

# SPS10

## Small size Isolated DC/DC Converters

**Total power** 10 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) .....  $4.8 \times 10^5$  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 ..... 74% - 86%</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>(Dual)</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>

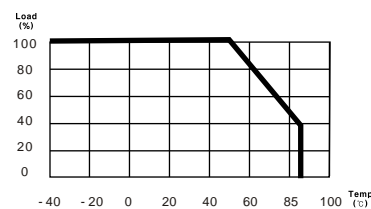
## Ordering Information

Input	Output1	Output2	Maximum Power	Ripple&Noise max	Efficiency Typ.	Model Number
4.5 - 9V	3.3V@1.6A		5.28W	50mVp - p	75%	SPS10-5-3R3
4.5 - 9V	5V@1.6A		8W	50mVp - p	78%	SPS10-5-5
4.5 - 9V	12V@0.7A		8.4W	120mVp - p	81%	SPS10-5-12
4.5 - 9V	15V@0.6A		9W	150mVp - p	83%	SPS10-5-15
4.5 - 9V	+12V@0.35A	- 12V@0.35A	8.4W	120mVp - p	84%	SPD10-5-1212
4.5 - 9V	+15V@0.3A	- 15V@0.3A	9W	150mVp - p	84%	SPD10-5-1515
9 - 18V	3.3V@2.0A		6.6W	50mVp - p	77%	SPS10-12-3R3
9 - 18V	5V@2.0A		10W	50mVp - p	81%	SPS10-12-5
9 - 18V	12V@0.9A		10.8W	120mVp - p	84%	SPS10-12-12
9 - 18V	15V@0.7A		10.5W	150mVp - p	86%	SPS10-12-15
9 - 18V	+12V@0.45A	- 12V@0.45A	10.8W	120mVp - p	86%	SPD10-12-1212
9 - 18V	+15V@0.35A	- 15V@0.35A	10.5W	150mVp - p	86%	SPD10-12-1515
18 - 36V	3.3V@2.0A		6.6W	50mVp - p	75%	SPS10-24-3R3
18 - 36V	5V@2.0A		10W	50mVp - p	80%	SPS10-24-5
18 - 36V	12V@0.9A		10.8W	120mVp - p	85%	SPS10-24-12
18 - 36V	15V@0.7A		10.5W	150mVp - p	85%	SPS10-24-15
18 - 36V	+12V@0.45A	- 12V@0.45A	10.8W	120mVp - p	85%	SPD10-24-1212
18 - 36V	+15V@0.35A	- 15V@0.35A	10.5W	150mVp - p	85%	SPD10-24-1515
36 - 76V	3.3V@2.0A		6.6W	50mVp - p	74%	SPS10-48-3R3
36 - 76V	5V@2.0A		10W	50mVp - p	80%	SPS10-48-5
36 - 76V	12V@0.9A		10.8W	120mVp - p	85%	SPS10-48-12
36 - 76V	15V@0.7A		10.5W	150mVp - p	85%	SPS10-48-15
36 - 76V	+12V@0.45A	- 12V@0.45A	10.8W	120mVp - p	84%	SPD10-48-1212
36 - 76V	+15V@0.35A	- 15V@0.35A	10.5W	150mVp - p	84%	SPD10-48-1515

## 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. No pin
6. No pin	6. COM
7. +Vout	7. +Vout

## Derating Curve



## Dimensions

