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## ZUS25



### 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] |
|------------|-------------------|--------------------|-----------------|
| ZUS25053R3 | DC 4.5 - 9        | 13.2               | 3.3V<br>4A      |
| ZUS250505  | DC 4.5 - 9        | 16                 | 5V<br>3.2A      |
| ZUS250512  | DC 4.5 - 9        | 20.4               | 12V<br>1.7A     |
| ZUS251205  | DC 9 - 18         | 20                 | 5V<br>4A        |
| ZUS251212  | DC 9 - 18         | 25.2               | 12V<br>2.1A     |
| ZUS252405  | DC 18 - 36        | 20                 | 5V<br>4A        |
| ZUS252412  | DC 18 - 36        | 25.2               | 12V<br>2.1A     |
| ZUS25483R3 | DC 36 - 75        | 13.2               | 3.3V<br>4A      |
| ZUS254805  | DC 36 - 75        | 20                 | 5V<br>4A        |
| ZUS254812  | DC 36 - 75        | 25.2               | 12V<br>2.1A     |



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

| MODEL                 | ZUS25053R3 | ZUS250505 | ZUS250512 | ZUS251205 | ZUS251212 | ZUS252405 | ZUS252412 | ZUS25483R3 | ZUS254805 | ZUS254812 |     |
|-----------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----|
| MAX OUTPUT WATTAGE[W] | 13.2       | 16.0      | 20.4      | 20.0      | 25.2      | 20.0      | 25.2      | 13.2       | 20.0      | 25.2      |     |
| DC OUTPUT             | VOLTAGE[V] | 3.3       | 5         | 12        | 5         | 12        | 5         | 12         | 3.3       | 5         | 12  |
|                       | CURRENT[A] | 4.0       | 3.2       | 1.7       | 4.0       | 2.1       | 4.0       | 2.1        | 4.0       | 4.0       | 2.1 |

## SPECIFICATIONS

|                           | MODEL  | ZUS25053R3   | ZUS250505 | ZUS250512 | ZUS251205 | ZUS251212 | ZUS252405 | ZUS252412   | ZUS25483R3                    | ZUS254805 | ZUS254812 |  |
|---------------------------|--|--|-----------|-----------|-----------|-----------|-----------|-------------|-------------------------------|-----------|-----------|--|
| INPUT                     | VOLTAGE[V]   | DC4.5 - 9  |           |           | DC9 - 18  |           | DC18 - 36 |             | DC36 - 75                     |           |           |  |
|                           | CURRENT[A]   | *1 3.66typ   | 4.00typ   | 4.98typ   | 2.03typ   | 2.47typ   | 1.02typ   | 1.23typ     | 0.35typ                       | 0.51typ   | 0.62typ   |  |
|                           | EFFICIENCY[%]  | *1 72typ   | 80typ     | 82typ     | 82typ     | 85typ     | 82typ     | 85typ       | 78typ                         | 82typ     | 85typ     |  |
| OUTPUT                    | VOLTAGE[V]   | 3.3  | 5         | 12        | 5         | 12        | 5         | 12          | 3.3                           | 5         | 12        |  |
|                           | CURRENT[A]   | 4.0  | 3.2       | 1.7       | 4.0       | 2.1       | 4.0       | 2.1         | 4.0                           | 4.0       | 2.1       |  |
|                           | LINE REGULATION[mV]  | 20max  | 20max     | 48max     | 20max     | 48max     | 20max     | 48max       | 20max                         | 20max     | 48max     |  |
|                           | LOAD REGULATION[mV]  | 40max  | 40max     | 100max    | 40max     | 100max    | 40max     | 100max      | 40max                         | 40max     | 100max    |  |
|                           | RIPPLE[mVp-p]  | *2 80max   | 80max     | 120max    | 80max     | 120max    | 80max     | 120max      | 80max                         | 80max     | 120max    |  |
|                           | RIPPLE NOISE[mVp-p]  | *2 120max  | 120max    | 150max    | 120max    | 150max    | 120max    | 150max      | 120max                        | 120max    | 150max    |  |
|                           | TEMPERATURE REGULATION[mV]   0 to +55°C  | 50max  | 50max     | 150max    | 50max     | 150max    | 50max     | 150max      | 50max                         | 50max     | 150max    |  |
|                           | DRIFT[mV]  | *3 20max   | 20max     | 48max     | 20max     | 48max     | 20max     | 48max       | 20max                         | 20max     | 48max     |  |
|                           | START-UP TIME[ms]  | 100max (Minimum input, Io=100%)  |           |           |           |           |           |             |                               |           |           |  |
|                           | OUTPUT VOLTAGE ADJUSTMENT RANGE[V]   | Internally fixed (TRM pin open), adjustable by external VR                                   |           |           |           |           |           |             |                               |           |           |  |
| OUTPUT VOLTAGE SETTING[V] | 3.20 - 3.47  | ±5%  |           |           |           |           |           | 3.20 - 3.47 | ±5%                           |           |           |  |
| OVERCURRENT PROTECTION    | Works over 105% of rating and recovers automatically   |  |           |           |           |           |           |             |                               |           |           |  |
| OVERVOLTAGE PROTECTION    | 4.0 - 5.25V  | Works at 115 - 140% of rating  |           |           |           |           |           | 4.0 - 5.25V | Works at 115 - 140% of rating |           |           |  |
| REMOTE ON/OFF             | Between RC and -side of input:short - 1.2V · · · output ON, 2.4V - 5.5V(or open) · · · output OFF, Compatible to TTL |  |           |           |           |           |           |             |                               |           |           |  |
| 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, EN60950-1, CSA C22.2 No.234 Complies with IEC60950-1                              |           |           |           |           |           |             |                               |           |           |  |
| OTHERS                    | CASE SIZE/WEIGHT   | 65 × 8.5 × 50mm (W × H × D) / 65g max  |           |           |           |           |           |             |                               |           |           |  |
|                           | COOLING METHOD   | Convection   |           |           |           |           |           |             |                               |           |           |  |

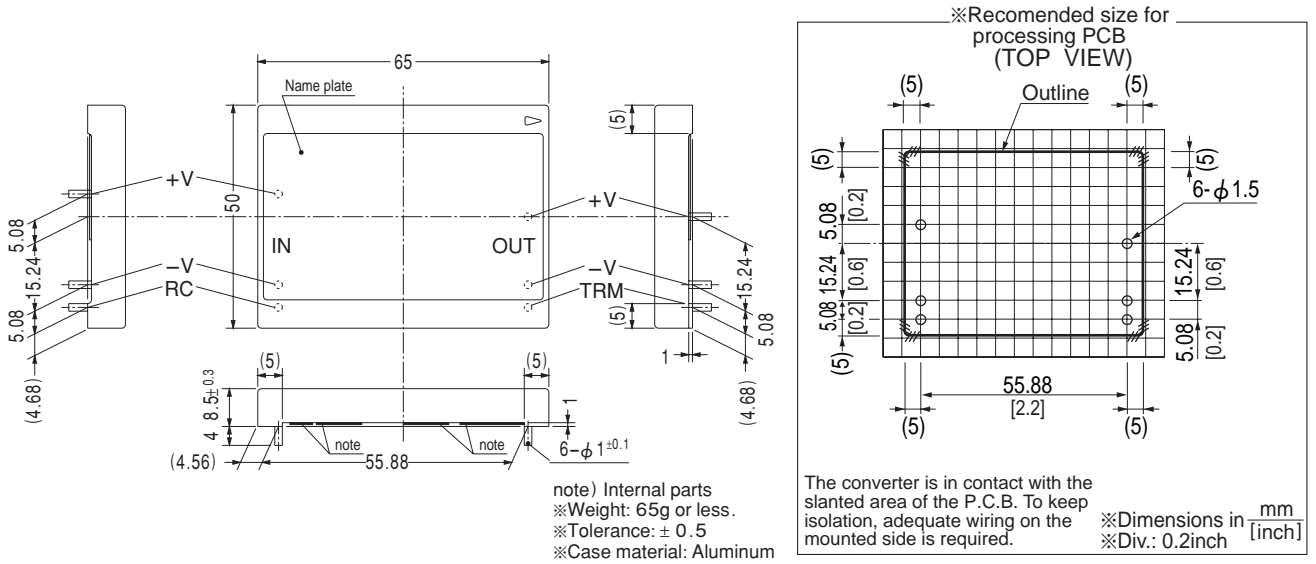
\*1 Rated input, 5V, 12V, 24V or 48V DC, Io=100%

\*2 Measured by 20MHz oscilloscope.

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

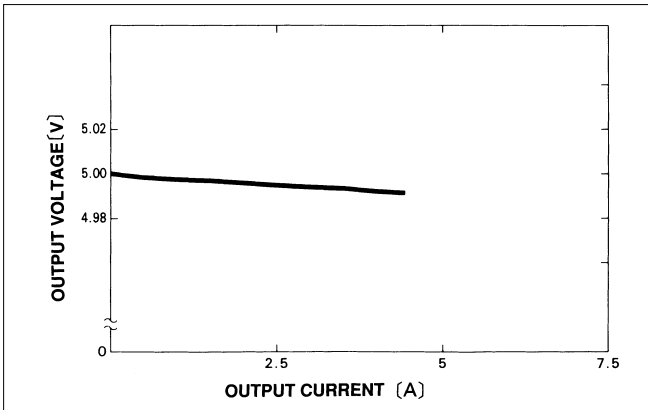
\* Series/Parallel operation with other model is not possible.

External view

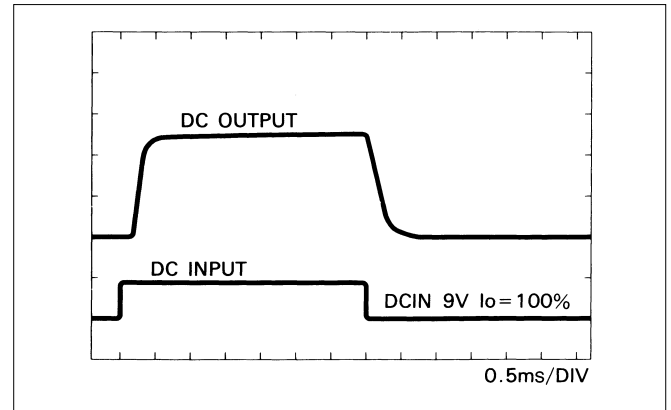


Performance data

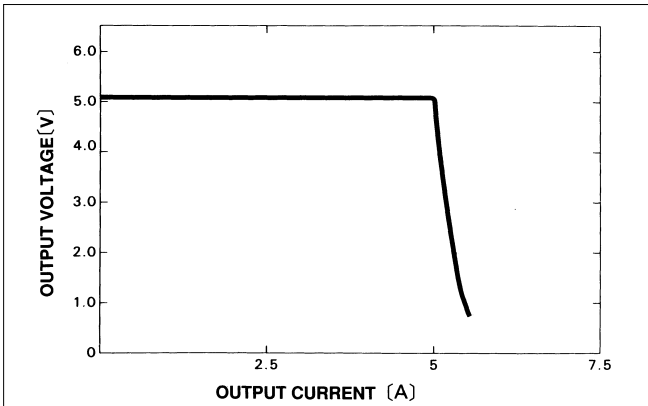
■ STATIC CHARACTERISTICS (ZUS251205)



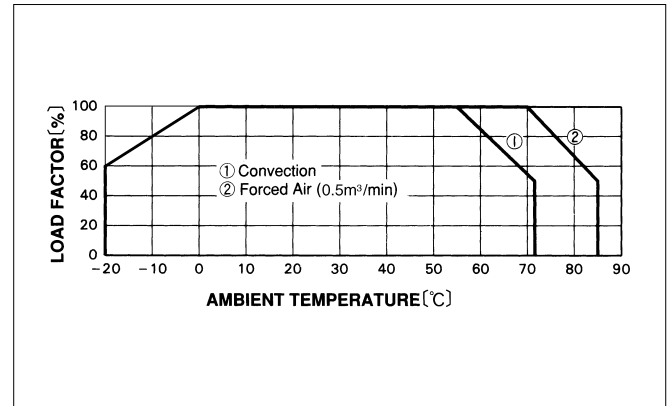
■ RISE TIME & FALL TIME (ZUS251205)



■ OVERCURRENT CHARACTERISTICS (ZUS251205)



■ DERATING CURVE



ZU/ZT