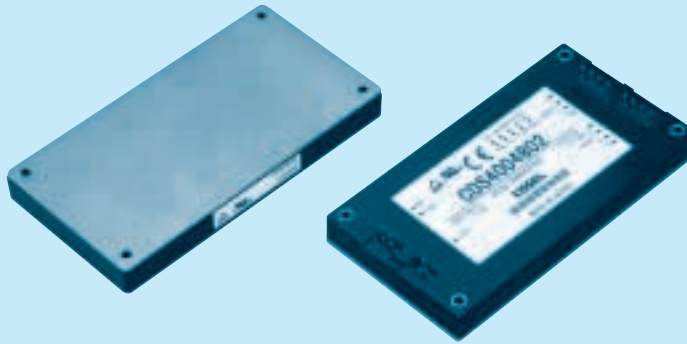


- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Optional
M:with Mounting hole
M3 tapped



RoHS



| MODEL | CDS4004802 | CDS4004803 | CDS4004805 | CDS4004807 | CDS4004812 | CDS4004815 | CDS4004824 | CDS4004828 |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 200 | 330 | 400 | 405 | 500 | 510 | 504 | 504 |
| DC OUTPUT | 2V 100A | 3.3V 100A | 5V 80A | 7.5V 54A | 12.5V 40A | 15V 34A | 24V 21A | 28V 18A |

SPECIFICATIONS

| | MODEL | CDS4004802 | CDS4004803 | CDS4004805 | CDS4004807 | CDS4004812 | CDS4004815 | CDS4004824 | CDS4004828 | |
|------------------------------------|---|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|
| INPUT | VOLTAGE[V] | DC36 - 76 | | | | | | | | |
| | CURRENT[A] | *1 6typ | 9typ | 10typ | 10typ | 12typ | 12typ | 12typ | 12typ | |
| | EFFICIENCY[%] | DCIN 48V, Io=100% 73typ DCIN 48V, Io=50% 75typ | 80typ 82typ | 84typ 86typ | 87typ 88typ | 89typ 91typ | 89typ 90typ | 89typ 90typ | 89typ 90typ | |
| OUTPUT | VOLTAGE[V] | 2 | 3.3 | 5 | 7.5 | 12.5 | 15 | 24 | 28 | |
| | CURRENT[A] | 100 | 100 | 80 | 54 | 40 | 34 | 21 | 18 | |
| | LINE REGULATION[mV] | 10max | 16max | 20max | 30max | 40max | 60max | 95max | 95max | |
| | LOAD REGULATION[mV] | 20max | 30max | 40max | 60max | 100max | 150max | 190max | 190max | |
| | RIPPLE[mVp-p] | 0 to +85°C *2 | 80max | 80max | 80max | 100max | 120max | 120max | 120max | 120max |
| | | -20 - 0°C *2 | 140max | 140max | 140max | 150max | 160max | 160max | 160max | 160max |
| | RIPPLE NOISE[mVp-p] | 0 to +85°C *2 | 100max | 100max | 100max | 140max | 150max | 150max | 150max | 150max |
| | | -20 - 0°C *2 | 150max | 150max | 150max | 160max | 180max | 180max | 180max | 180max |
| | TEMPERATURE REGULATION[mV] | 0 to +65°C | 25max | 35max | 50max | 75max | 120max | 180max | 280max | 280max |
| | | -20 to +85°C | 40max | 60max | 85max | 130max | 200max | 310max | 480max | 480max |
| | DRIFT[mV] | *3 10max | 16max | 20max | 30max | 40max | 60max | 90max | 90max | |
| START-UP TIME[ms] | 200max (DCIN 48V, Io=100%) | | | | | | | | | |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | Fixed (TRM pin open), 60 - 110% adjustable by external VR or external voltage | | | | | | | | | |
| | 1.0 - 2.2 *4 | 1.98 - 3.63 | 3.0 - 5.5 | 4.50 - 8.25 | 7.50 - 13.75 | 9.0 - 16.5 | 14.4 - 26.4 | 16.8 - 32.0 *5 | | |
| OUTPUT VOLTAGE SETTING[V] | 1.95 - 2.10 | 3.25 - 3.45 | 4.90 - 5.20 | 7.25 - 7.85 | 12.00 - 13.00 | 14.40 - 15.60 | 23.04 - 24.96 | 26.88 - 29.12 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating and recovers automatically | | | | | | | | |
| | OVERVOLTAGE PROTECTION[V] | 2.80 - 4.50 | 4.00 - 5.50 | 5.75 - 7.00 | 8.60 - 10.50 | 14.35 - 17.50 | 17.25 - 21.00 | 27.60 - 33.60 | 33.00 - 39.20 | |
| | REMOTE SENSING | Provided | | | | | | | | |
| ISOLATION | REMOTE ON/OFF | Provided (On both side of input and output) | | | | | | | | |
| | INPUT-OUTPUT | DC1500V 1minute, DC500V 50MΩ min (20±15°C) | | | | | | | | |
| | INPUT-FG | DC1500V 1minute, DC500V 50MΩ min (20±15°C) | | | | | | | | |
| | OUTPUT-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C) | | | | | | | | |
| ENVIRONMENT | OUTPUT-RC2,RC3 | AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (20±15°C) | | | | | | | | |
| | OPERATING TEMP.,HUMID.AND ALTITUDE *6 | -20 to +85°C (On aluminum base plate), 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, 49.0m/s ² (5G) 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | |
| SAFETY | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | |
| | AGENCY APPROVALS | UL60950-1, C-UL, EN60950-1 | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 61 × 12.7 × 116.8mm (W × H × D) / 180g max | | | | | | | | |
| | COOLING METHOD | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | | | | | | |

*1 At rated input(DC48V) and rated load.

*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:RM101).

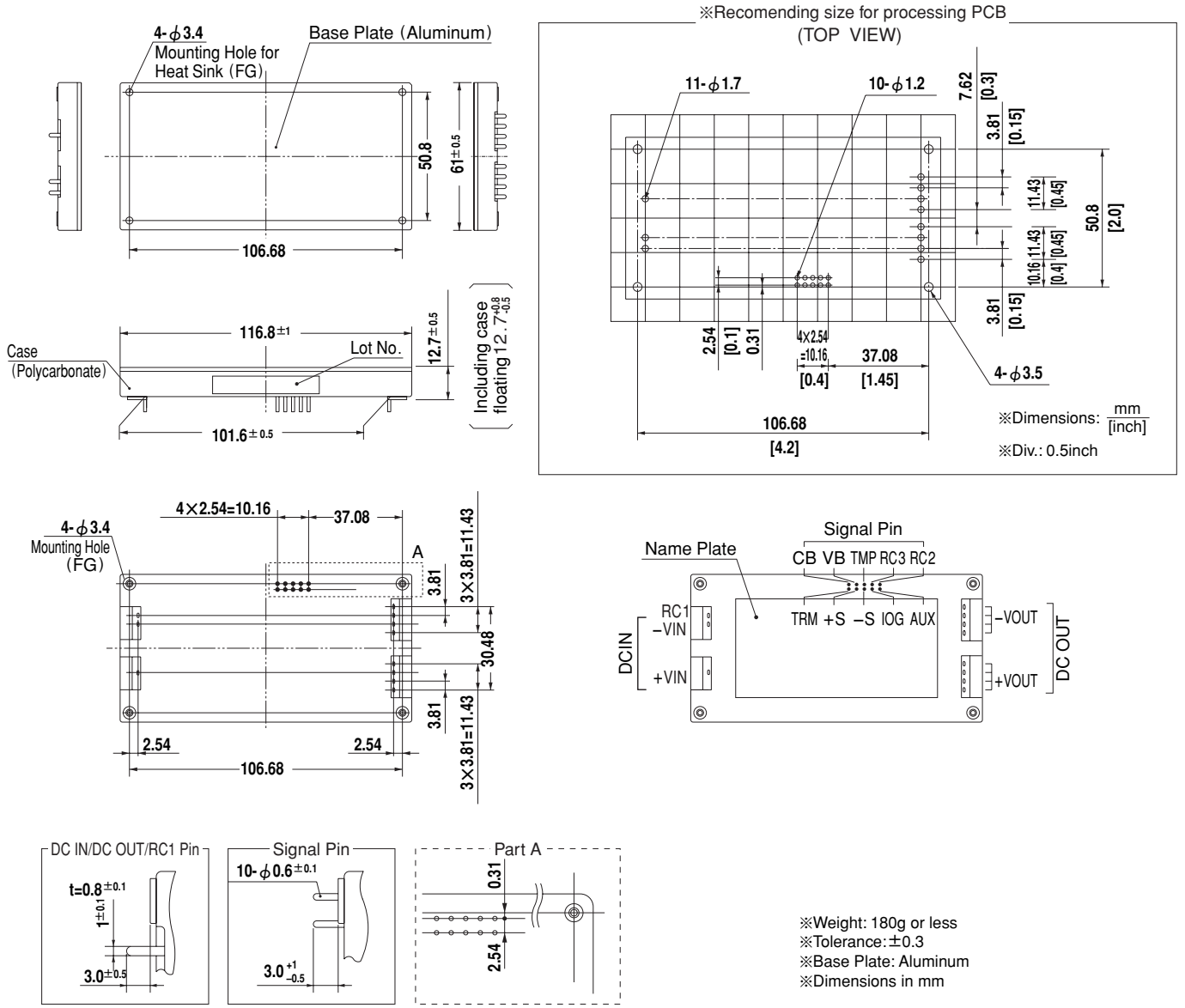
*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

*4 When using with in the range of 1-1.2V ,please consult with us.

*5 CDS4004828 : Output voltage adjustment range is 60 - 114.3%.

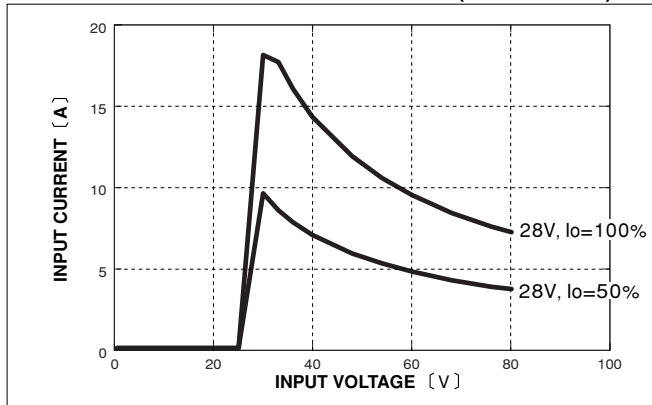
*6 Please consult us in regard to use from -40°C .

External view

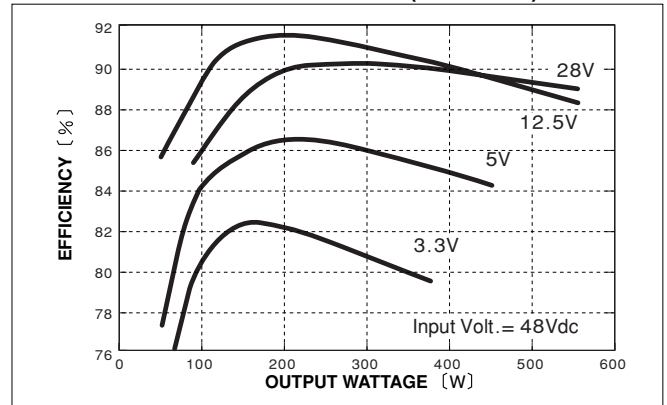


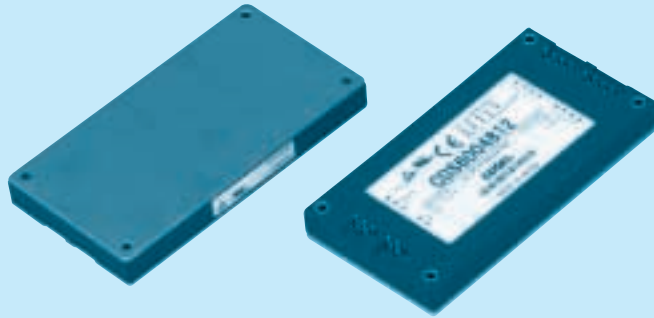
Performance data

INPUT CURRENT CHARACTERISTICS (CDS4004828)



EFFICIENCY CHARACTERISTICS (CDS40048)





- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
24 :DC18 - 36V
48 :DC36 - 76V
- ⑤ Output voltage
- ⑥ H :HighEfficiency
(24VIN Model only)
- ⑦ Optional
M:with Mounting hole
M3 tapped

| MODEL | CDS5002428H | CDS6002412 | CDS6002412H | CDS6002428 | CDS6002428H | CDS6004812 | CDS6004828 |
|-----------------------|-------------|------------|-------------|------------|-------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 504 | 600 | 600 | 616 | 616 | 700 | 700 |
| DC OUTPUT | 28V 18A | 12.5V 48A | 12.5V 48A | 28V 22A | 28V 22A | 12.5V 56A | 28V 25A |

SPECIFICATIONS

| | MODEL | CDS5002428H | CDS6002412 | CDS6002412H | CDS6002428 | CDS6002428H | CDS6004812 | CDS6004828 | |
|-------------------------------|---------------------------------------|---|------------------|-----------------|---------------------|-----------------|------------------|----------------------------|-----------------|
| INPUT | VOLTAGE[V] | DC18 - 36 | | DC20.5 - 36 | DC18 - 36 | DC19 - 36 | DC36 - 76 | | |
| | CURRENT[A] | *1 24typ | 30typ | 29typ | 30typ | 29typ | 17typ | 17typ | |
| | EFFICIENCY[%] | Io=100% | 89typ(DCIN 24V) | 83typ(DCIN 24V) | 87typ(DCIN 24V) | 86typ(DCIN 24V) | 89typ(DCIN 24V) | 89typ(DCIN 48V) | 89typ(DCIN 48V) |
| | | Io=50% | 90typ(DCIN 24V) | 87typ(DCIN 24V) | 90typ(DCIN 24V) | 87typ(DCIN 24V) | 90typ(DCIN 24V) | 91typ(DCIN 48V) | 90typ(DCIN 48V) |
| OUTPUT | VOLTAGE[V] | 28 | 12.5 | 12.5 | 28 | 28 | 12.5 | 28 | |
| | CURRENT[A] | 18 | 48 | 48 | 22 | 22 | 56 | 25 | |
| | LINE REGULATION[mV] | 95max | 40max | 40max | 95max | 95max | 40max | 95max | |
| | LOAD REGULATION[mV] | 190max | 100max | 100max | 190max | 190max | 100max | 190max | |
| | RIPPLE[mVp-p] | 0 to +85°C *2 | 120max | 120max | 120max | 120max | 120max | 120max | 120max |
| | | -20 - 0°C *2 | 160max | 160max | 160max | 160max | 160max | 160max | 160max |
| | RIPPLE NOISE[mVp-p] | 0 to +85°C *2 | 150max | 150max | 150max | 150max | 150max | 150max | 150max |
| | | -20 - 0°C *2 | 180max | 180max | 180max | 180max | 180max | 180max | 180max |
| | TEMPERATURE REGULATION[mV] | 0 to +65°C | 280max | 120max | 120max | 280max | 280max | 120max | 280max |
| | | -20 to +85°C | 480max | 200max | 200max | 480max | 480max | 200max | 480max |
| | DRIFT[mV] | *3 90max | 40max | 40max | 90max | 90max | 40max | 90max | |
| | START-UP TIME[ms] | 200max (DCIN 24V, Io=100%) | | | | | | 200max (DCIN 48V, Io=100%) | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | Fixed (TRM pin open), 80 - 110% adjustable by external VR or external voltage | | | | | | | |
| 22.40 - 32.00 *4 *5 | | 10.00 - 13.75 | 10.00 - 13.75 *5 | 22.40 - 30.80 | 22.40 - 32.00 *4 *5 | 10.00 - 13.75 | 22.40 - 32.00 *4 | | |
| OUTPUT VOLTAGE SETTING[V] | 27.72 - 28.28 *6 | 12.00 - 13.00 | 12.00 - 13.00 | 26.88 - 29.12 | 26.88 - 29.12 | 12.00 - 13.00 | 26.88 - 29.12 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating and recovers automatically | | | | | | | |
| | OVERVOLTAGE PROTECTION[V] | 33.00 - 39.20 | 14.35 - 17.50 | | 33.00 - 39.20 | | 14.35 - 17.50 | 33.00 - 39.20 | |
| | REMOTE SENSING | Provided | | | | | | | |
| | REMOTE ON/OFF | Provided (On both side of input and output) | | | | | | | |
| ISOLATION | INPUT-OUTPUT | AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C) | | | | | | | |
| | INPUT-FG | AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C) | | | | | | | |
| | OUTPUT-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C) | | | | | | | |
| | OUTPUT-RC2.RC3 | AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (20±15°C) | | | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE *7 | -20 to +85°C (On aluminum base plate), 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, 49.0m/s ² (5G) 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | |
| | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | |
| SAFETY | AGENCY APPROVALS | UL60950-1, C-UL, EN60950-1 | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 61 × 12.7 × 116.8mm (W × H × D) / 200g max | | | | | | | |
| | COOLING METHOD | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | | | | | |

*1 At rated input(DC24,DC48V) and rated load.

*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:RM101).

*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

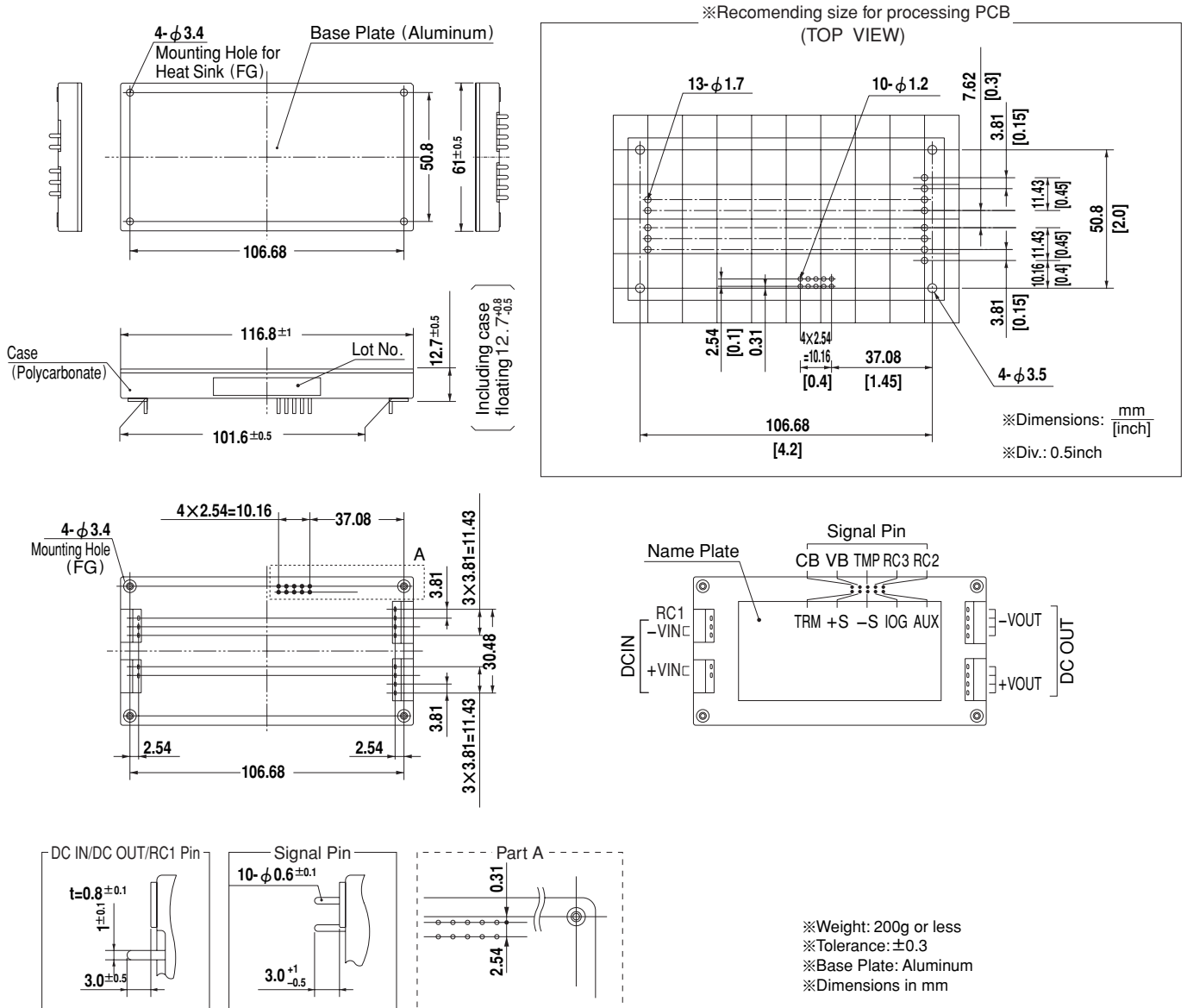
*4 CDS5002428H,CDS6002428H,CDS6004828:Output voltage adjustment range is 80 - 114.3%.

*5 CDS5002428H,CDS6002412H,CDS6002428H:When the output voltage adjustment range is 101% or more,the input voltage range is limited(Refer to Instruction Manual).

*6 Aluminum baseplate temperature Tc=25°C

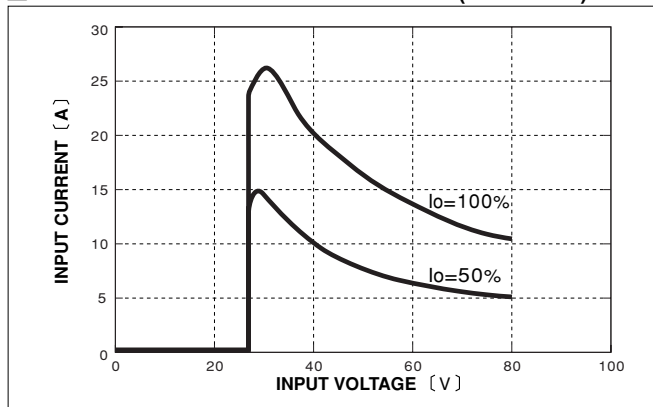
*7 Please consult us in regard to use from -40°C.

External view



Performance data

INPUT CURRENT CHARACTERISTICS (CDS60048)



EFFICIENCY CHARACTERISTICS (CDS60048)

