



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

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| MODEL                 | ZTS1R50505 | ZTS1R50512 | ZTS1R50515 | ZTS1R51205 | ZTS1R51212 | ZTS1R51215 | ZTS1R52405 | ZTS1R52412 | ZTS1R52415 | ZTS1R54805 | ZTS1R54812 | ZTS1R54815 |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 1.50       | 1.56       | 1.50       | 1.50       | 1.56       | 1.50       | 1.50       | 1.56       | 1.50       | 1.50       | 1.56       | 1.50       |
| DC OUTPUT             | VOLTAGE[V] | 5          | 12         | 15         | 5          | 12         | 15         | 5          | 12         | 15         | 5          | 12         |
|                       | CURRENT[A] | 0.30       | 0.13       | 0.10       | 0.30       | 0.13       | 0.10       | 0.30       | 0.13       | 0.10       | 0.30       | 0.10       |

## SPECIFICATIONS

|                    | MODEL                                | ZTS1R50505                                                                                   | ZTS1R50512    | ZTS1R50515    | ZTS1R51205  | ZTS1R51212    | ZTS1R51215    | ZTS1R52405  | ZTS1R52412    | ZTS1R52415    | ZTS1R54805  | ZTS1R54812    | ZTS1R54815    |
|--------------------|--------------------------------------|----------------------------------------------------------------------------------------------|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|
| INPUT              | VOLTAGE[V]                           | DC4.5 - 9                                                                                    |               |               | DC9 - 18    |               |               | DC18 - 36   |               |               | DC36 - 72   |               |               |
|                    | CURRENT[A]                           | *1 0.441typ                                                                                  | 0.459typ      | 0.441typ      | 0.176typ    | 0.183typ      | 0.176typ      | 0.088typ    | 0.092typ      | 0.088typ      | 0.043typ    | 0.045typ      | 0.043typ      |
|                    | EFFICIENCY[%]                        | *1 68typ                                                                                     | 68typ         | 68typ         | 71typ       | 71typ         | 71typ         | 71typ       | 71typ         | 71typ         | 73typ       | 73typ         | 73typ         |
| OUTPUT             | VOLTAGE[V]                           | 5                                                                                            | 12            | 15            | 5           | 12            | 15            | 5           | 12            | 15            | 5           | 12            | 15            |
|                    | CURRENT[A]                           | 0.30                                                                                         | 0.13          | 0.10          | 0.30        | 0.13          | 0.10          | 0.30        | 0.13          | 0.10          | 0.30        | 0.13          | 0.10          |
|                    | LINE REGULATION[mV]                  | 20max                                                                                        | 48max         | 60max         | 20max       | 48max         | 60max         | 20max       | 48max         | 60max         | 20max       | 48max         | 60max         |
|                    | LOAD REGULATION[mV]                  | 40max                                                                                        | 100max        | 120max        | 40max       | 100max        | 120max        | 40max       | 100max        | 120max        | 40max       | 100max        | 120max        |
|                    | RIPPLE[mVp-p]                        | *2 80max                                                                                     | 120max        | 120max        | 80max       | 120max        | 120max        | 80max       | 120max        | 120max        | 80max       | 120max        | 120max        |
|                    | RIPPLE NOISE[mVp-p]                  | *2 120max                                                                                    | 150max        | 150max        | 120max      | 150max        | 150max        | 120max      | 150max        | 150max        | 120max      | 150max        | 150max        |
|                    | TEMPERATURE REGULATION[mV]           | -20 to +55°C                                                                                 | 50max         | 150max        | 180max      | 50max         | 150max        | 180max      | 50max         | 150max        | 180max      | 50max         | 150max        |
|                    | DRIFT[mV]                            | *3 20max                                                                                     | 48max         | 60max         | 20max       | 48max         | 60max         | 20max       | 48max         | 60max         | 20max       | 48max         | 60max         |
|                    | START-UP TIME[ms]                    | 20max (Minimum input, Io=100%)                                                               |               |               |             |               |               |             |               |               |             |               |               |
|                    | OUTPUT VOLTAGE ADJUSTMENT RANGE[V]   | Fixed                                                                                        |               |               |             |               |               |             |               |               |             |               |               |
|                    | OUTPUT VOLTAGE SETTING[V]            | 4.85 - 5.25                                                                                  | 11.40 - 12.60 | 14.25 - 15.75 | 4.85 - 5.25 | 11.40 - 12.60 | 14.25 - 15.75 | 4.85 - 5.25 | 11.40 - 12.60 | 14.25 - 15.75 | 4.85 - 5.25 | 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 50MW min (20 t 15°C)                           |               |               |             |               |               |             |               |               |             |               |               |
|                    | INPUT-CASE                           | AC500V 1minute, Cutoff current = 10mA, DC500V 50MW min (20 t 15°C)                           |               |               |             |               |               |             |               |               |             |               |               |
|                    | OUTPUT-CASE                          | AC500V 1minute, Cutoff current = 10mA, DC500V 50MW min (20 t 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                     | UL1950, C-UL, EN60950 Complies with IEC60950                                                 |               |               |             |               |               |             |               |               |             |               |               |
| OTHERS             | CASE SIZE/WEIGHT                     | 28 X 21 X 10mm (W X H X D) / 15g max                                                         |               |               |             |               |               |             |               |               |             |               |               |
|                    | COOLING METHOD                       | Convection                                                                                   |               |               |             |               |               |             |               |               |             |               |               |

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

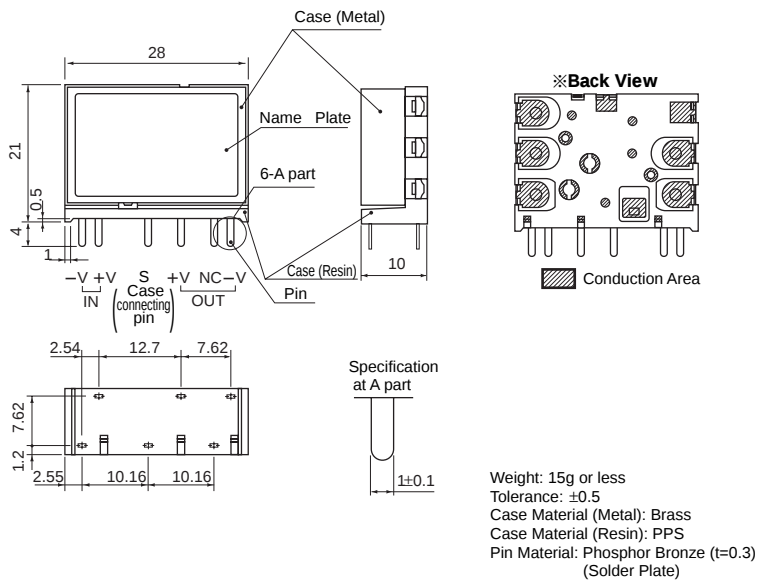
\*2 Measured by 20MHz oscilloscope.

\*3 The drift is a change at 25°C of ambient temperature and 30 minutes - 8 hours after the in

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

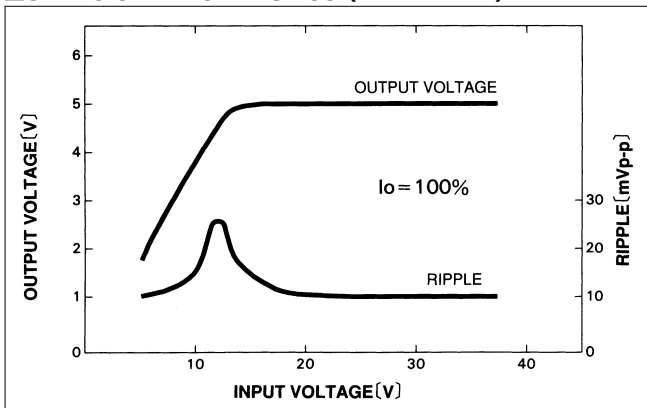
put voltage applied at rated input/output.

## External view

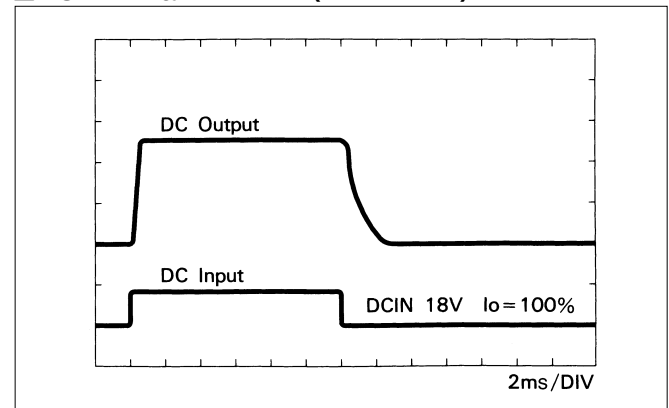


## Performance data

## ■ STATIC CHARACTERISTICS (ZTS1R52405)



## ■ RISE TIME &amp; FALL TIME (ZTS1R52405)



## ■ OVERCURRENT CHARACTERISTICS (ZTS1R52405)

