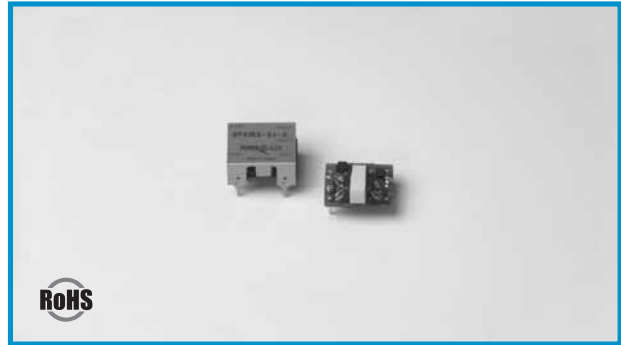


# SPS1R5

## Small size Isolated DC/DC Converters

**Total power** 1.5 Watts  
**Input voltages** 5V, 12V, 24V, 48V  
**#of outputs** Single, Dual output



### SPECIAL FEATURES

- High efficiency
- Wide operating temperature range (-40°C ~ +85°C)
- Small size & Light weight
- Wide 2:1 input range
- Built - in over current protection circuit
- Input - Output Isolated
- Trimmable output voltage (single output)
- Open case type
- Long Life Design (employ only ceramic capacitor)
- 5years warranty

### ENVIRONMENTAL

- Operating temperature range ..... -40°C ~ 85°C
- Storage temperature range ..... -40°C ~ 105°C
- Operating humidity (non consensing) .... 5% ~ 95%
- Storage humidity (non consensing) ..... 5% ~ 95%
- Cooling method ..... convection, forced air
- MTBF .....  $9 \times 10^5$  hrs
- Safety ..... UL(pending)  
CE(pending)

### ELECTRICAL SPECIFICATIONS

**INPUT**

- Input range ..... DC 4.5V - 9V, 9V - 18V, 18V - 36V, 36V - 76V
- Efficiency ..... 73% - 81%
- Remote on/off ..... on : short to - Vin  
off : open

**OUTPUT**

- Voltage tolerance .....  $\pm 2\%$ (Single)  
 $\pm 3\%$ (Daul)
- Line Reg .....  $\pm 0.5\%$
- Load Reg .....  $\pm 1\%$
- Ripple & Noise ..... 1% of Vout (Bandwidth : 20MHz)

**PROTECTION CIRCUIT**

- Short circuit protection ..... Current Limited Output

**ELECTRICALLY ISOLATED**

- Isolation ..... input - output, input - case, output - case / DC500V, 100Mohms
- High pot ..... input - output, input - case, output - case / AC500V, 1Min

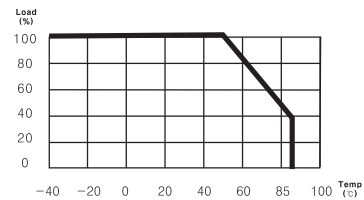
## Ordering Information

Input	Output1	Output2	Maximum Power	Ripple&Noise max	Efficiency Typ.	Model Number
4.5 - 9V	3.3V@0.4A		1.32W	50mVp-p	73%	<b>SPS1R5-5-3R3</b>
4.5 - 9V	5V@0.3A		1.5W	50mVp-p	78%	<b>SPS1R5-5-5</b>
4.5 - 9V	12V@0.13A		1.56W	120mVp-p	81%	<b>SPS1R5-5-12</b>
4.5 - 9V	15V@0.1A		1.5W	150mVp-p	81%	<b>SPS1R5-5-15</b>
4.5 - 9V	+12V@65mA	-12V@65mA	1.56W	120mVp-p	81%	<b>SPD1R5-5-1212</b>
4.5 - 9V	+15V@50mA	-15V@50mA	1.5W	150mVp-p	81%	<b>SPD1R5-5-1515</b>
9 - 18V	3.3V@0.4A		1.32W	50mVp-p	73%	<b>SPS1R5-12-3R3</b>
9 - 18V	5V@0.3A		1.5W	50mVp-p	78%	<b>SPS1R5-12-5</b>
9 - 18V	12V@0.13A		1.56W	120mVp-p	81%	<b>SPS1R5-12-12</b>
9 - 18V	15V@0.1A		1.5W	150mVp-p	81%	<b>SPS1R5-12-15</b>
9 - 18V	+12V@65mA	-12V@65mA	1.56W	120mVp-p	81%	<b>SPD1R5-12-1212</b>
9 - 18V	+15V@50mA	-15V@50mA	1.5W	150mVp-p	81%	<b>SPD1R5-12-1515</b>
18 - 36V	3.3V@0.4A		1.32W	50mVp-p	73%	<b>SPS1R5-24-3R3</b>
18 - 36V	5V@0.3A		1.5W	50mVp-p	78%	<b>SPS1R5-24-5</b>
18 - 36V	12V@0.13A		1.56W	120mVp-p	81%	<b>SPS1R5-24-12</b>
18 - 36V	15V@0.1A		1.5W	150mVp-p	81%	<b>SPS1R5-24-15</b>
18 - 36V	+12V@65mA	-12V@65mA	1.56W	120mVp-p	81%	<b>SPD1R5-24-1212</b>
18 - 36V	+15V@50mA	-15V@50mA	1.5W	150mVp-p	81%	<b>SPD1R5-24-1515</b>
36 - 76V	3.3V@0.4A		1.32W	70mVp-p	73%	<b>SPS1R5-48-3R3</b>
36 - 76V	5V@0.3A		1.5W	70mVp-p	78%	<b>SPS1R5-48-5</b>
36 - 76V	12V@0.13A		1.56W	120mVp-p	81%	<b>SPS1R5-48-12</b>
36 - 76V	15V@0.1A		1.5W	150mVp-p	81%	<b>SPS1R5-48-15</b>
36 - 76V	+12V@65mA	-12V@65mA	1.56W	120mVp-p	81%	<b>SPD1R5-48-1212</b>
36 - 76V	+15V@50mA	-15V@50mA	1.5W	150mVp-p	81%	<b>SPD1R5-48-1515</b>

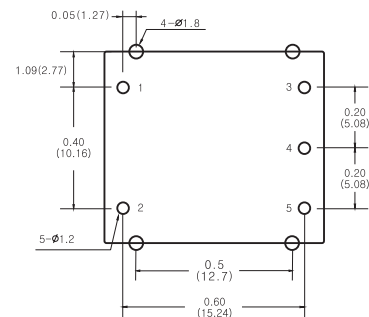
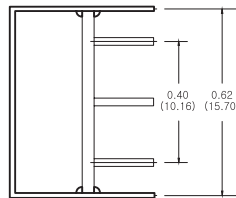
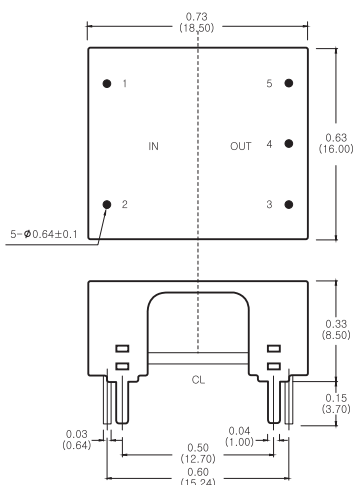
## Pin assignments

Single Output	Dual Output
1. +Vin	1. +Vin
2. -Vin	2. -Vin
3. Trim	3. -Vout
4. -Vout	4. COM
5. +Vout	5. +Vout

## Derating Curve



## Dimensions



※ Mounting hole top view

### NOTES

1. All dimensions are in inches and(mm).
2. Weight : 3.3g or less