

P1R5 Series

1.5W DC-DC CONVERTER



FEATURES 5V, 12V, 24V, 48V Inputs / Single, Dual Outputs

- High Efficiency
- Encapsulated Small / Compact Size
- Wide 2:1 Input Range
- 300kHz Fixed Frequency
- Input / Output Isolation
- Surface Mounting Technology
- Current Mode Control
- Output Low Ripple / Noise
- Low Start up Current
- 3 Year Warranty

ELECTRICAL SPECIFICATIONS

Input	· Input Range	DC 5V(4.5 - 7.2), 12V(8 - 16.5), 24V(18 - 32), 48V(32 - 63)
	· Efficiency	66 - 81% Typ.

Output	· Output Voltages	3.3V, 5V, 12V, 15V, ±12V, ±15V
	· Output Voltage Tolerance	±2.0% (Single and Uncomplementary Dual) ±3.0% (Complementary Dual)
	· Line Regulation	±0.5% Max.
	· Load Regulation	±1.0% Max. (Single), ±2.5% Max. (Dual : Minimum Load 10%)
	· Ripple and Noise	1% of Vout (Bandwidth : 20MHz)

Protection Circuit	· Over Current Protection	Work Over 105% of Rating (Current Limited Output) (NOTE 1)
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Electrically Isolated	· Isolation	Input-Output, Input-Case, Output-Case / DC500V, 100MΩ
	· High Pot	Input-Output, Input-Case, Output-Case / AC500V, 1Min.

ENVIRONMENTAL

· Operating Temperature Range	-20°C ~ 71°C
· Option, See NOTE 2	-40°C ~ 85°C
· Operating Humidity (Non-Condensing)	20% ~ 90%RH
· Storage Temperature Range	-40°C ~ 105°C
· Storage Humidity (Non-Condensing)	10% ~ 95%RH
· Cooling Method	Convection
· MTBF (MIL-HDBK-217F)	7.9 x 10 ⁵ hrs
· Safety (Single Output)	CE_LVD (EN 60950) through TÜV

NOTE 1. Long term continuous operation into a short circuit will compromise the reliability of the unit.

NOTE 2. As a factory added option, the all model can be operated from -40°C to 85°C, the suffix 'M' should be added to the model number when ordering. ex) PS1R5-24-5M

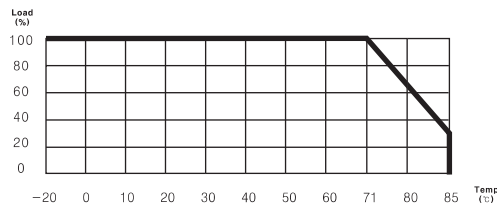
ORDERING INFORMATION

Input	Output1	Output2	Maximum Power	Ripple&Noise Max.	Efficiency Typ.	Model Number
4.5 - 7.2V	3.3V@0.30A		0.99W	50mVp-p	66%	PS1R5-5-3R3
4.5 - 7.2V	5V@0.30A		1.50W	50mVp-p	70%	PS1R5-5-5
4.5 - 7.2V	12V@0.125A		1.50W	120mVp-p	70%	PS1R5-5-12
4.5 - 7.2V	15V@0.10A		1.50W	150mVp-p	75%	PS1R5-5-15
4.5 - 7.2V	+12V@0.06A	-12V@0.06A	1.44W	120/120mVp-p	72%	PD1R5-5-1212
4.5 - 7.2V	+15V@0.05A	-15V@0.05A	1.50W	150/150mVp-p	75%	PD1R5-5-1515
8 - 16.5V	3.3V@0.30A		0.99W	50mVp-p	75%	PS1R5-12-3R3
8 - 16.5V	5V@0.30A		1.50W	50mVp-p	78%	PS1R5-12-5
8 - 16.5V	12V@0.125A		1.50W	120mVp-p	81%	PS1R5-12-12
8 - 16.5V	15V@0.10A		1.50W	150mVp-p	81%	PS1R5-12-15
8 - 16.5V	+12V@0.06A	-12V@0.06A	1.44W	120/120mVp-p	81%	PD1R5-12-1212
8 - 16.5V	+15V@0.05A	-15V@0.05A	1.50W	150/150mVp-p	78%	PD1R5-12-1515
18 - 32V	3.3V@0.30A		0.99W	50mVp-p	70%	PS1R5-24-3R3
18 - 32V	5V@0.30A		1.50W	50mVp-p	73%	PS1R5-24-5
18 - 32V	12V@0.125A		1.50W	120mVp-p	78%	PS1R5-24-12
18 - 32V	15V@0.10A		1.50W	150mVp-p	78%	PS1R5-24-15
18 - 32V	+12V@0.06A	-12V@0.06A	1.44W	120/120mVp-p	74%	PD1R5-24-1212
18 - 32V	+15V@0.05A	-15V@0.05A	1.50W	150/150mVp-p	75%	PD1R5-24-1515
32 - 63V	3.3V@0.30A		0.99W	50mVp-p	68%	PS1R5-48-3R3
32 - 63V	5V@0.30A		1.50W	50mVp-p	70%	PS1R5-48-5
32 - 63V	12V@0.125A		1.50W	120mVp-p	75%	PS1R5-48-12
32 - 63V	15V@0.10A		1.50W	150mVp-p	73%	PS1R5-48-15
32 - 63V	+12V@0.06A	-12V@0.06A	1.44W	120/120mVp-p	74%	PD1R5-48-1212
32 - 63V	+15V@0.05A	-15V@0.05A	1.50W	150/150mVp-p	73%	PD1R5-48-1515

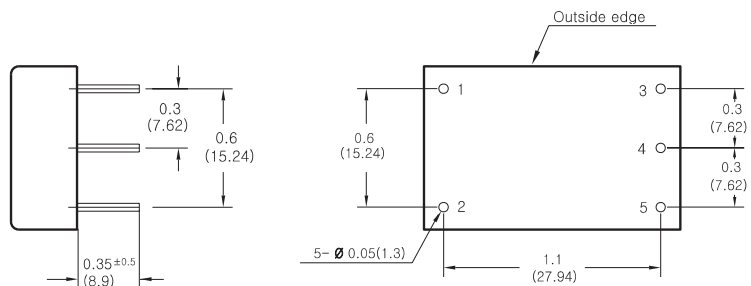
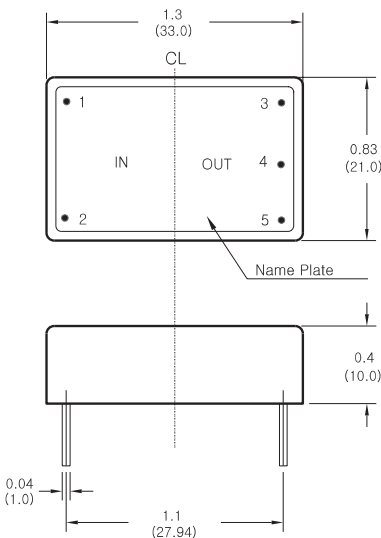
PIN ASSIGNMENTS

Single Output	Dual Output
1. +Vin	1. +Vin
2. - Vin	2. - Vin
3. +Vout	3. Output1
4. No Pin	4. COM
5. - Vout	5. Output2

DERATING CURVE



DIMENSIONS



※ Mounting hole top view

NOTE 1 All dimension are in inches (mm)
 2 Weight : 18g or less
 3 Case Material : ZnDC