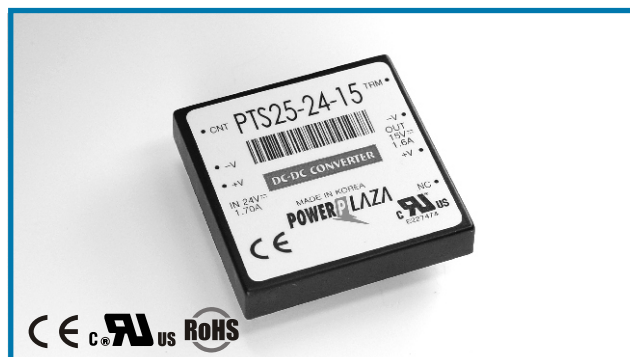


# PT 25

## PT 25 Watt Series DC/DC Converters

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



### SPECIAL FEATURES

- CE(LVD), UL marking
- High efficiency
- Industrial standard pin output
- 300KHz fixed frequency
- Wide 2:1 input range
- Isolated output
- Small, compact size 2.0" x 2.0" x 0.50"
- Surface mount internal construction
- Six sided EMI shielding
- Low output ripple & noise
- Remote on / off control
- Output voltage variation (TRM)
- Over voltage protection (O.V.P.)
- Short circuit protection
- Current mode control
- 3 years warranty

### ENVIRONMENTAL

- Operating temperature range ..... -20 ~71
- Option, see Note 1 ..... -40 ~85
- Storage temperature range ..... -40 ~105
- Operating humidity (non condensing) ..... 20%~90%RH
- Storage humidity (non condensing) ..... 10%~95%RH
- Cooling method ..... Convection
- EMI / RFI ..... Six-sided continuous shield
- Case material ..... Zn
- MTBF (MIL-HDBK-217F) .....  $4.5 \times 10^5$  hrs
- Safety
  - └ UL (UL 60950, CSA C22.2 NO.60950, single) : E227474 /
  - └ CE (EN 60950) through TÜV

### ELECTRICAL SPECIFICATIONS

INPUT	<ul style="list-style-type: none"> <li>• Input range ..... DC 18V - 36 V (PT 25-24), DC 36V - 72 V (PT 25-48)</li> <li>• Efficiency ..... 80 - 89% typ.</li> <li>• Remote on / off ..... TTL compatible               <ul style="list-style-type: none"> <li>└ On : DC 2.5V - 5.5V or open</li> <li>└ Off : DC 0V - 0.8V</li> </ul> </li> </ul>
OUTPUT	<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 0.25\%</math> @ output1 <math>\pm 5\%</math> @ output 2, 3</li> <li>• Load regulation ..... <math>\pm 0.25\%</math> @ single <math>\pm 2.5\%</math> @ dual <math>\pm 0.25\%</math> output1 <math>\pm 8\%</math> output 2, 3 } @ Triples / 50% L-FL max (aux) bal. Loads</li> <li>• Ripple and Noise, pk-pk ..... Bandwidth : 20MHz Magnitude : 1% Vout nom</li> </ul>
PROTECTION CIRCUIT	<ul style="list-style-type: none"> <li>• Short circuit protection ..... Current limited output (note2)</li> <li>• Over voltage protection ..... Work at 115~140% or rating</li> </ul>
ELECTRICALLY ISOLATED	<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, 1minute</li> </ul>

**NOTE** 1. As a factory added option, the all model can be operated down to -40 , the suffix 'M' should be added to the model number when ordering. ex) PT25-48-522M  
 2. Long term continuous operation into a short circuit will compromise the reliability of the unit.

## Ordering Information

Input	Output1	Output2	Output3	Maximum Power	Ripple&Noise max	Efficiency Typ.	Model Number
18 - 36V	3.3V@6.0A			19.8W	100mVp-p	80%	<b>PTS25-24-3R3</b>
18 - 36V	5V@5.0A			25.0W	100mVp-p	85%	<b>PTS25-24-5</b>
18 - 36V	12V@2.0A			24.0W	120mVp-p	89%	<b>PTS25-24-12</b>
18 - 36V	15V@1.6A			24.0W	150mVp-p	89%	<b>PTS25-24-15</b>
18 - 36V	5V@2.5A	-5V@2.50A		25.0W	75/75mVp-p	84%	<b>PTD25-24-55</b>
18 - 36V	12V@1.0A	-12V@1.00A		24.0W	120/120mVp-p	88%	<b>PTD25-24-1212</b>
18 - 36V	15V@0.8A	-15V@0.80A		24.0W	150/150mVp-p	87%	<b>PTD25-24-1515</b>
18 - 36V	3.3V@3.5A	12V@0.35A	-12V@0.35A	19.95W	75/120/120mVp-p	83%	<b>PT25-24-322</b>
18 - 36V	5V@3.5A	12V@0.35A	-12V@0.35A	25.9W	75/120/120mVp-p	84%	<b>PT25-24-522</b>
18 - 36V	3.3V@3.5A	15V@0.28A	-15V@0.28A	19.95W	75/150/150mVp-p	83%	<b>PT25-24-3FF</b>
18 - 36V	5V@3.5A	15V@0.25A	-15V@0.25A	25.0W	75/150/150mVp-p	84%	<b>PT25-24-5FF</b>
36 - 72V	3.3V@6.0A			19.8W	100mVp-p	81%	<b>PTS25-48-3R3</b>
36 - 72V	5V@5.0A			25.0W	100mVp-p	85%	<b>PTS25-48-5</b>
36 - 72V	12V@2.0A			24.0W	120mVp-p	89%	<b>PTS25-48-12</b>
36 - 72V	15V@1.6A			24.0W	150mVp-p	89%	<b>PTS25-48-15</b>
36 - 72V	5V@2.5A	-5V@2.50A		25.0W	75/75mVp-p	84%	<b>PTD25-48-55</b>
36 - 72V	12V@1.0A	-12V@1.00A		24.0W	120/120mVp-p	88%	<b>PTD25-48-1212</b>
36 - 72V	15V@0.8A	-15V@0.80A		24.0W	150/150mVp-p	87%	<b>PTD25-48-1515</b>
36 - 72V	3.3V@3.5A	12V@0.35A	-12V@0.35A	19.95W	75/120/120mVp-p	83%	<b>PT25-48-322</b>
36 - 72V	5V@3.5A	12V@0.35A	-12V@0.35A	25.9W	75/120/120mVp-p	84%	<b>PT25-48-522</b>
36 - 72V	3.3V@3.5A	15V@0.28A	-15V@0.28A	19.95W	75/150/150mVp-p	83%	<b>PT25-48-3FF</b>
36 - 72V	5V@3.5A	15V@0.25A	-15V@0.25A	25.0W	75/150/150mVp-p	84%	<b>PT25-48-5FF</b>

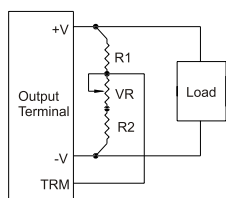
## Pin assignments

Single Output	Dual Output	Triple Output
1. +Vin	1. +Vin	1. +Vin
2. - Vin	2. - Vin	2. - Vin
3. No pin	3. No pin	3. No pin
4. Control(enable)	4. Control(enable)	4. Control(enable)
5. No connect	5. Output1	5. Output2
6. +Vout	6. COM	6. Output1
7. -Vout	7. Output2	7. GND
8. Trim	8. Trim	8. Output3

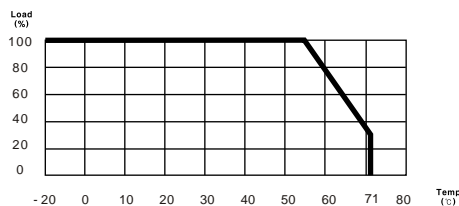
## External Parts

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

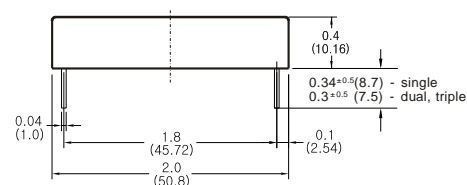
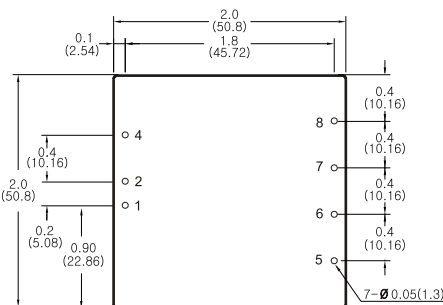
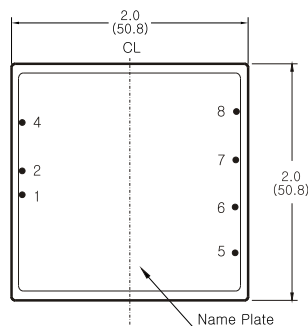
## Trim method



## Derating curve



## Dimensions



### NOTES

- All dimensions are in inches and(mm).
- Weight : 80g or less