

# P 25

## P 25 Watt Series DC/DC Converters

**Total power** 25 Watts  
**Input voltages** 5V, 12V, 24V, 48V Input  
**#of outputs** Single, Dual Output



### SPECIAL FEATURES

- CE(LVD) Marking
- High efficiency
- 300KHz fixed frequency
- Wide 2:1 input range
- Surface mounting technology
- Small, compact size 2.56"×2.0"×0.35"
- Remote on / off control
- Output voltage variation (TRM)
- Over voltage protection (OVP)
- Low output ripple & noise
- Current mode control
- Isolated output
- Low start up current
- 3 years warranty

### ENVIRONMENTAL

- Operating temperature range ..... -20 °C ~ 71 °C
- Option, see Note 1 ..... -40 °C ~ 85 °C
- Storage temperature range ..... -40 °C ~ 105 °C
- Operating humidity (non condensing) .... 20%~90%RH
- Storage humidity (non condensing) ..... 10%~95%RH
- Cooling method ..... Convection
- Case material ..... Zn
- MTBF .....  $4.7 \times 10^5$  hrs
- Safety(Single output) ..... CE (EN 60950)  
\*Approved through TÜV

### ELECTRICAL SPECIFICATIONS

<b>INPUT</b>	<ul style="list-style-type: none"> <li>• Input range ..... 4.5V to 9 VDC, 9V to 18 VDC, 18 to 36 VDC, 36V to 72 VDC</li> <li>• Efficiency ..... 73 ~ 87% typ.</li> <li>• Remote on / off ..... TTL compatible on : 0 to 1.2 VDC or short Vin-V off : 2.4 to 5.5 VDC or open</li> </ul>
<b>OUTPUT</b>	<ul style="list-style-type: none"> <li>• Voltage tolerance ..... <math>\pm 2\%</math> (Single and uncomplementary dual) <math>\pm 3\%</math> (Complementary dual)</li> <li>• Line regulation ..... <math>\pm 0.5\%</math></li> <li>• Load regulation ..... <math>\pm 1\%</math> @ single <math>\pm 2.5\%</math> @ dual (minimum load 10%)</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz Magnitude : 1% Vout nom</li> </ul>
<b>PROTECTION CIRCUIT</b>	<ul style="list-style-type: none"> <li>• Short circuit protection ..... Current limited output (note2)</li> <li>• Over voltage protection ..... Work at 115 ~ 140% of rating</li> </ul>
<b>ELECTRICALLY ISOLATED</b>	<ul style="list-style-type: none"> <li>• Isolation ..... Input-output, input-case, output-case / DC 500V, 100Mohms</li> <li>• High pot ..... Input-output, input-case, output-case / AC 500V, 1 minute</li> </ul>

**NOTE** 1. As a factory added option, the all model can be operated down to -40 °C, the suffix 'M' should be added to the model number when ordering ex) PS25-24-5M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit

### Ordering Information

Input	Output1	Output2	Maximum Power	Ripple&Noise max	Efficiency Typ.	Model Number
4.5 - 9V	3.3V@3.20A		10.56W	75mVp-p	73%	PS25-5-3R3
4.5 - 9V	5V@3.20A		16.0W	75mVp-p	75%	PS25-5-5
4.5 - 9V	12V@1.70A		20.4W	120mVp-p	77%	PS25-5-12
4.5 - 9V	15V@1.40A		21.0W	150mVp-p	77%	PS25-5-15
4.5 - 9V	+5V@1.60A	-5V@1.60A	16.0W	100/100mVp-p	77%	PD25-5-55
4.5 - 9V	+12V@0.85A	-12V@0.85A	20.4W	120/120mVp-p	77%	PD25-5-1212
4.5 - 9V	+15V@0.70A	-15V@0.70A	21.0W	150/150mVp-p	77%	PD25-5-1515
9 - 18V	3.3V@4.00A		13.2W	75mVp-p	83%	PS25-12-3R3
9 - 18V	5V@4.00A		20.0W	75mVp-p	85%	PS25-12-5
9 - 18V	12V@2.10A		25.2W	120mVp-p	87%	PS25-12-12
9 - 18V	15V@1.70A		25.5W	150mVp-p	87%	PS25-12-15
9 - 18V	+5V@2.00A	-5V@2.00A	20.0W	100/100mVp-p	87%	PD25-12-55
9 - 18V	+12V@1.05A	-12V@1.05A	25.2W	120/120mVp-p	87%	PD25-12-1212
9 - 18V	+15V@0.85A	-15V@0.85A	25.5W	150/150mVp-p	87%	PD25-12-1515
18 - 36V	3.3V@4.00A		13.2W	75mVp-p	83%	PS25-24-3R3
18 - 36V	5V@4.00A		20.0W	75mVp-p	85%	PS25-24-5
18 - 36V	12V@2.10A		25.2W	120mVp-p	87%	PS25-24-12
18 - 36V	15V@1.70A		25.5W	150mVp-p	87%	PS25-24-15
18 - 36V	+5V@2.00A	-5V@2.00A	20.0W	100/100mVp-p	87%	PD25-24-55
18 - 36V	+12V@1.05A	-12V@1.05A	25.2W	120/120mVp-p	87%	PD25-24-1212
18 - 36V	+15V@0.85A	-15V@0.85A	25.2W	150/150mVp-p	87%	PD25-24-1515
36 - 72V	3.3V@4.00A		13.2W	75mVp-p	83%	PS25-48-3R3
36 - 72V	5V@4.00A		20.0W	75mVp-p	85%	PS25-48-5
36 - 72V	12V@2.10A		25.2W	120mVp-p	87%	PS25-48-12
36 - 72V	15V@1.70A		25.5W	150mVp-p	87%	PS25-48-15
36 - 72V	+5V@2.00A	-5V@2.00A	20.0W	100/100mVp-p	87%	PD25-48-55
36 - 72V	+12V@1.05A	-12V@1.05A	25.2W	120/120mVp-p	87%	PD25-48-1212
36 - 72V	+15V@0.85A	-15V@0.85A	25.2W	150/150mVp-p	87%	PD25-48-1515

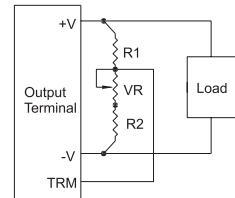
### Pin assignments

Single Output	Dual Output
1. +Vin	1. +Vin
2. - Vin	2. - Vin
3. CNT	3. CNT
4. +Vout	4. +Vout
5. No pin	5. COM
6. -Vout	6. -Vou
7. TRM	7. TRM

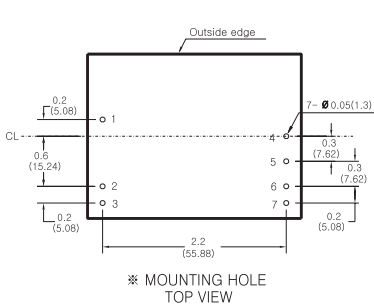
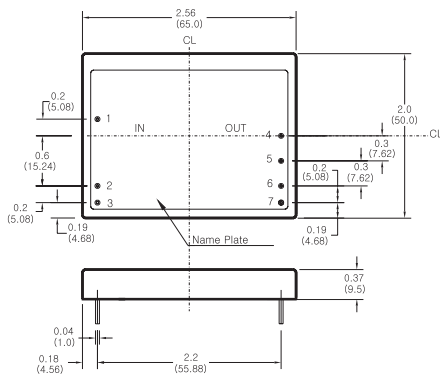
### External Parts

Model	Output Voltage	VR	R1	R2
PS 25	5V	1K	1K	680Ω
	12V	1K	3.9K	680Ω
	15V	1K	5.6K	750Ω
PD 25	±5V (10V)	1K	3.3K	680Ω
	±12V (24V)	5K	9.0K	820Ω
	±15V (30V)	5K	20.0K	910Ω

### Trim method



### Dimensions



- NOTES**
- All dimensions are in inches and (mm).
  - Weight : 65g or less

### Derating curve

