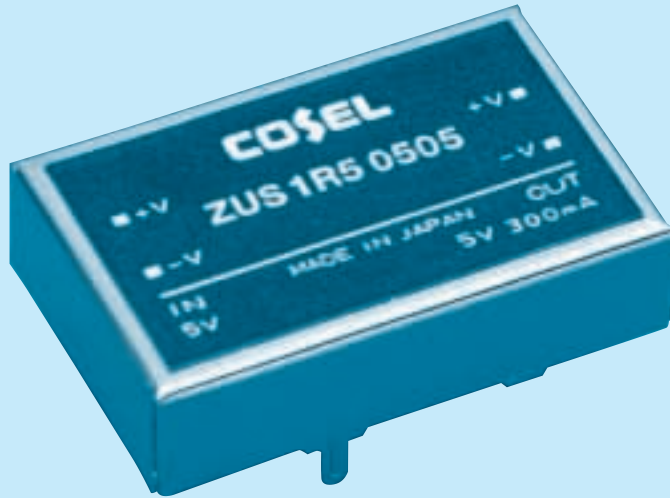


- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage



| MODEL | ZUS1R50505 | ZUS1R50512 | ZUS1R50515 | ZUS1R51205 | ZUS1R51212 | ZUS1R51215 | ZUS1R52405 | ZUS1R52412 | ZUS1R52415 | ZUS1R54805 | ZUS1R54812 | ZUS1R54815 | |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|
| 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 | 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 |

SPECIFICATIONS

| | MODEL | ZUS1R50505 | ZUS1R50512 | ZUS1R50515 | ZUS1R51205 | ZUS1R51212 | ZUS1R51215 | ZUS1R52405 | ZUS1R52412 | ZUS1R52415 | ZUS1R54805 | ZUS1R54812 | ZUS1R54815 | |
|--------------------|--------------------------------------|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------|
| 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 | 180max |
| | DRIFT[mV] | *3 20max | 48max | 60max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 48max | 60max | |
| | START-UP TIME[ms] | 20max (Minimum input, lo=100%) | | | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | Fixed | | | | | | | | | | | | |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | 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 | | | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT | Works over 105% of rating and recovers automatically | | | | | | | | | | | | |
| | 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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | | | |
| | IMPACT | 490.3m/s ² (50G), 11ms, once each X, Y and Z axis | | | | | | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with IEC60950-1 | | | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 27.5×7×18mm (W×H×D) / 10g max | | | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | | | |

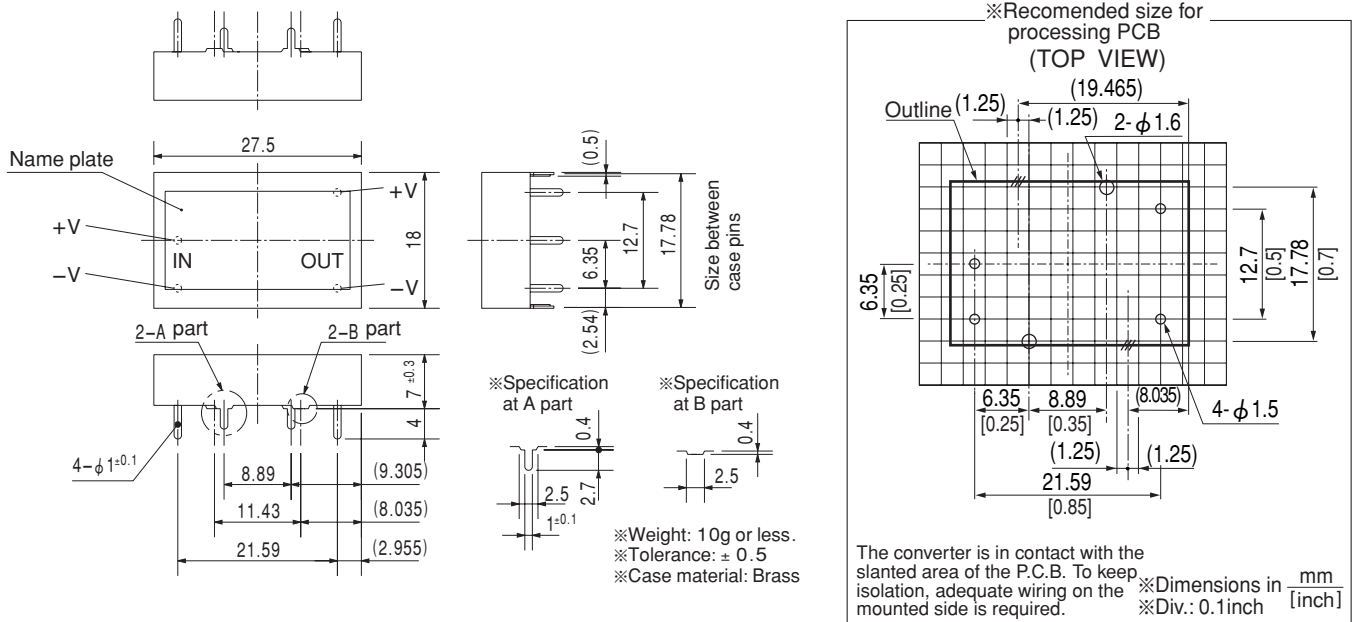
*1 Rated input 5V, 12V, 24V or 48V DC lo=100%.

*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.

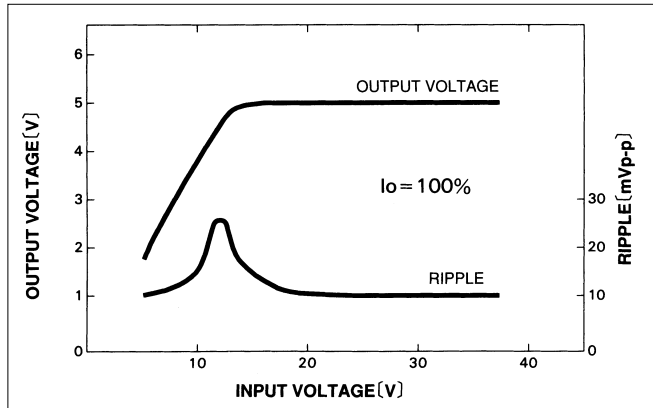
* Series/Parallel operation with other model is not possible.

External view

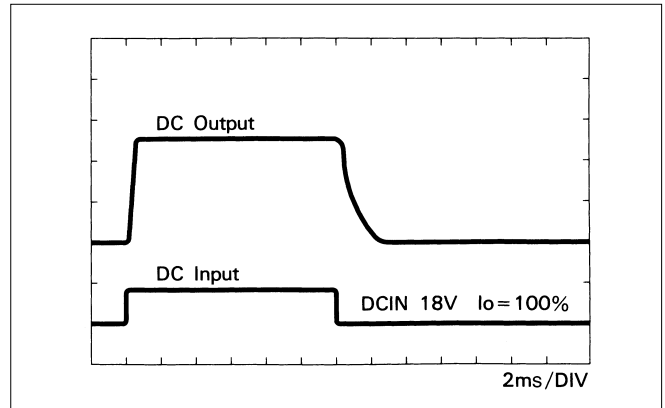


Performance data

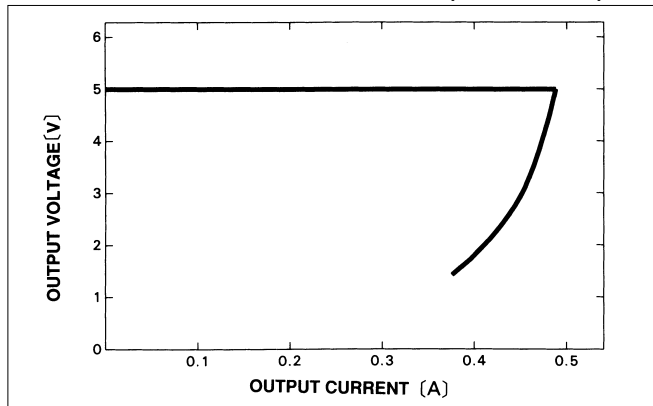
■ STATIC CHARACTERISTICS (ZUS1R52405)



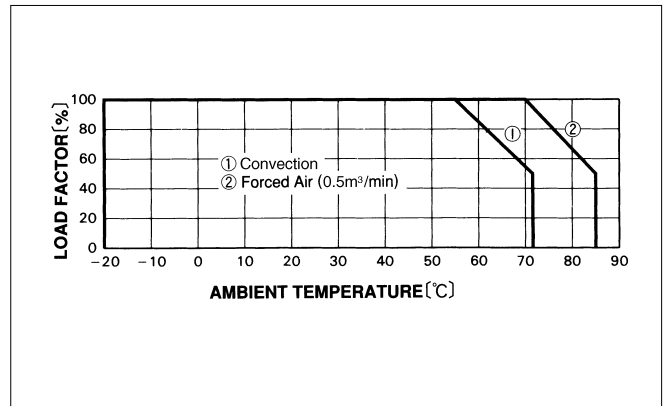
■ RISE TIME & FALL TIME (ZUS1R52405)



■ OVERCURRENT CHARACTERISTICS (ZUS1R52405)



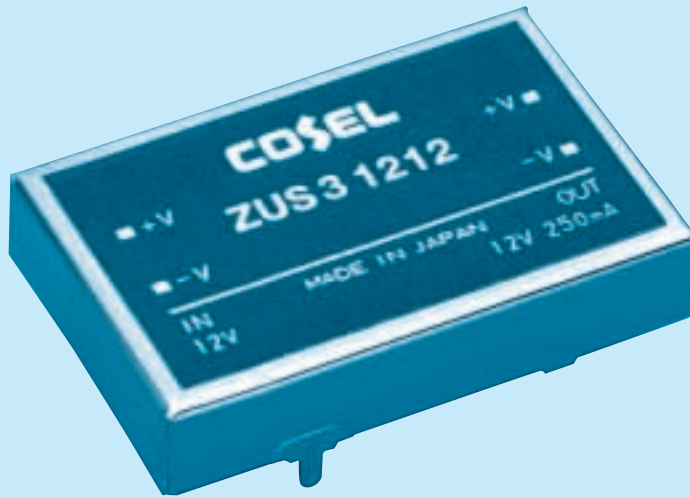
■ DERATING CURVE



ZU/ZT



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



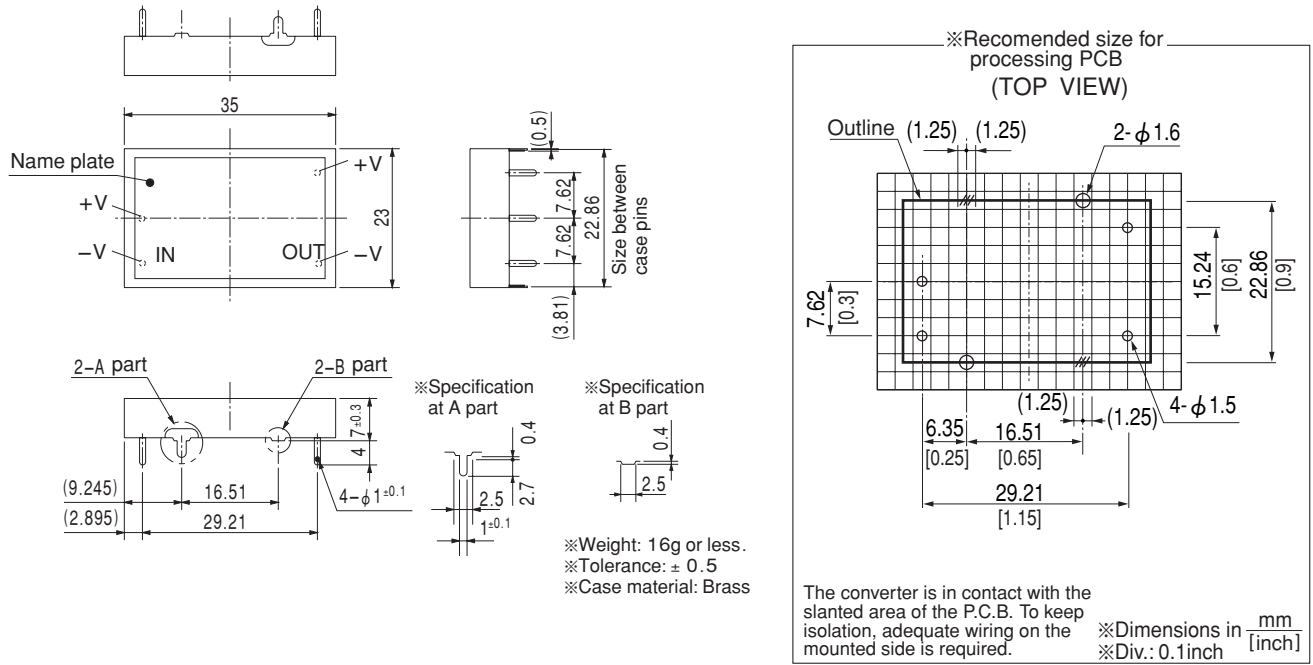
| MODEL | ZUS30505 | ZUS30512 | ZUS30515 | ZUS31205 | ZUS31212 | ZUS31215 | ZUS32405 | ZUS32412 | ZUS32415 | ZUS34805 | ZUS34812 | ZUS34815 |
|-----------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| MAX OUTPUT WATTAGE[W] | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| DC OUTPUT | VOLTAGE[V] | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 |
| | CURRENT[A] | 0.60 | 0.25 | 0.20 | 0.60 | 0.25 | 0.20 | 0.60 | 0.25 | 0.20 | 0.60 | 0.25 |

SPECIFICATIONS

| | MODEL | ZUS30505 | ZUS30512 | ZUS30515 | ZUS31205 | ZUS31212 | ZUS31215 | ZUS32405 | ZUS32412 | ZUS32415 | ZUS34805 | ZUS34812 | ZUS34815 |
|--------------------|--------------------------------------|---|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|----------|----------|
| INPUT | VOLTAGE[V] | DC4.5 - 9 | | | DC9 - 18 | | | DC18 - 36 | | | DC36 - 72 | | |
| | CURRENT[A] | *1 0.896typ | 0.857typ | 0.857typ | 0.357typ | 0.338typ | 0.338typ | 0.176typ | 0.167typ | 0.167typ | 0.088typ | 0.082typ | 0.082typ |
| | EFFICIENCY[%] | *1 67typ | 70typ | 70typ | 70typ | 74typ | 74typ | 71typ | 75typ | 75typ | 71typ | 76typ | 76typ |
| OUTPUT | VOLTAGE[V] | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 |
| | CURRENT[A] | 0.60 | 0.25 | 0.20 | 0.60 | 0.25 | 0.20 | 0.60 | 0.25 | 0.20 | 0.60 | 0.25 | 0.20 |
| | 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, lo=100%) | | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | Fixed | | | | | | | | | | | |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | 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 | | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT | Works over 105% of rating and recovers automatically | | | | | | | | | | | |
| | 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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | | |
| | IMPACT | 490.3m/s ² (50G), 11ms, once each X, Y and Z axis | | | | | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1 | | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 35×7×23mm (W×H×D) / 16g max | | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | | |

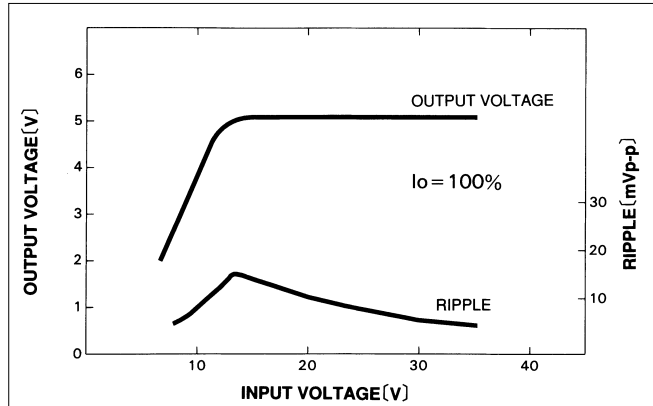
*1 Rated input. 5V, 12V, 24V or 48V DC, lo=100%
 *2 Measured by 20MHz oscilloscope.
 *3 The drift is a change at 25°C of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.
 * Series/Parallel operation with other model is not possible.

External view

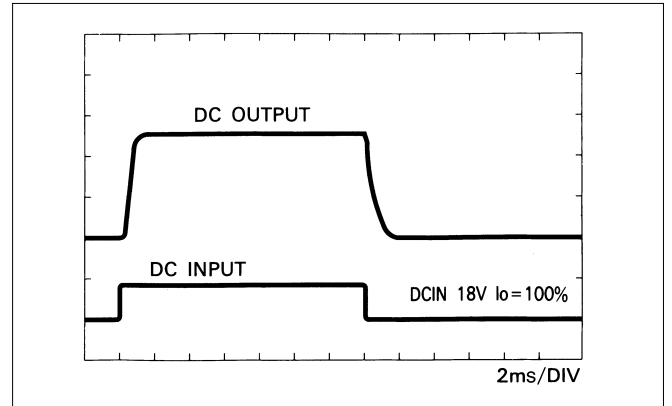


Performance data

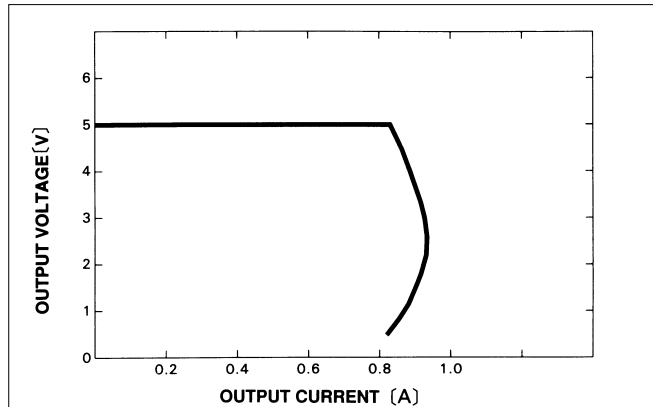
■STATIC CHARACTERISTICS (ZUS32405)



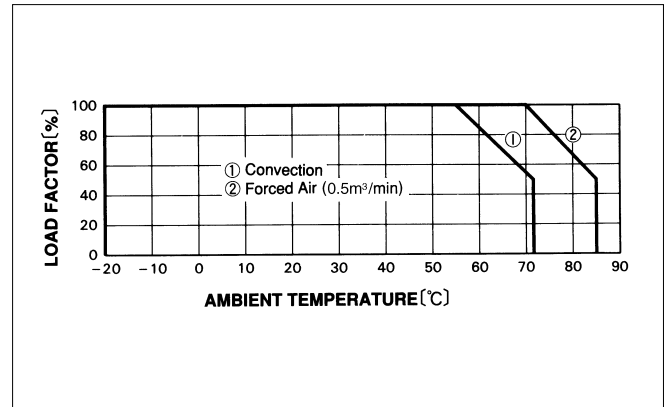
■RISE TIME & FALL TIME (ZUS32405)



■OVERCURRENT CHARACTERISTICS (ZUS32405)

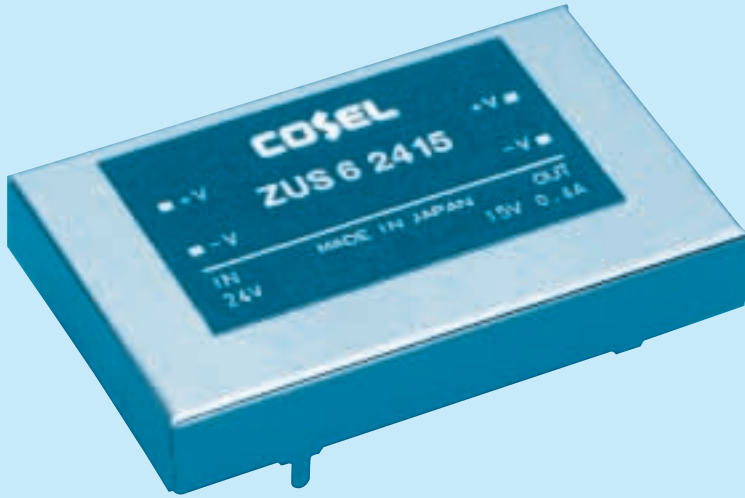


■DERATING CURVE



ZU/ZT

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



| MODEL | ZUS6053R3 | ZUS60505 | ZUS60512 | ZUS60515 | ZUS61205 | ZUS61212 | ZUS61215 | ZUS62405 | ZUS62412 | ZUS62415 | ZUS6483R3 | ZUS64805 | ZUS64812 | ZUS64815 | |
|-----------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----|
| MAX OUTPUT WATTAGE[W] | 3.3 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3.96 | 6 | 6 | 6 | |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 1.0 | 1.0 | 0.5 | 0.4 | 1.2 | 0.5 | 0.4 | 1.2 | 0.5 | 0.4 | 1.2 | 1.2 | 0.5 | 0.4 |

SPECIFICATIONS

| | MODEL | ZUS6053R3 | ZUS60505 | ZUS60512 | ZUS60515 | ZUS61205 | ZUS61212 | ZUS61215 | ZUS62405 | ZUS62412 | ZUS62415 | ZUS6483R3 | ZUS64805 | ZUS64812 | ZUS64815 | |
|--------------------|--------------------------------------|--|----------|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|----------|----------|----------|--------|
| INPUT | VOLTAGE[V] | DC4.5 - 9 | | | | DC9 - 18 | | | DC18 - 36 | | | DC36 - 72 | | | | |
| | CURRENT[A] | *1 0.94typ | 1.41typ | 1.63typ | 1.63typ | 0.69typ | 0.65typ | 0.65typ | 0.35typ | 0.33typ | 0.33typ | 0.09typ | 0.18typ | 0.17typ | 0.17typ | |
| | EFFICIENCY[%] | *1 70typ | 71typ | 74typ | 74typ | 73typ | 78typ | 78typ | 73typ | 78typ | 78typ | 73typ | 73typ | 78typ | 78typ | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 | |
| | CURRENT[A] | 1.0 | 1.0 | 0.5 | 0.4 | 1.2 | 0.5 | 0.4 | 1.2 | 0.5 | 0.4 | 1.2 | 1.2 | 0.5 | 0.4 | |
| | LINE REGULATION[mV] | 20max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 20max | 48max | 60max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 120max | 40max | 100max | 120max | 40max | 100max | 120max | 40max | 40max | 100max | 120max | |
| | RIPPLE[mVp-p] | *2 80max | 80max | 120max | 120max | 80max | 120max | 120max | 80max | 120max | 120max | 80max | 80max | 120max | 120max | |
| | RIPPLE NOISE[mVp-p] | *2 120max | 120max | 150max | 150max | 120max | 150max | 150max | 120max | 150max | 150max | 120max | 120max | 150max | 150max | |
| | TEMPERATURE REGULATION[mV] | -20 to +55°C | 50max | 50max | 150max | 180max | 50max | 150max | 180max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | DRIFT[mV] | *3 20max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 20max | 48max | 60max | |
| | START-UP TIME[ms] | 20max (Minimum input, lo=100%) | | | | | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | Fixed | | | | | | | | | | | | | | |
| 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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | | | | | |
| | IMPACT | 490.3m/s ² (50G), 11ms, once each X, Y and Z axis | | | | | | | | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1 | | | | | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 44.5×7×28mm (W×H×D) / 25g max | | | | | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | | | | | |

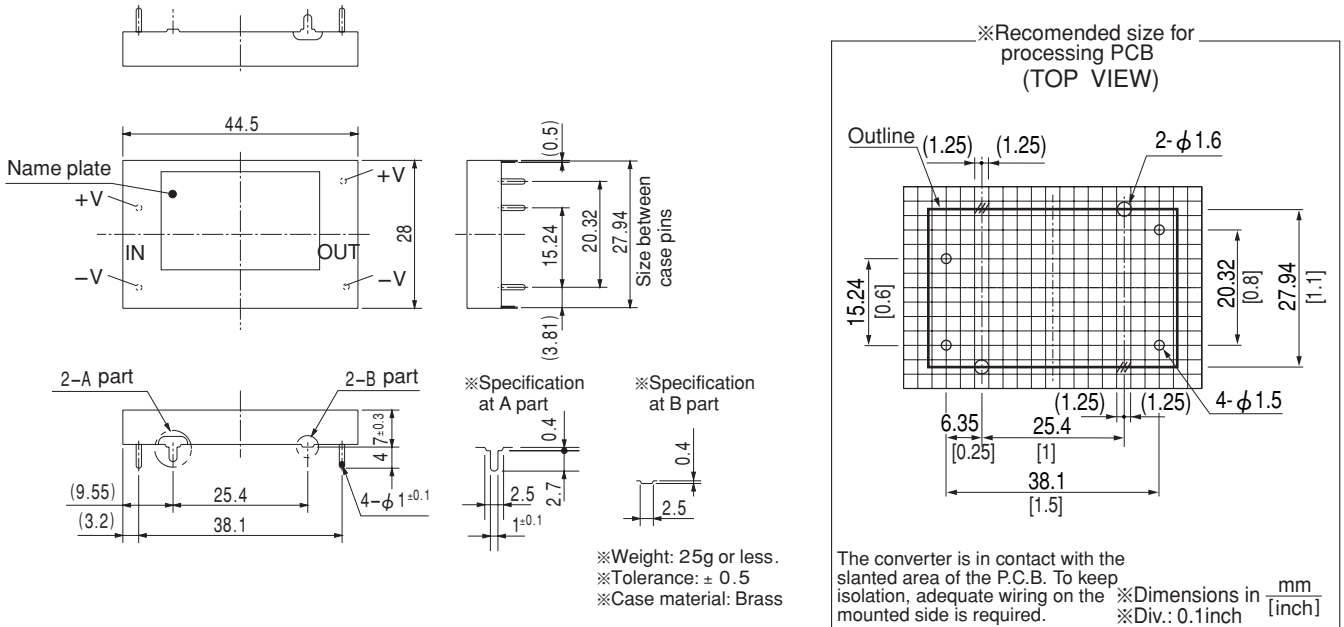
*1 Rated input. 5V, 12V, 24V or 48V DC, lo=100%

*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.

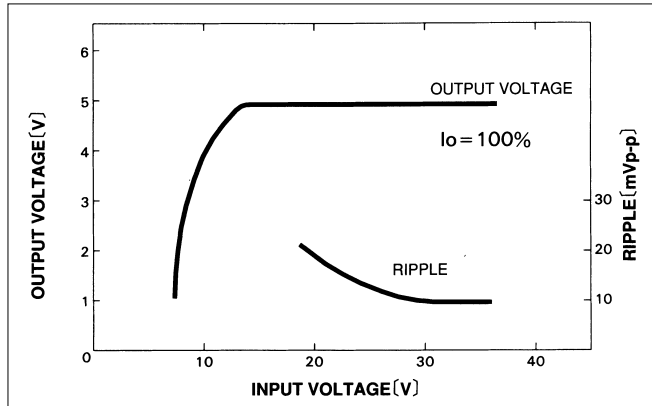
* Series/Parallel operation with other model is not possible.

External view



Performance data

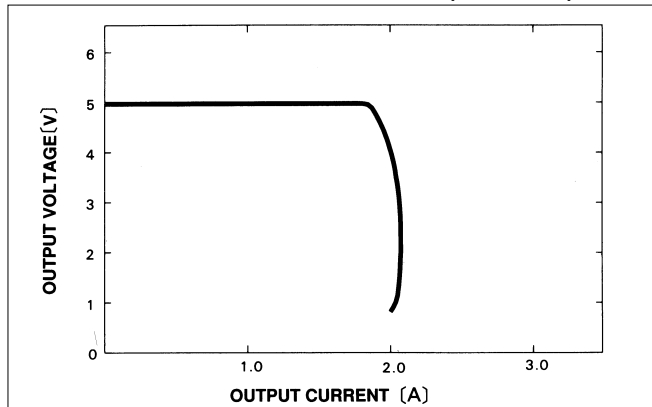
■ STATIC CHARACTERISTICS (ZUS62405)



■ RISE TIME & FALL TIME (ZUS62405)



■ OVERCURRENT CHARACTERISTICS (ZUS62405)



■ DERATING CURVE



ZUS6

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



| MODEL | ZUS10053R3 | ZUS100505 | ZUS100512 | ZUS100515 | ZUS101205 | ZUS101212 | ZUS101215 | ZUS102405 | ZUS102412 | ZUS102415 | ZUS10483R3 | ZUS104805 | ZUS104812 | ZUS104815 | |
|------------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----|
| MAX OUTPUT WATTAGE[W] | 5.28 | 8.0 | 8.4 | 9.0 | 10.0 | 10.8 | 10.5 | 10.0 | 10.8 | 10.5 | 6.6 | 10.0 | 10.8 | 10.5 | |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 1.6 | 1.6 | 0.7 | 0.6 | 2.0 | 0.9 | 0.7 | 2.0 | 0.9 | 0.7 | 2.0 | 2.0 | 0.9 | 0.7 |

SPECIFICATIONS

| | MODEL | ZUS10053R3 | ZUS100505 | ZUS100512 | ZUS100515 | ZUS101205 | ZUS101212 | ZUS101215 | ZUS102405 | ZUS102412 | ZUS102415 | ZUS10483R3 | ZUS104805 | ZUS104812 | ZUS104815 | |
|----------------------------------|--|--|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|-------------|---------------|---------------|-----------|--|
| INPUT | VOLTAGE[V] | DC4.5 - 9 | | | | DC9 - 18 | | | DC18 - 36 | | | DC36 - 72 | | | | |
| | CURRENT[A] *1 | 1.48typ | 2.14typ | 2.24typ | 2.40typ | 1.05typ | 1.10typ | 1.07typ | 0.53typ | 0.55typ | 0.54typ | 0.18typ | 0.27typ | 0.28typ | 0.27typ | |
| | EFFICIENCY[%] *1 | 72typ | 75typ | 75typ | 75typ | 80typ | 82typ | 82typ | 80typ | 82typ | 82typ | 75typ | 80typ | 82typ | 82typ | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 | 5 | 12 | 15 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 | |
| | CURRENT[A] | 1.6 | 1.6 | 0.7 | 0.6 | 2.0 | 0.9 | 0.7 | 2.0 | 0.9 | 0.7 | 2.0 | 2.0 | 0.9 | 0.7 | |
| | LINE REGULATION[mV] | 20max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 20max | 48max | 60max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 120max | 40max | 100max | 120max | 40max | 100max | 120max | 40max | 40max | 100max | 120max | |
| | RIPPLE[mVp-p] *2 | 80max | 80max | 120max | 120max | 80max | 120max | 120max | 80max | 120max | 120max | 80max | 80max | 120max | 120max | |
| | RIPPLE NOISE[mVp-p] *2 | 120max | 120max | 150max | 150max | 120max | 150max | 150max | 120max | 150max | 150max | 120max | 120max | 150max | 150max | |
| | TEMPERATURE REGULATION[mV] -20 to +55°C | 50max | 50max | 150max | 180max | 50max | 150max | 180max | 50max | 150max | 180max | 50max | 50max | 150max | 180max | |
| | DRIFT[mV] *3 | 20max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 48max | 60max | 20max | 20max | 48max | 60max | |
| | START-UP TIME[ms] | 20max (Minimum input, lo=100%) | | | | | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | Fixed | | | | | | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | 3.20 - 3.47 | 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 | 3.20 - 3.47 | 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 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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | | | | | |
| | IMPACT | 490.3m/s ² (50G), 11ms, once each X, Y and Z axis | | | | | | | | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1 | | | | | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 45×7×35mm (W×H×D) / 40g max | | | | | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | | | | | |

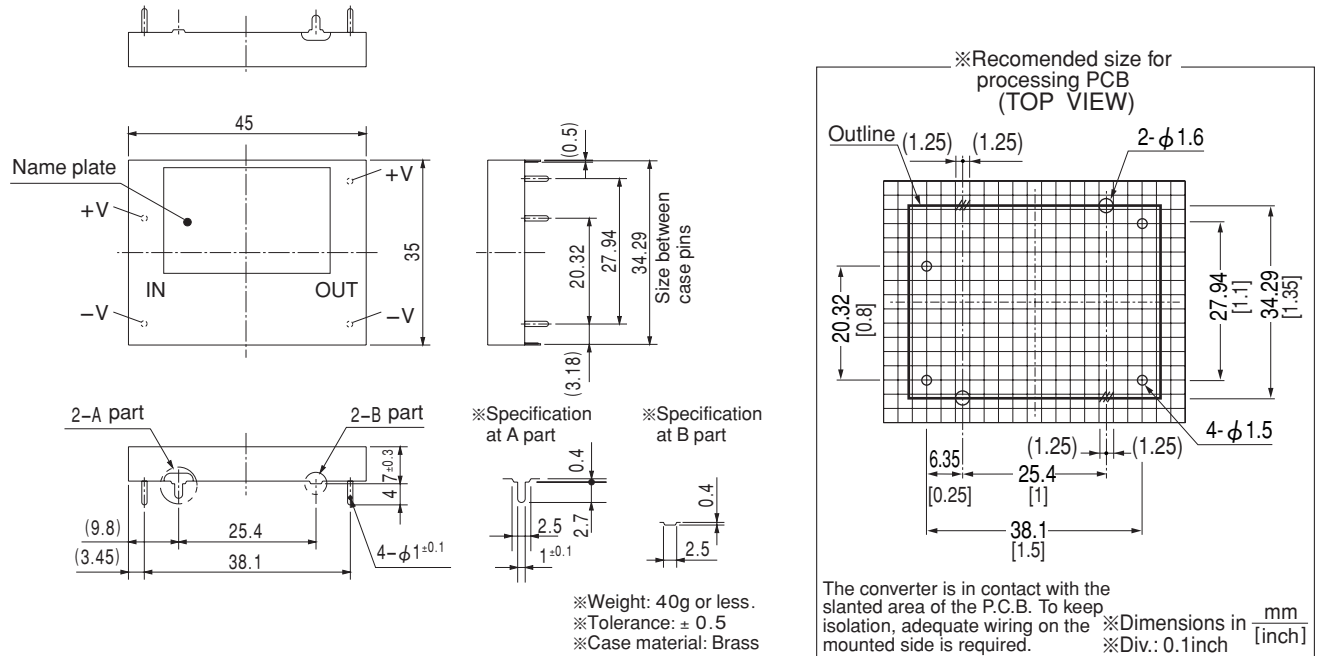
*1 Rated input. 5V, 12V, 24V or 48V DC, lo=100%

*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.

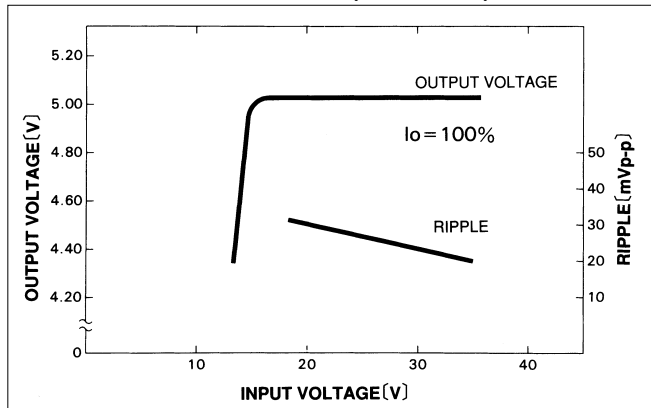
* Series/Parallel operation with other model is not possible.

External view

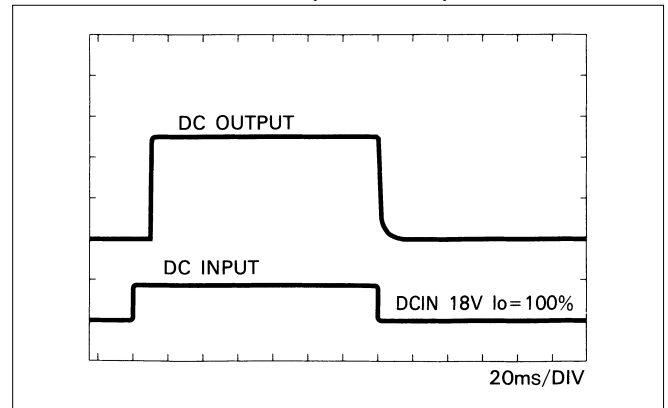


Performance data

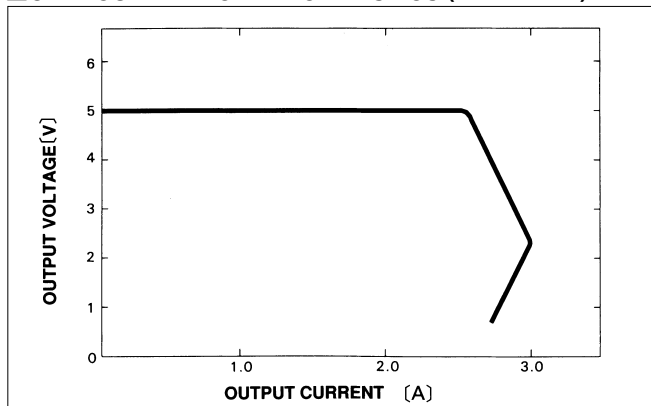
■STATIC CHARACTERISTICS (ZUS102405)



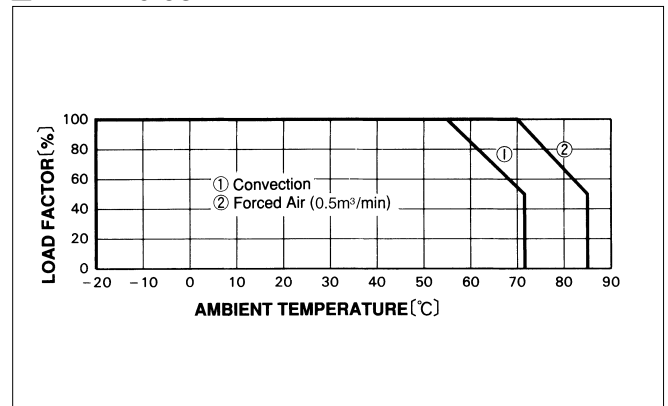
■RISE TIME & FALL TIME (ZUS102405)



■OVERCURRENT CHARACTERISTICS (ZUS102405)

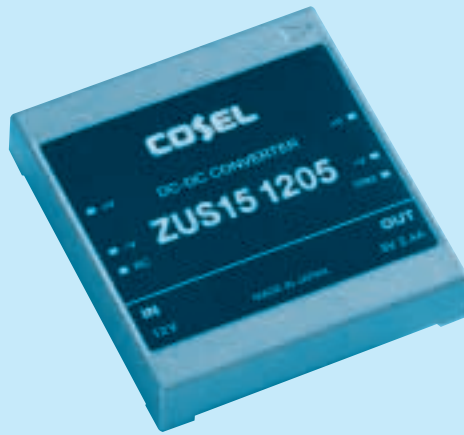


■DERATING CURVE



ZU/ZT

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



| MODEL | ZUS15053R3 | ZUS150505 | ZUS150512 | ZUS151205 | ZUS151212 | ZUS152405 | ZUS152412 | ZUS15483R3 | ZUS154805 | ZUS154812 | |
|-----------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----|
| MAX OUTPUT WATTAGE[W] | 6.6 | 10.0 | 12.0 | 12.0 | 15.6 | 12.0 | 15.6 | 7.92 | 12.0 | 15.6 | |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 5 | 12 | 5 | 12 | 3.3 | 5 | 12 |
| | CURRENT[A] | 2.0 | 2.0 | 1.0 | 2.4 | 1.3 | 2.4 | 1.3 | 2.4 | 2.4 | 1.3 |

SPECIFICATIONS

| | MODEL | ZUS15053R3 | ZUS150505 | ZUS150512 | ZUS151205 | ZUS151212 | ZUS152405 | ZUS152412 | ZUS15483R3 | ZUS154805 | ZUS154812 | |
|---------------------------|--|--|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------------------------|-----------|--|
| INPUT | VOLTAGE[V] | DC4.5 - 9 | | | DC9 - 18 | | DC18 - 36 | | DC36 - 75 | | | |
| | CURRENT[A] | *1 1.83typ | 2.50typ | 2.96typ | 1.25typ | 1.57typ | 0.63typ | 0.78typ | 0.21typ | 0.31typ | 0.39typ | |
| | EFFICIENCY[%] | *1 72typ | 80typ | 81typ | 80typ | 83typ | 80typ | 83typ | 78typ | 80typ | 83typ | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 5 | 12 | 5 | 12 | 3.3 | 5 | 12 | |
| | CURRENT[A] | 2.0 | 2.0 | 1.0 | 2.4 | 1.3 | 2.4 | 1.3 | 2.4 | 2.4 | 1.3 | |
| | 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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | |
| | IMPACT | 490.3m/s ² (50G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1 | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 45×8.5×50mm (W×H×D) / 55g max | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | |

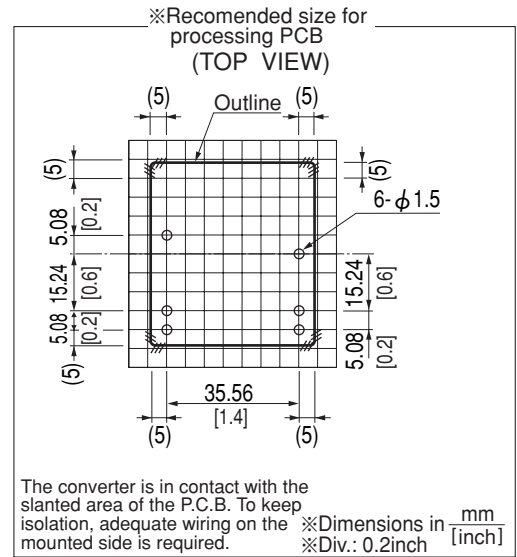
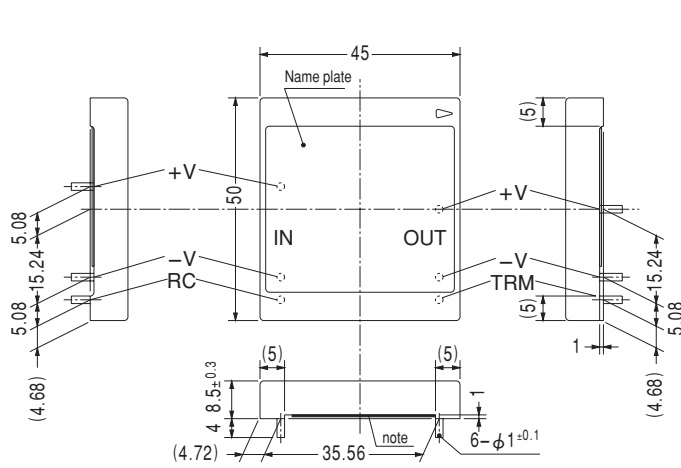
*1 Rated input. 5V, 12V, 24V or 48V DC, Io=100%

*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

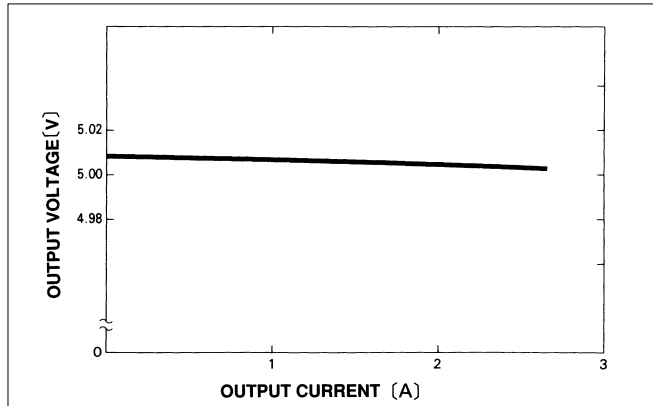


note) Internal parts
 ※Weight: 55g or less.
 ※Tolerance: ± 0.5
 ※Case material: Aluminum

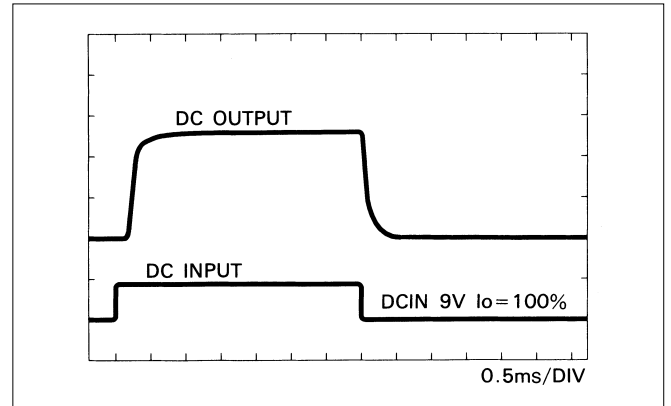
The converter is in contact with the slanted area of the P.C.B. To keep isolation, adequate wiring on the mounted side is required.
 ※Dimensions in mm [inch]
 ※Div.: 0.2inch

Performance data

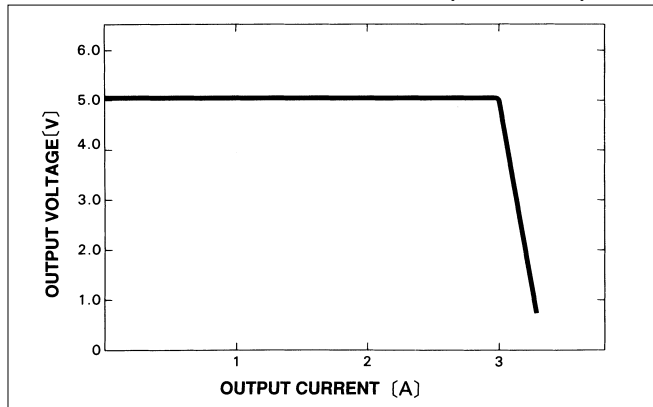
■STATIC CHARACTERISTICS (ZUS151205)



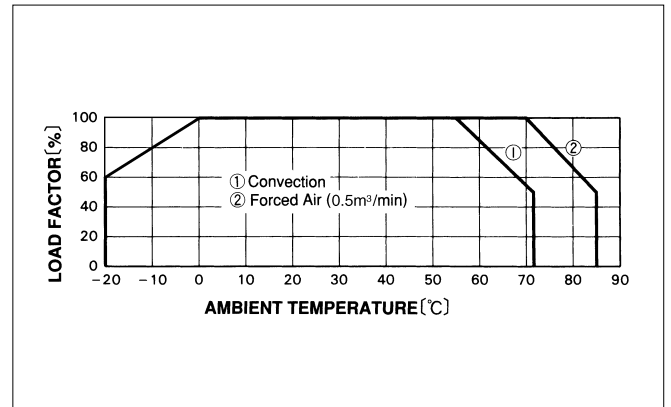
■RISE TIME & FALL TIME (ZUS151205)



■OVERCURRENT CHARACTERISTICS (ZUS151205)



■DERATING CURVE



ZUS15

- 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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | |
| | IMPACT | 490.3m/s ² (50G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1 | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 65×8.5×50mm (W×H×D) / 65g max | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | |

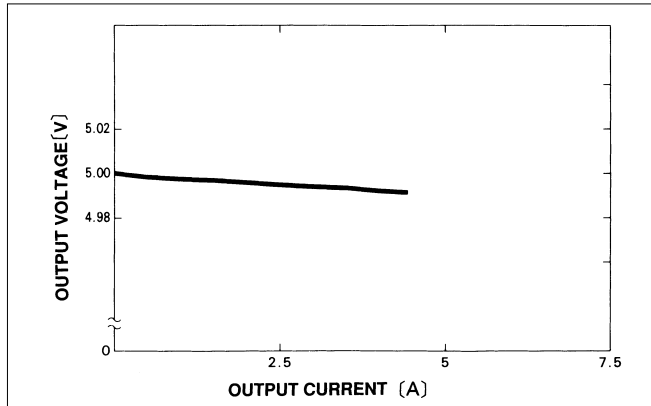
*1 Rated input. 5V, 12V, 24V or 48V DC, Io=100%
 *2 Measured by 20MHz oscilloscope.
 *3 The drift is a change at 25°C of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.
 * Series/Parallel operation with other model is not possible.

External view

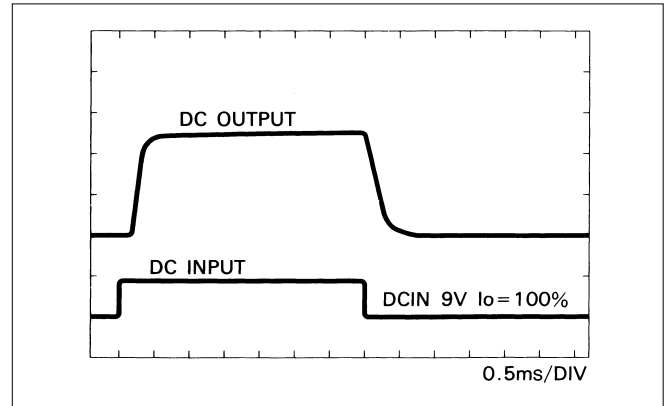


Performance data

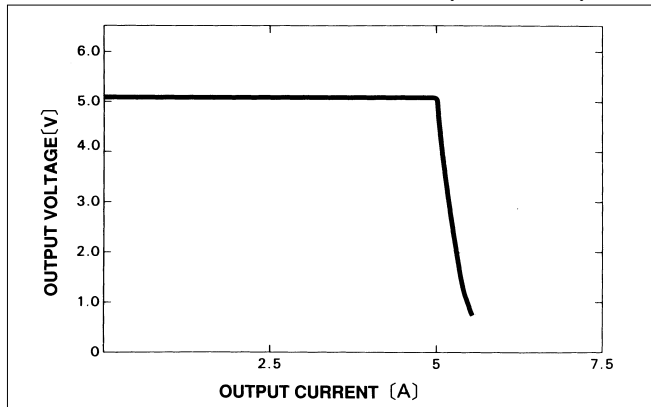
■STATIC CHARACTERISTICS (ZUS251205)



■RISE TIME & FALL TIME (ZUS251205)



■OVERCURRENT CHARACTERISTICS (ZUS251205)



■DERATING CURVE



ZUS/2T