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## ZTW1R5



### Features

- UL recognized, TV approved, CSA certified
- Isolated between input-output
- Thin profile
- Built-in Over Current Protection
- RoHS Compliant

**5 year warranty(refer to Instruction Manual)**

Model	Input Voltage [V]	Output Wattage [W]	DC Output [V/A]
ZTW1R50512	DC 4.5 - 9	1.56	-12 - 24V 0.065A
ZTW1R50515	DC 4.5 - 9	1.5	-15 - 30V 0.05A
ZTW1R51212	DC 9 - 18	1.56	-12 - 24V 0.065A
ZTW1R51215	DC 9 - 18	1.5	-15 - 30V 0.05A
ZTW1R52412	DC 18 - 36	1.56	-12 - 24V 0.065A
ZTW1R52415	DC 9 - 18	1.5	-15 - 30V 0.05A
ZTW1R54812	DC 36 - 72	1.56	-12 - 24V 0.065A
ZTW1R54815	DC 36 - 72	1.5	-15 - 30V 0.05A

- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage



MODEL	ZTW1R50512	ZTW1R50515	ZTW1R51212	ZTW1R51215	ZTW1R52412	ZTW1R52415	ZTW1R54812	ZTW1R54815
MAX OUTPUT WATTAGE[W]	1.56	1.50	1.56	1.50	1.56	1.50	1.56	1.50
DC OUTPUT	VOLTAGE[V]	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24
	CURRENT[A]	0.065	0.050	0.065	0.050	0.065	0.050	0.065

## SPECIFICATIONS

Output pins can be connected in series to make a 24V/30V output.

	MODEL	ZTW1R50512	ZTW1R50515	ZTW1R51212	ZTW1R51215	ZTW1R52412	ZTW1R52415	ZTW1R54812	ZTW1R54815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72		
	CURRENT[A]	*1 0.466typ	0.448typ	0.183typ	0.176typ	0.092typ	0.088typ	0.046typ	0.044typ	
	EFFICIENCY[%]	*1 67typ	67typ	71typ	71typ	71typ	71typ	71typ	71typ	
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	
	CURRENT[A]	0.065	0.050	0.065	0.050	0.065	0.050	0.065	0.050	
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max	60max	75max	
	LOAD REGULATION[mV]	600max	750max	600max	750max	600max	750max	600max	750max	
	RIPPLE[mVp-p]	*2 120max	120max	120max	120max	120max	120max	120max	120max	
	RIPPLE NOISE[mVp-p]	*2 150max	150max	150max	150max	150max	150max	150max	150max	
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	150max	
	DRIFT[mV]	*3 50max	60max	50max	60max	50max	60max	50max	60max	
	START-UP TIME[ms]	20max (Minimum input, lo=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed								
OUTPUT VOLTAGE SETTING[V]	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75		
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
	INPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
	OUTPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-20 to +71°C, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each X, Y and Z axis								
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1 Complies with IEC60950-1								
OTHERS	CASE SIZE/WEIGHT	28 × 21 × 10mm (W × H × D) / 15g max								
	COOLING METHOD	Convection								

\*1 Rated input 5V, 12V, 24V or 48V DC, lo=100%.

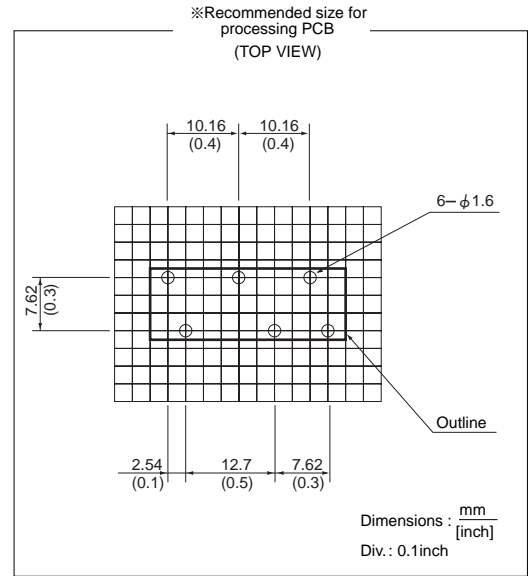
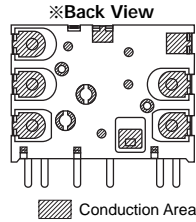
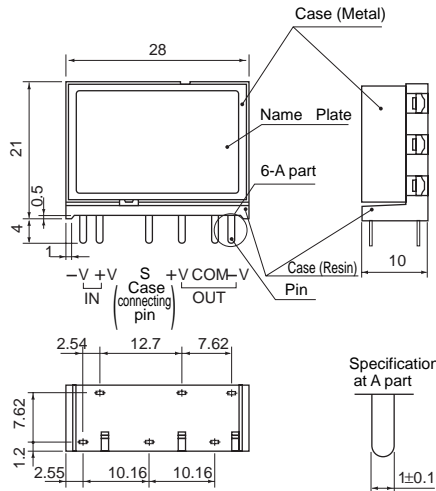
\*2 Measured by 20MHz oscilloscope.

\*3 The drift is a change at 25°C of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.

\* The output specification is at ±12V and ±15V.

\* Series/Parallel operation with other model is not possible.

External view

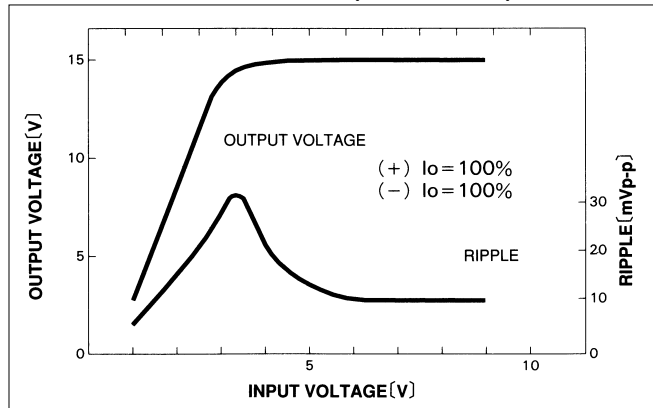


Weight: 15g or less  
 Tolerance: ±0.5  
 Case Material (Metal): Brass  
 Case Material (Resin): PPS  
 Pin Material: Phosphor Bronze (t=0.3)  
 (Solder Plate)

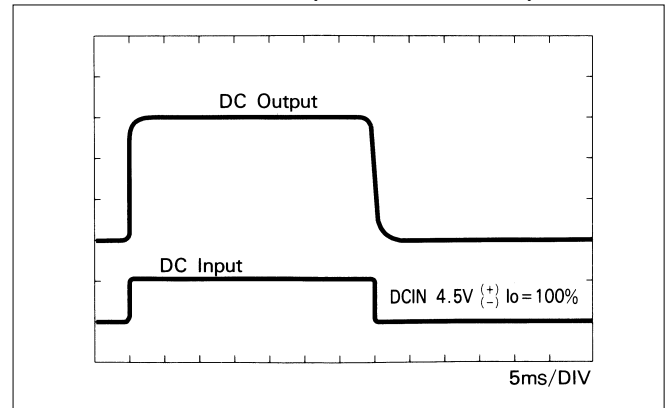
Dimensions :  $\frac{\text{mm}}{\text{[inch]}}$   
 Div. : 0.1inch

Performance data

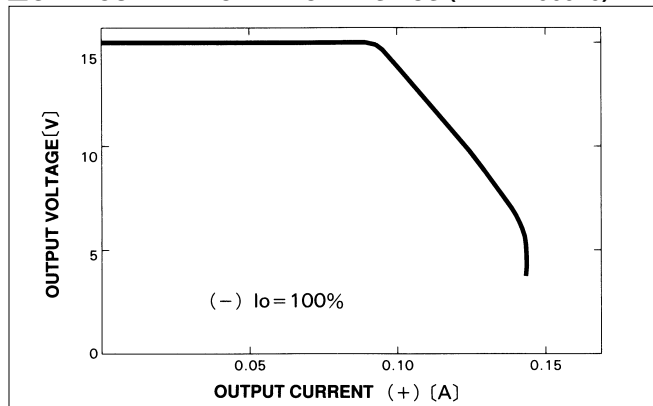
STATIC CHARACTERISTICS (ZTW1R50515)



RISE TIME & FALL TIME (ZTW1R50515:+15V)



OVERCURRENT CHARACTERISTICS (ZTW1R50515)



ZU/ZT