

# SD3

MAX. Power 3.0W Isolated DC-DC Converter

## SDS3 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

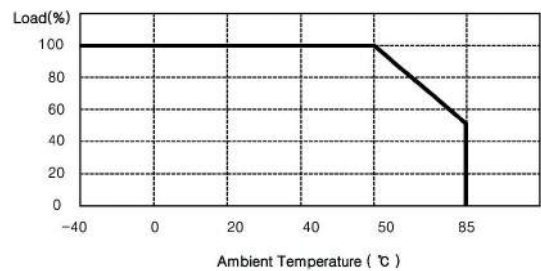
### Environment

- Operating Temperature : -40°C ~ 85°C
- Operating Humidity : 5% ~ 95% RH (Non condensing)
- Storage Temperature : -40°C ~ 105°C
- Cooling : Free-Air Convection
- MTBF :  $7.0 \times 10^5$  hrs

### Applications

- Data and telecommunication
- Datacommunication electronic equipments
- FA control

### Derating Curve



※ Operating Temperature Range : From -40°C to 85°C

### 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 $\Omega$

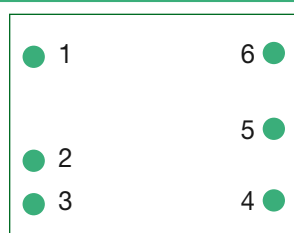
### SDS3 Series Ordering Information (Single Output)

MODEL		SDS3-05-3R3	SDS3-05-05	SDS3-05-12	SDS3-05-15	SDS3-12-3R3	SDS3-12-05	SDS3-12-12	SDS3-12-15
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)	0.6	0.6	0.25	0.2	0.6	0.6	0.25	0.2
Maximum Power (W)		1.98	3	3	3	1.98	3	3	3
Ripple & Noise (mVp-p)		50	50	120	150	50	50	120	150
Efficiency Typ. (%)		73	78	81	81	77	82	86	87
MODEL		SDS3-24-3R3	SDS3-24-05	SDS3-24-12	SDS3-24-15	SDS3-48-3R3	SDS3-48-05	SDS3-48-12	SDS3-48-15
Input Voltage (V)		24 (18 ~ 36)				48 (36 ~ 76)			
Output	Vout (V)	3.3	5	12	15	3.3	5	12	15
	Iout (A)	0.6	0.6	0.25	0.2	0.6	0.6	0.25	0.2
Maximum Power (W)		1.98	3	3	3	1.98	3	3	3
Ripple & Noise (mVp-p)		50	50	120	150	50	50	120	150
Efficiency Typ. (%)		77	82	85	87	73	80	83	83

### SDD3 Series Ordering Information (Dual Output)

MODEL		SDD3-05-1212	SDD3-05-1515	SDD3-12-1212	SDD3-12-1515	SDD3-24-1212	SDD3-24-1515	SDD3-48-1212	SDD3-48-1515
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	±12	±15
	Iout (A)	0.13	0.1	0.13	0.1	0.13	0.1	0.13	0.1
Maximum Power (W)		3.12	3	3.12	3	3.12	3	3.12	3
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	83	83

## Pin assignments



| Top View |

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

### Function Pin

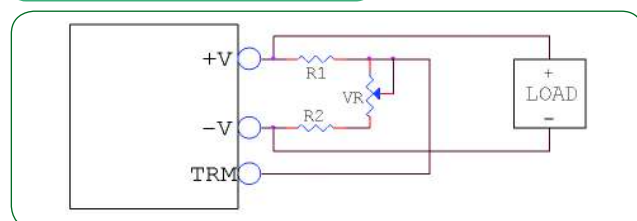
**TRM Pin** : Output Voltage Trimmable ( $\pm 10\%$ )

**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
3.3V	150Ω	680Ω	1kΩ
5V	1kΩ	680Ω	1kΩ
12V	3.9kΩ	680Ω	1kΩ
15V	5.6kΩ	750Ω	1kΩ

**Outline Dimensions :** All dimensions are in inches (mm)

