



50W DC-DC converter(1/4 brick)

Typical Performance

FEATURES

- Wide Input voltage range (2:1/4:1)
- Typical Efficiency:85%
- Switching frequency: 300KHz
- Output Over current protect, Short circuit protection
- input under voltage protection, over voltage protection
- input-output isolated
- PCB Board in-line type installs
- High reliability
- Optional heat sink



Technology parameter Test condition: General Nominal Line, $T_c=25^{\circ}\text{C}$, Rated resistant load unless other wise specified

Input Features	Min	Nom	Max	Notes
	Test condition			
Start voltage	12V(9~18V)			9V
	18V(9~36V)			10V
	24V(18~36V)			18V
	36V(18~72V)			18V
	48V(36~72V)			36V
Input under voltage protection	12V(9~18V)			8V
	18V(9~36V)			8V
	24V(18~36V)			17V
	36V(18~72V)			17V
	48V(36~72V)			47V
Input voltage (Vdc)	9	12	18V	W 2:1
	9	18	36	W 4:1
	18	24	36	W 2:1

	18	36	72	W 4:1
	36	48	72	W 2:1
Start time	Not capacitive load			20mS
Remote On/Off Function				
CTL	CNT Pin connect -Vin			OFF
	CNT Pin left open			ON
Output Feature				
	Test condition			
Voltage accuracy	$I_o=0.1...1.0 \times I_{nom}, V_i=V_{rated}$			$\pm 1.0\%$
Line regulation	$V_{min} \leq V_i \leq V_{max}$			$\pm 0.2\%$
Load regulation	$I_o=0.1...1.0 \times I_{nom}, V_{min} \leq V_i \leq V_{max}, V_i=V_{rated}$			$\pm 0.5\%$
Ripple&noise	2-MHz Broadband			1%
Over current protection	$V_{min} \leq V_i \leq V_{max}$			120%
Peak Deviation	25% Rated Load Vary			$\pm 5.0\%$
Dynamic Response Setting Time				400us
Output Voltage Trim	$V_{min} \leq V_i \leq V_{max}$			10%
Switching frequency	$V_{min} \leq V_i \leq V_{max}$			300KHz
General Feature				
	Test condition			
Efficiency				85% typical
Board temperature	Industry level			-25°C ~ +55°C
Working environment temperature	Military level			-25°C ~ +85°C
Max Board temperature	Industry level			+85°C
	Military level			+105°C
Storage temperature	Industry level			-40°C ~ +105°C
	Military level			-50°C ~ +105°C
Relative humidity	No condensation			5%~90%RH
Temperature coefficient				$\pm 0.02\%/^{\circ}\text{C}$
case material				aluminium baseplate

Isolated resistance	Input-Output		100M ohm
Vibration resistance	10~55Hz		5G
Over current mode	Full input range	Protection type : Hiccup mode, recovers automatically	
Cooling		Heatsink,nature cooling	
Case material		epoxy,Aluminum base plate	
Isolated Voltage	Input-output 1500Vdc; input-FG 1500Vdc,Output-FG 500Vdc		
MTBF	MIL-HDBK-217F2		5X10 ⁶ Hrs

Product Nomination Method

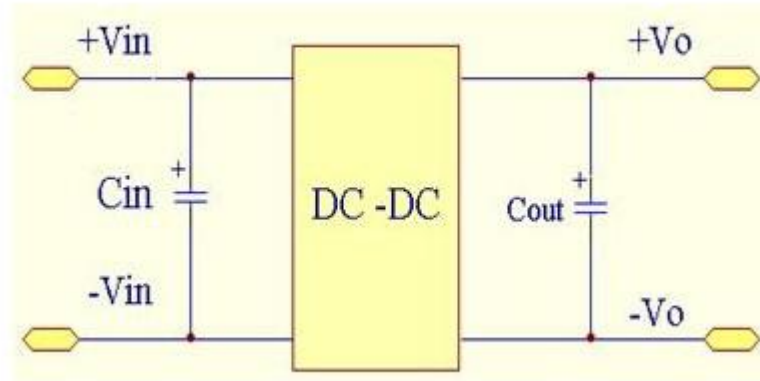
example	SL D 200 – G 48 S 12		
	① ② ③	④ ⑤ ⑥ ⑦	
①	Wide input voltage: 2: 1	④	G:1/4 brick package
②	Power adaptation mode: D (DC-DC)	⑤	Normal input voltage
③	Output power(W)	⑥	S=Single route output
⑦	output voltage		

Product Program

PART #	Input voltage range	Output voltage / current					
		VO1		VO2		VO3	
		V	A	V	A	V	A
SLD50G-12S05	12V(9-18V)	5V	10A				
SLD50G-12S12		12V	4.1A				
SLD50G-12S15		15V	3.3A				
SLD50G-12S24		24V	2A				
SLD50G-12S28		28V	1.7A				
SLD50G-18S05	18V(9-36V)	5V	10A				
SLD50G-18S12		12V	4.1A				
SLD50G-18S15		15V	3.3A				
SLD50G-18S24		24V	2A				
SLD50G-18S28		28V	1.7A				
SLD50G-24S05	24V(18-36V)	5V	10A				
SLD50G-24S12		12V	4.1A				
SLD50G-24S15		15V	3.3A				
SLD50G-24S24		24V	2A				

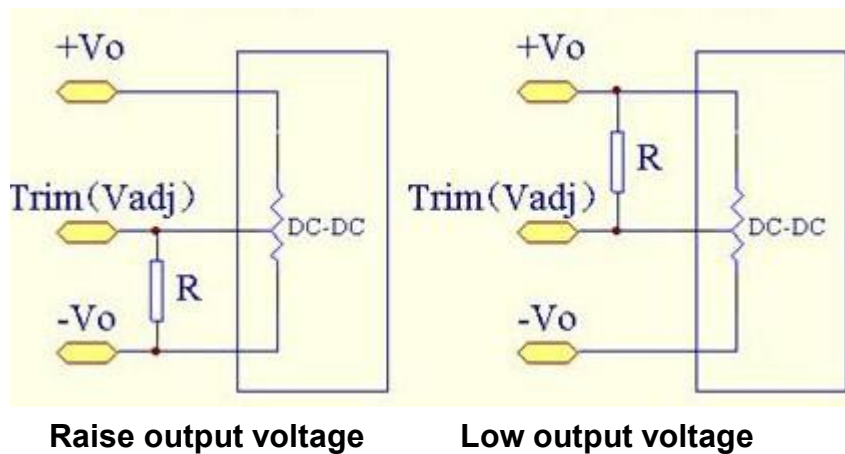
SLD50G-24S28		28V	1.7A				
SLD50G-36S05	36V(18-72V)	5V	10A				
SLD50G-36S12		12V	4.1A				
SLD50G-36S15		15V	3.3A				
SLD50G-36S24		24V	2A				
SLD50G-36S28		28V	1.7A				
SLD50G-48S05		48V(36-72V)	5V	10A			
SLD50G-48S12	12V		4.1A				
SLD50G-48S15	15V		3.3A				
SLD50G-48S24	24V		2A				
SLD50G-48S28	28V		1.7A				

Recommended Circuit

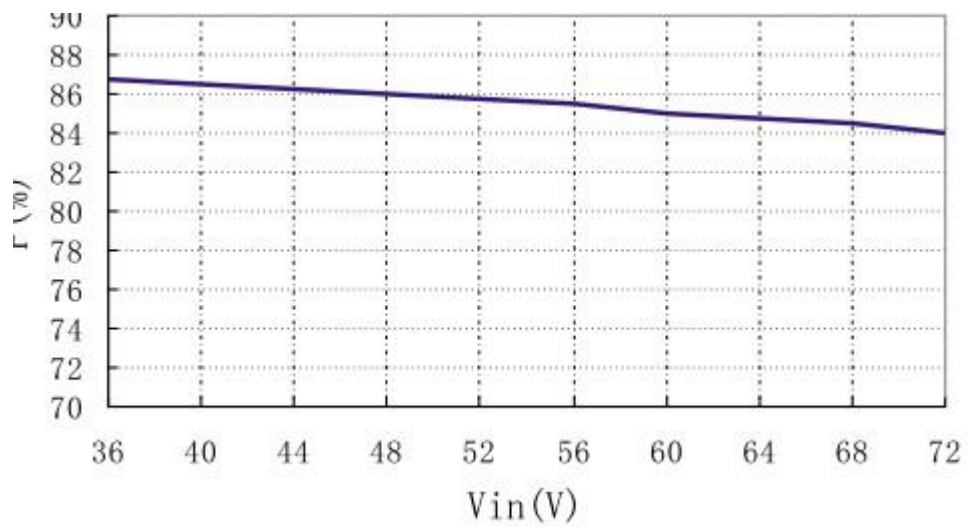


- (1) Power module with C_{in} is helpful to improve the electromagnetic compatibility, it is recommended to use $47\ \mu\text{F} \sim 100\ \mu\text{F}$ electrolytic capacitor
- (2) Power module with C_{out} is helpful to lower the output ripple
- (3) Power module output connects the digital circuit needs to add C_{out}
- (4) C_{out} is recommended to use $100\ \mu\text{F}/\text{A}$, the current is refers to the output current

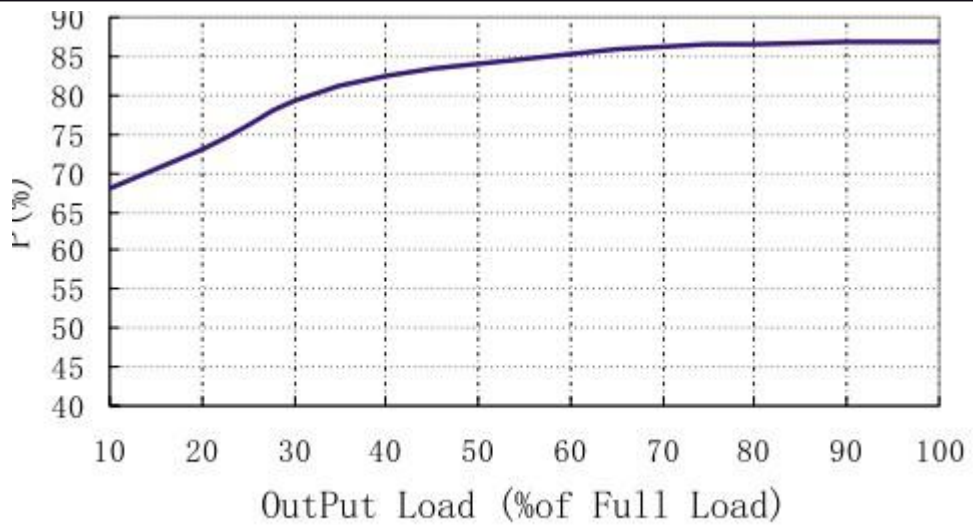
TRIM



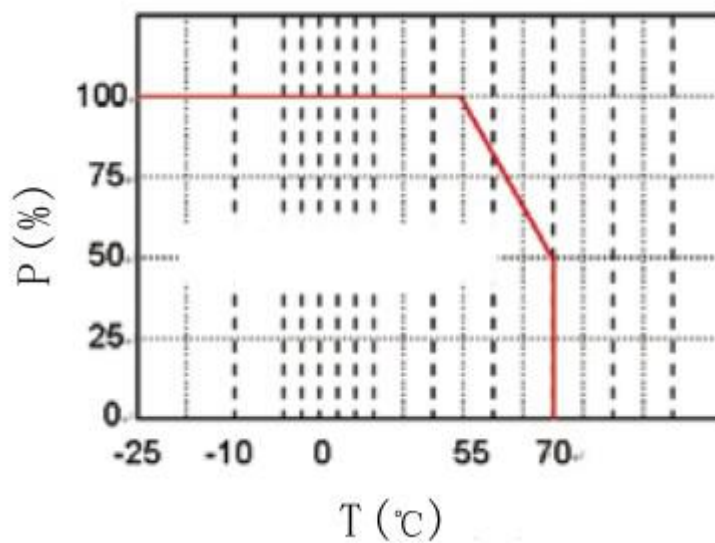
Input voltage--Efficiency



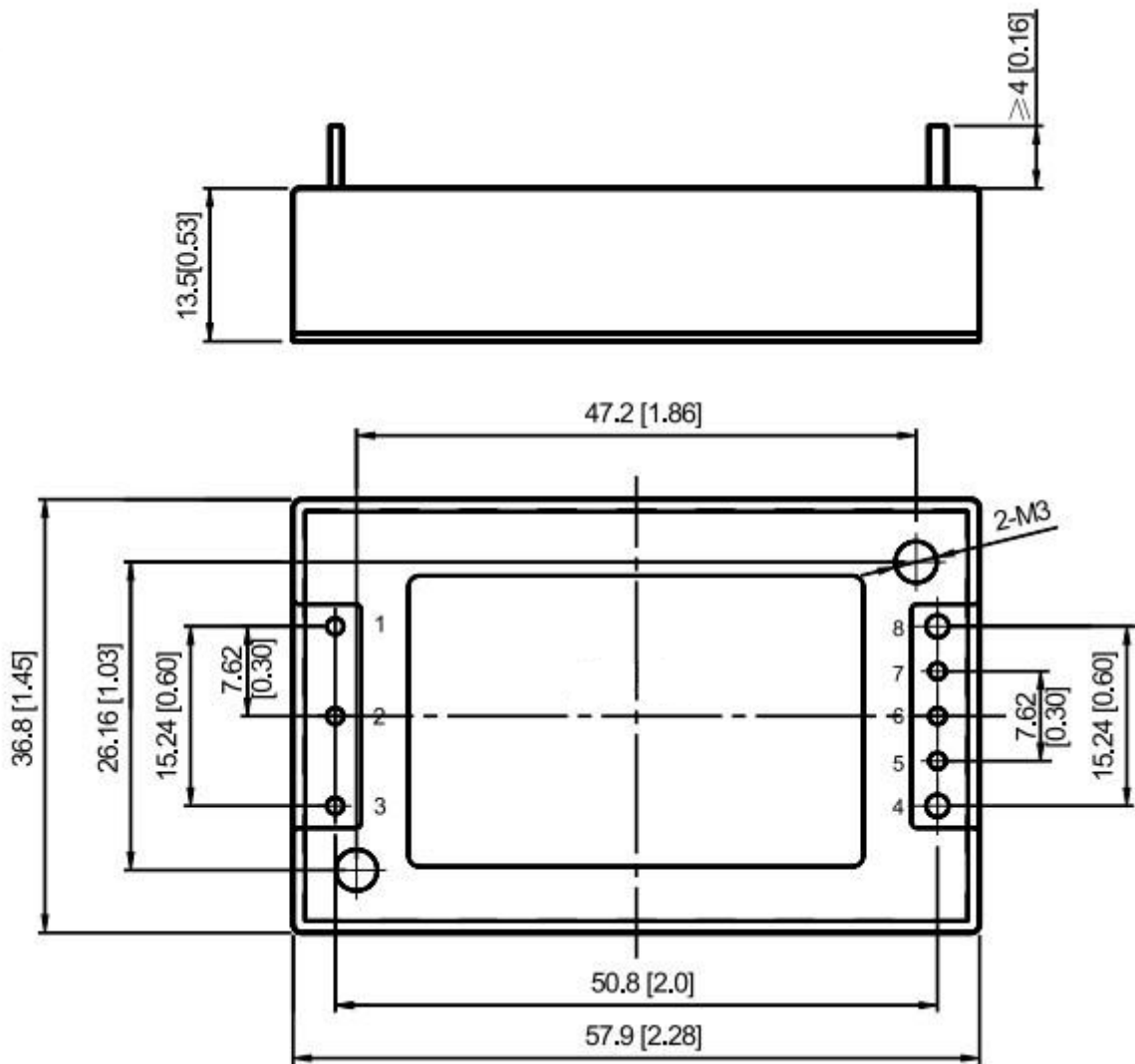
Output Load--Efficiency



Temperature Curve



Mechanical Dimension



BOTTOM VIEW

Unit:mm(inch)

Tolerance: ± 0.2 mm(± 0.008 inch)

Mechanical Data

WATT	L x W x H	Packing No.
50W	57.9*36.8*12.7mm	

Pin Assignment

Pin	1	2	3	4	5	6	7	8		
Single O/P	-Vin	CTL	+Vin	+Vo	+S	TRIM	-S	-Vo		

*Note: The power modules such as the definition of the pin does not match with the hand book, please refer to the actual item.