

SD1R5

MAX. Power 1.5W Isolated DC-DC Converter

SDS1R5 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

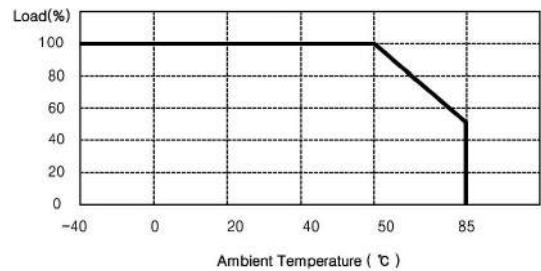
Environment

- Operating Temperature : -40°C ~ 85°C
- Operating Humidity : 5% ~ 95% RH (Non condensing)
- Storage Temperature : -40°C ~ 105°C
- Cooling : Free-Air Convection
- MTBF : 9.0 x 10⁵ 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% ~ 83%
Output	Output Voltage	3.3V, 5V, 12V, 15V, ±12V, ±15V
	Line Regulation	± 0.5%
	Load Regulation	± 1.0%
	Output Voltage Accuracy	± 2.0%
	Output Voltage adj. Range	± 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 100MΩ

SDS1R5 Series Ordering Information (Single Output)

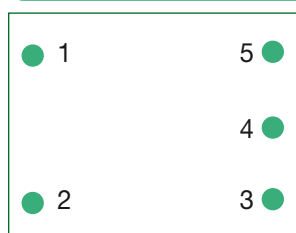
MODEL	SDS1R5-05-3R3	SDS1R5-05-05	SDS1R5-05-12	SDS1R5-05-15	SDS1R5-12-3R3	SDS1R5-12-05	SDS1R5-12-12	SDS1R5-12-15	
Input Voltage (V)	5 (4.5 ~ 9.0)				12 (9 ~ 18)				
Output	Vout (V)	3.3	5	12	15	3.3	5	12	15
	Iout (A)	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1
Maximum Power (W)	1.32	1.5	1.56	1.5	1.32	1.5	1.56	1.5	
Ripple & Noise (mVp-p)	50	50	120	150	50	50	120	150	
Efficiency Typ. (%)	73	78	81	81	73	78	81	81	

MODEL	SDS1R5-24-3R3	SDS1R5-24-05	SDS1R5-24-12	SDS1R5-24-15	SDS1R5-48-3R3	SDS1R5-48-05	SDS1R5-48-12	SDS1R5-48-15	
Input Voltage (V)	24 (18 ~ 36)				48 (36 ~ 76)				
Output	Vout (V)	3.3	5	12	15	3.3	5	12	15
	Iout (A)	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1
Maximum Power (W)	1.32	1.5	1.56	1.5	1.32	1.5	1.56	1.5	
Ripple & Noise (mVp-p)	50	50	120	150	50	50	120	150	
Efficiency Typ. (%)	75	80	83	83	73	78	81	81	

SDD1R5 Series Ordering Information (Dual Output)

MODEL	SDD1R5-05-1212	SDD1R5-05-1515	SDD1R5-12-1212	SDD1R5-12-1515	SDD1R5-24-1212	SDD1R5-24-1515	SDD1R5-48-1212	SDD1R5-48-1515
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	±12	±15
	Iout (A)	0.065	0.05	0.065	0.05	0.065	0.05	0.065
Maximum Power (W)	1.56	1.5	1.56	1.5	1.56	1.5	1.56	1.5
Ripple & Noise (mVp-p)	120 / 120	150 / 150	120 / 120	150 / 150	120 / 120	150 / 150	120 / 120	150 / 150
Efficiency Typ. (%)	81	81	81	81	83	83	81	81

Pin assignments



| Top View |

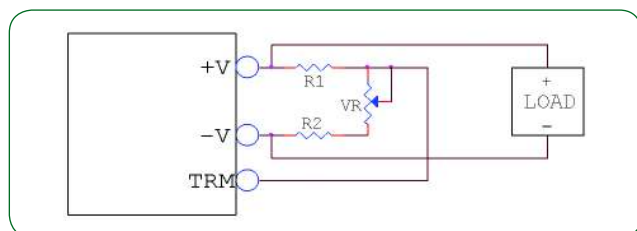
Pin No.	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	TRM	-Vout
4	-Vout	COM
5	+Vout	+Vout

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
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)

