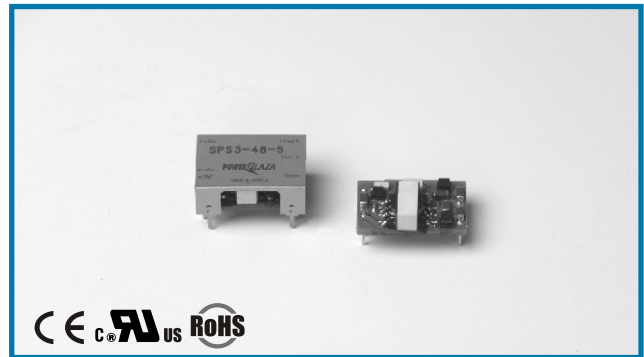


# SPS3

## Small size Isolated DC/DC Converters

**Total power**      **3 Watts**  
**Input voltages**   **5V, 12V, 24V, 48V**  
**#of outputs**        **Single, Dual output**



### SPECIAL FEATURES

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

### ENVIRONMENTAL

- Operating temperature range ..... -40 ~ 85
- Storage temperature range ..... -40 ~ 105
- Operating humidity (non consensing) .... 5% ~ 95%
- Storage humidity (non consensing) ..... 5% ~ 95%
- Cooling method ..... convection, forced air
- MTBF (MIL-HDBK-217F) .....  $7 \times 10^5$  hrs
- Safety ..... UL(pending)  
CE(pending)

### ELECTRICAL SPECIFICATIONS

INPUT	<ul style="list-style-type: none"> <li>· Input range ..... DC 4.5V - 9V, 9V - 18V, 18V - 36V, 36V - 76V</li> <li>· Efficiency ..... 73% - 83%</li> <li>· Remote on/off ..... on : short to - Vin off : open</li> </ul>
OUTPUT	<ul style="list-style-type: none"> <li>· Voltage tolerance ..... <math>\pm 2\%</math>(Single) <math>\pm 3\%</math>(Daul)</li> <li>· Line Reg ..... <math>\pm 0.5\%</math></li> <li>· Load Reg ..... <math>\pm 1\%</math></li> <li>· Ripple &amp; Noise ..... 1% of Vout (Bandwidth : 20MHz)</li> </ul>
PROTECTION CIRCUIT	<ul style="list-style-type: none"> <li>· Short circuit protection ..... Current Limited Output</li> </ul>
ELECTRICALLY ISOLATED	<ul style="list-style-type: none"> <li>· Isolation ..... input - output, input - case, output - case / DC500V,100Mohms</li> <li>· High pot ..... input - output, input - case, output - case / AC500V, 1Min</li> </ul>

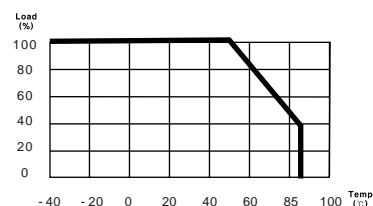
## Ordering Information

Input	Output1	Output2	Maximum Power	Ripple&Noise max	Efficiency Typ.	Model Number
4.5 - 9V	3.3V@0.6A		1.98W	50mVp-p	73%	<b>SPS3-5-3R3</b>
4.5 - 9V	5V@0.6A		3W	50mVp-p	78%	<b>SPS3-5-5</b>
4.5 - 9V	12V@0.25A		3W	120mVp-p	80%	<b>SPS3-5-12</b>
4.5 - 9V	15V@0.2A		3W	150mVp-p	80%	<b>SPS3-5-15</b>
4.5 - 9V	+12V@0.13A	-12V@0.13A	3.12W	120mVp-p	81%	<b>SPD3-5-1212</b>
4.5 - 9V	+15V@0.10A	-15V@0.10A	3W	150mVp-p	81%	<b>SPD3-5-1515</b>
9 - 18V	3.3V@0.6A		1.98W	50mVp-p	74%	<b>SPS3-12-3R3</b>
9 - 18V	5V@0.6A		3W	50mVp-p	81%	<b>SPS3-12-5</b>
9 - 18V	12V@0.25A		3W	120mVp-p	83%	<b>SPS3-12-12</b>
9 - 18V	15V@0.2A		3W	150mVp-p	83%	<b>SPS3-12-15</b>
9 - 18V	+12V@0.13A	-12V@0.13A	3.12W	120mVp-p	83%	<b>SPD3-12-1212</b>
9 - 18V	+15V@0.10A	-15V@0.10A	3W	150mVp-p	83%	<b>SPD3-12-1515</b>
18 - 36V	3.3V@0.6A		1.98W	50mVp-p	73%	<b>SPS3-24-3R3</b>
18 - 36V	5V@0.6A		3W	50mVp-p	79%	<b>SPS3-24-5</b>
18 - 36V	12V@0.25A		3W	120mVp-p	82%	<b>SPS3-24-12</b>
18 - 36V	15V@0.2A		3W	150mVp-p	82%	<b>SPS3-24-15</b>
18 - 36V	+12V@0.13A	-12V@0.13A	3.12W	120mVp-p	83%	<b>SPD3-24-1212</b>
18 - 36V	+15V@0.10A	-15V@0.10A	3W	150mVp-p	83%	<b>SPD3-24-1515</b>
36 - 76V	3.3V@0.6A		1.98W	50mVp-p	73%	<b>SPS3-48-3R3</b>
36 - 76V	5V@0.6A		3W	50mVp-p	81%	<b>SPS3-48-5</b>
36 - 76V	12V@0.25A		3W	120mVp-p	83%	<b>SPS3-48-12</b>
36 - 76V	15V@0.2A		3W	150mVp-p	83%	<b>SPS3-48-15</b>
36 - 76V	+12V@0.13A	-12V@0.13A	3.12W	120mVp-p	83%	<b>SPD3-48-1212</b>
36 - 76V	+15V@0.10A	-15V@0.10A	3W	150mVp-p	83%	<b>SPD3-48-1515</b>

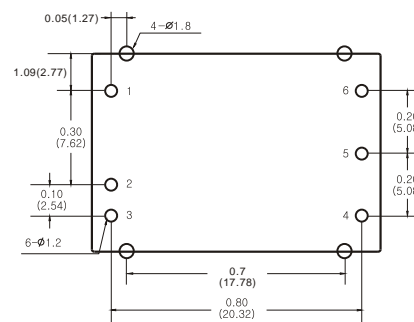
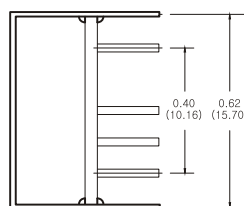
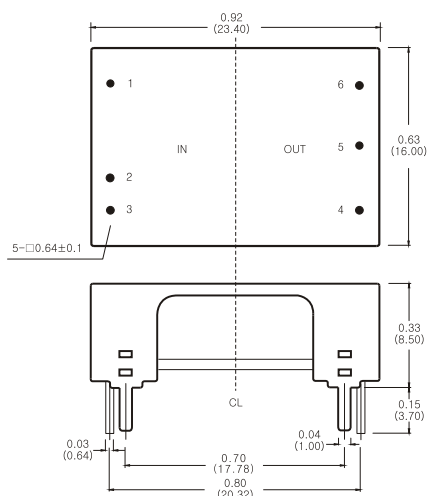
## Pin assignments

Single Output	Dual Output
1. +Vin	1. +Vin
2. -Vin	2. -Vin
3. CNT	3. CNT
4. Trim	4. -Vout
5. -Vout	5. COM
6. +Vout	6. +Vout

## Derating Curve



## Dimensions



Mounting hole (top view)

### NOTES

1. All dimensions are in inches and (mm).
2. Weight : 4.0g or less