

# SD6

MAX. Power 6W Isolated DC-DC Converter

## SDS6 Series Small Compact Size DC-DC Converter



### Features

- Small Compact Size
- High Efficiency
- Isolated Input - Output
- Wide operating temperature range (-40°C to 85°C)
- Long Life Design (Employ only Ceramic Capacitor)
- Built-in over current protection circuit
- Wide 2 :1 input range
- Adjustable output voltage (single output)
- Safety standard : NRTL, CE approved
- RoHS compatible design
- 5-years warranty

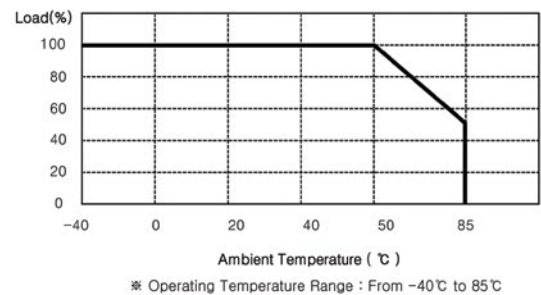
### Environment

- Operating Temperature : -40°C ~ 85°C
- Operating Humidity : 5% ~ 95% RH (Non condensing)
- Storage Temperature : -40°C ~ 105°C
- Cooling : Free-Air Convection
- MTBF :  $5.6 \times 10^5$  hrs

### Applications

- Data and telecommunication
- Datacommunication electronic equipments
- FA control

### Derating Curve



### General Specifications

Input	Input Voltage Range	5V (4.5V~9.0V), 12V (9V~18V), 24V (18V~36V), 48V (36V~76V)
	Efficiency	73% ~ 87%
Output	Output Voltage	3.3V, 5V, 12V, 15V, $\pm 12V$ , $\pm 15V$
	Line Regulation	$\pm 0.5\%$
	Load Regulation	$\pm 1.0\%$
	Output Voltage Accuracy	$\pm 2.0\%$
	Output Voltage adj. Range	$\pm 10\%$ Range
Protection Circuit	Over Current Protection	Works at over 105% of rating and recovers automatically
	Over Voltage Protection	None
Electrically Isolated	High Pot	Input / Output, Input / Case, Output / Case : AC500V 1minute
	Isolation	Input / Output, Input / Case, Output / Case : DC500V 100M $\Omega$

### SDS6 Series Ordering Information (Single Output)

MODEL	SDS6-05-3R3	SDS6-05-05	SDS6-05-12	SDS6-05-15	SDS6-12-3R3	SDS6-12-05	SDS6-12-12	SDS6-12-15	
Input Voltage (V)	5 (4.5 ~ 9.0)				12 (9 ~ 18)				
Output	Vout (V)	3.3	5	12	15	3.3	5	12	15
	Iout (A)	1.2	1	0.5	0.4	1.5	1.2	0.5	0.4
Maximum Power (W)	3.96	5	6	6	4.95	6	6	6	
Ripple & Noise (mVp-p)	50	50	120	150	50	50	120	150	
Efficiency Typ. (%)	73	78	81	81	77	82	86	87	

MODEL	SDS6-24-3R3	SDS6-24-05	SDS6-24-12	SDS6-24-15	SDS6-48-3R3	SDS6-48-05	SDS6-48-12	SDS6-48-15	
Input Voltage (V)	24 (18 ~ 36)				48 (36 ~ 76)				
Output	Vout (V)	3.3	5	12	15	3.3	5	12	15
	Iout (A)	1.5	1.2	0.5	0.4	1.5	1.2	0.5	0.4
Maximum Power (W)	4.95	6	6	6	4.95	6	6	6	
Ripple & Noise (mVp-p)	50	50	120	150	50	50	120	150	
Efficiency Typ. (%)	77	82	85	87	75	81	85	85	

### SDD6 Series Ordering Information (Dual Output)

MODEL	SDD6-05-1212	SDD6-05-1515	SDD6-12-1212	SDD6-12-1515	SDD6-24-1212	SDD6-24-1515	SDD6-48-1212	SDD6-48-1515
Input Voltage (V)	5 (4.5 ~ 9.0)		12 (9 ~ 18)		24 (18 ~ 36)		48 (36 ~ 76)	
Output	Vout (V)	±12	±15	±12	±15	±12	±15	±15
	Iout (A)	0.25	0.2	0.25	0.2	0.25	0.2	0.2
Maximum Power (W)	6	6	6	6	6	6	6	6
Ripple & Noise (mVp-p)	120 / 120	150 / 150	120 / 120	150 / 150	120 / 120	150 / 150	120 / 120	150 / 150
Efficiency Typ. (%)	81	81	85	85	85	85	85	85

### Pin assignments



| Top View |

Pin No.	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	CNT	CNT
4	TRM	-Vout
5	-Vout	No Pin
6	No Pin	COM
7	+Vout	+Vout

#### Function Pin

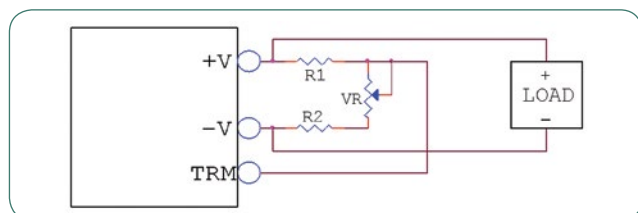
**TRM Pin** : Output Voltage Trimmable (±10%)

**CNT Pin** : Remote on/off Control

on : 0~1.2VDC or short -Vin

off : 2.4~5.5VDC or open

### Trim Method



### External Parts

	Vo	R1	R2	VR
Single	3.3V	1.5kΩ	680Ω	1kΩ
	5V	1kΩ	680Ω	1kΩ
	12V	3.9kΩ	680Ω	1kΩ
	15V	5.6kΩ	750Ω	1kΩ
Dual	±12(24V)	12kΩ	1kΩ	1kΩ
	±15(30V)	15kΩ	1kΩ	1kΩ

### Outline Dimensions : <Unit : mm (inch)>

