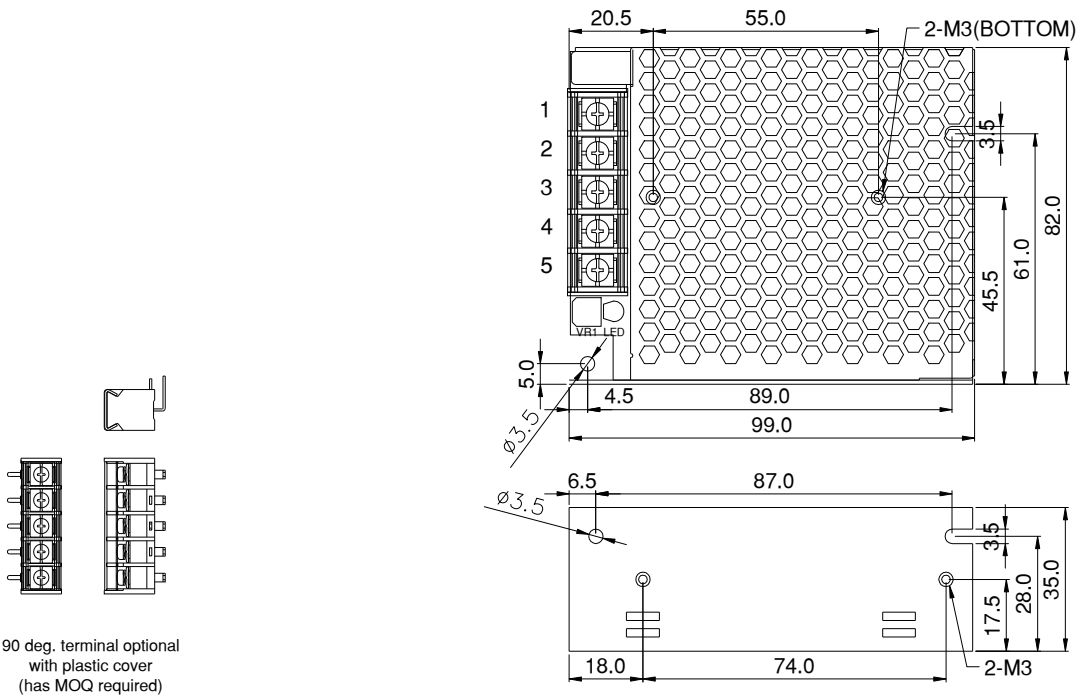


## Output De-rating Vs Input Voltage :



## Dimension:

(Unit: mm)



## NOTES:

MODEL No.	1	2	3	4	5
SDS-050L-xx	+Vin	-Vin	PE	-V	+V



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# SDS-050M-xx Series

50W, Single Output  
 24V / 48V DC INPUT



99 x 82 x 35 mm  
 3.9 x 3.23 x 1.38 inch



## Features:

- \* DC Input 19V ~ 72V
- \* Input protection: 4A/250V fuses
- \* Inrush current limitation soft start function
- \* Input & output isolation
- \* Input polarity reverse protection
- \* Over voltage, over load & short circuit protection
- \* Output voltage  $\pm 10\%$  adjustment
- \* 100% full load burn-in test
- \* Meet LVD standard
- \* 2 years warranty

## Specification:

INPUT	<b>Voltage</b>	19V ~ 72V DC			
	<b>Current</b>	<2.8A@24 V DC input full load condition			
OUTPUT	<b>Voltage</b>	<b>5V</b>	<b>12V</b>	<b>24V</b>	<b>48V</b>
	<b>Min Load</b>	0A	0A	0A	0A
	<b>Max Load</b>	9A	4.2A	2.1A	1.1A
	<b>Output Tolerance</b> ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	<b>Ripple Noise MAX.</b> ③	70mV	120mV	150mV	240mV
	<b>Efficiency (TYP)</b>	77%	82%	84%	86%
	<b>Output MAX.</b>	45W	50W	50W	53W
PROTECTION	<b>Over Voltage</b>	5.8~7.0V	13.8~16.8V	27.6~33.6V	55.2~67.2V
		Shutdown and latch off, recover after re-start up.			
	<b>Over Load &amp; Short Circuit</b>	When power supply over 105%~ 150% max load or short circuit acted, power supply will be shutdown and recover automatically after the fault is removed.			
ELEC. CHAR.	<b>Rise time</b>	<20mS			
ENVIRONMENT	<b>Temperature</b> ④	Operating: -20 ~ +70°C ; De-rating: 45 ~ 70°C : 2.5%/°C ; Storage: -40 ~ +85°C			
	<b>Humidity</b>	Operating: 20% ~ 90% RH (non condensing); Storage: 10% ~ 95% RH (non condensing)			
SAFETY	<b>Withstand voltage</b>	I/P-O/P:2.0KVAC, I/P-PE:1.5KVAC, O/P-PE:0.5KVAC, 1minute			
	<b>Isolation resistance</b>	I/P-O/P, I/P-PE, O/P-PE > 100MΩ/500VDC at 25°C / 70% RH			
EMC	<b>EMI</b>	EN 55022 CLASS B、FCC CFR 47 PART 15 CLASS B、CNS 13438 CLASS B.			
	<b>EMS</b>	EN 55024 : EN 61000-4-2,3,4,5,6,8 ; ENV 50204			
OTHERS	<b>Cooling</b>	Natural cooling			
	<b>M.T.B.F.</b>	417 K hours			
	<b>Dimension</b>	99 x 82 x 35 mm (L*W*H)			
	<b>Packing</b>	N.W.:0.34Kg / 1pc; 46pcs / 1.22 CUFT / 1 CTN			

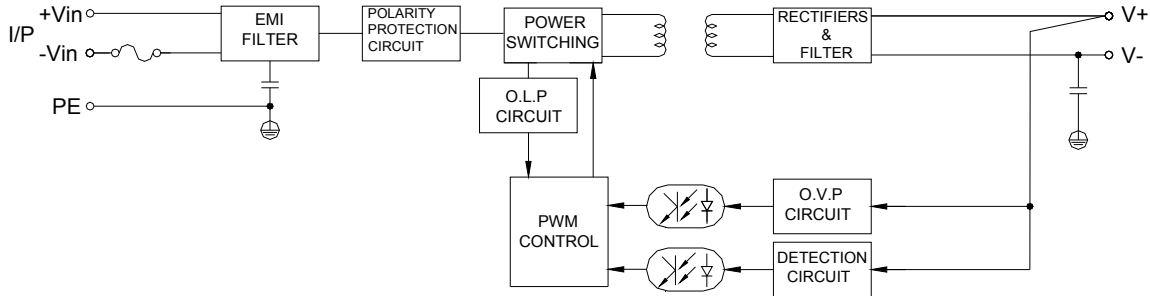
NOTE	① All measurements which not mentioned are based on 24VDC input, <b>output Max</b> at ambient 25°C / 70%RH
	② Output tolerance included set up voltage, line regulation and load regulation.
	③ Ripple & noise are measured at 21~72VDC input with 0~50°C condition and 20MHz of bandwidth by using a 10" ~ 15" twisted pair-wire terminated with a 0.1uF & a 47uF parallel capacitor.
	④ The operating temperature shall follow the de-rating curve in spec
	⑤ The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.



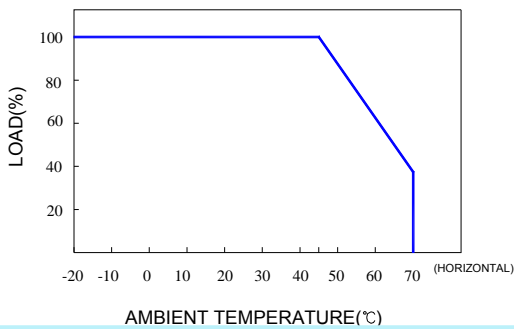
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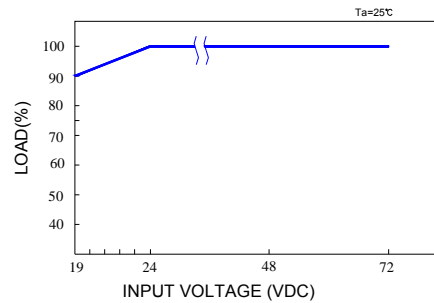
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## De-rating Curve :

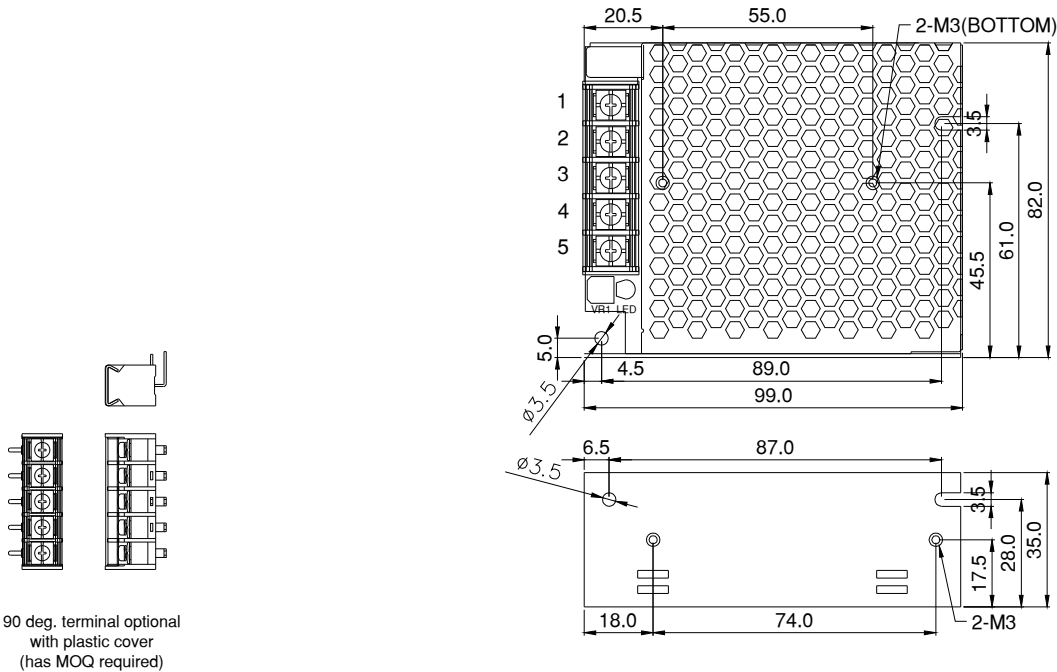


## Output De-rating Vs Input Voltage :



## Dimension:

(Unit: mm)



## NOTES:

MODEL No.	1	2	3	4	5
SDS-050M-xx	+Vin	-Vin	PE	-V	+V