

MODEL	ZUW1R50512	ZUW1R50515	ZUW1R51212	ZUW1R51215	ZUW1R52412	ZUW1R52415	ZUW1R54812	ZUW1R54815	
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	±15 or +30
	CURRENT[A]	0.065	0.050	0.065	0.050	0.065	0.050	0.065	0.050

## SPECIFICATIONS

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

	MODEL	ZUW1R50512	ZUW1R50515	ZUW1R51212	ZUW1R51215	ZUW1R52412	ZUW1R52415	ZUW1R54812	ZUW1R54815	
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	180max
	DRIFT[mV]	*3 50max	60max	50max	60max	50max	60max	50max	60max	
	START-UP TIME[ms]	20max (Minimum input, I <sub>o</sub> =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, EN60950-1, 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, I<sub>o</sub>=100%.

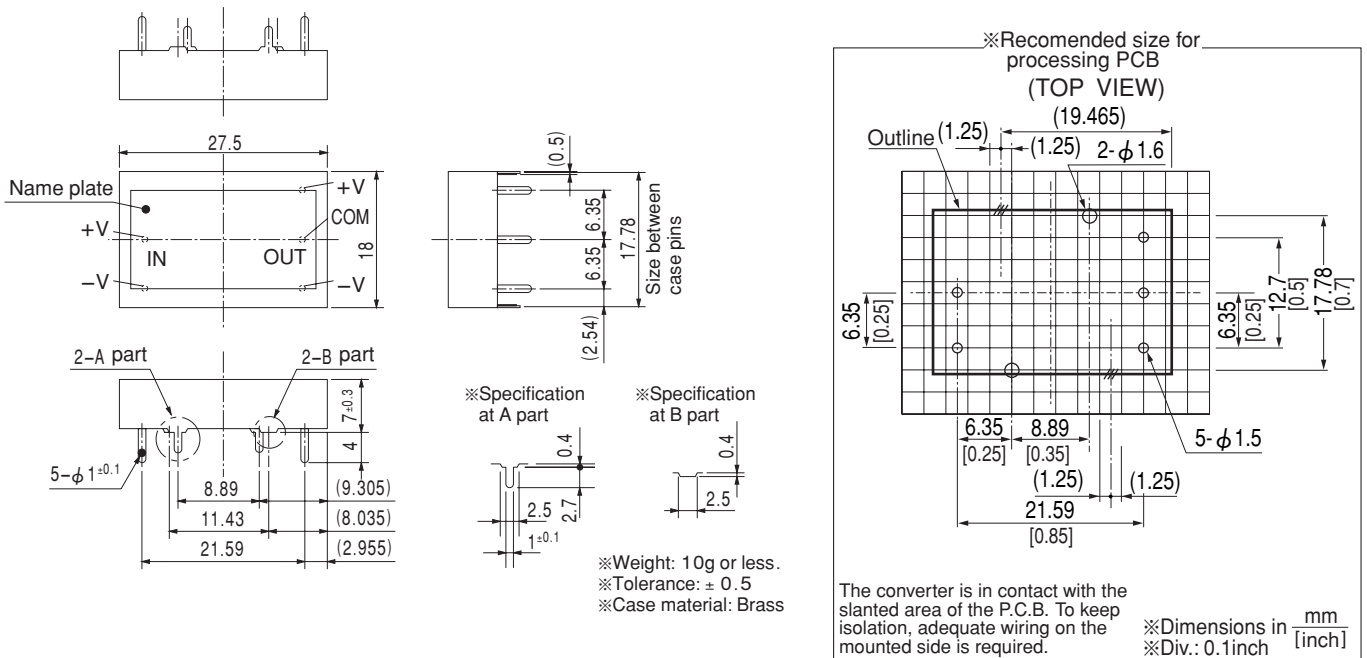
\*2 Measured by 20MHz oscilloscope.

\*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.

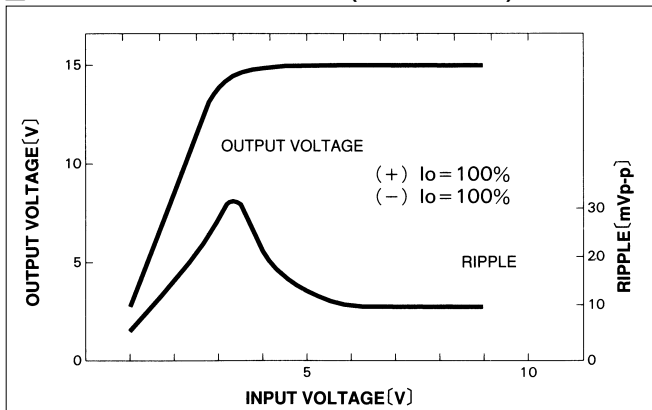
\* In series connection with other model is not possible.

External view

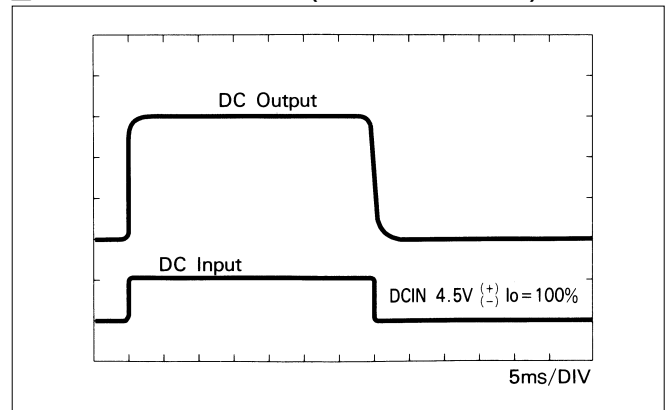


Performance data

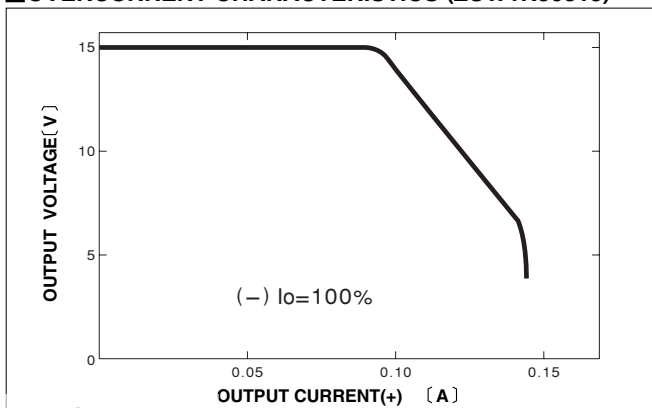
■ STATIC CHARACTERISTICS (ZUW1R50515)



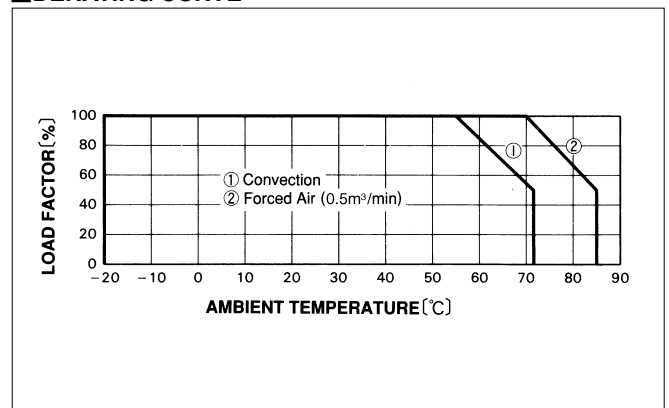
■ RISE TIME & FALL TIME (ZUW1R50515:+15V)

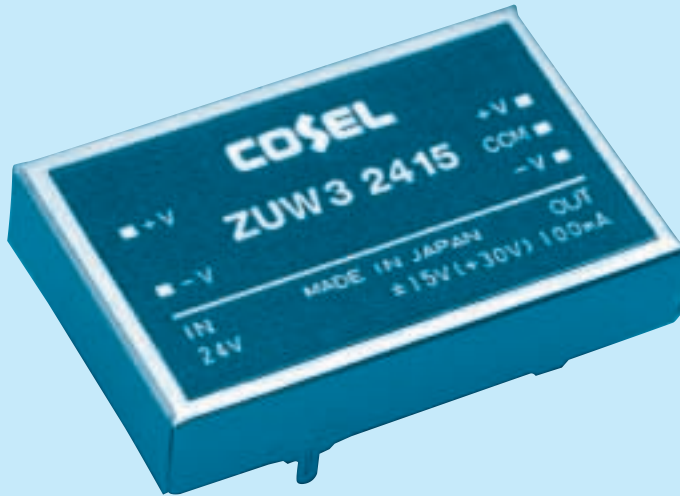


■ OVERCURRENT CHARACTERISTICS (ZUW1R50515)



■ DERATING CURVE





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

MODEL	ZUW30512	ZUW30515	ZUW31212	ZUW31215	ZUW32412	ZUW32415	ZUW34812	ZUW34815
MAX OUTPUT WATTAGE[W]	3.12	3.00	3.12	3.00	3.12	3.00	3.12	3.00
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]	0.13	0.10	0.13	0.10	0.13	0.10	0.13

## SPECIFICATIONS

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

	MODEL	ZUW30512	ZUW30515	ZUW31212	ZUW31215	ZUW32412	ZUW32415	ZUW34812	ZUW34815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72		
	CURRENT[A]	*1 0.891typ	0.857typ	0.351typ	0.338typ	0.176typ	0.169typ	0.087typ	0.083typ	
	EFFICIENCY[%]	*1 70typ	70typ	74typ	74typ	74typ	74typ	75typ	75typ	
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	
	CURRENT[A]	0.13	0.10	0.13	0.10	0.13	0.10	0.13	0.10	
	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, I <sub>o</sub> =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, 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, I<sub>o</sub>=100%.

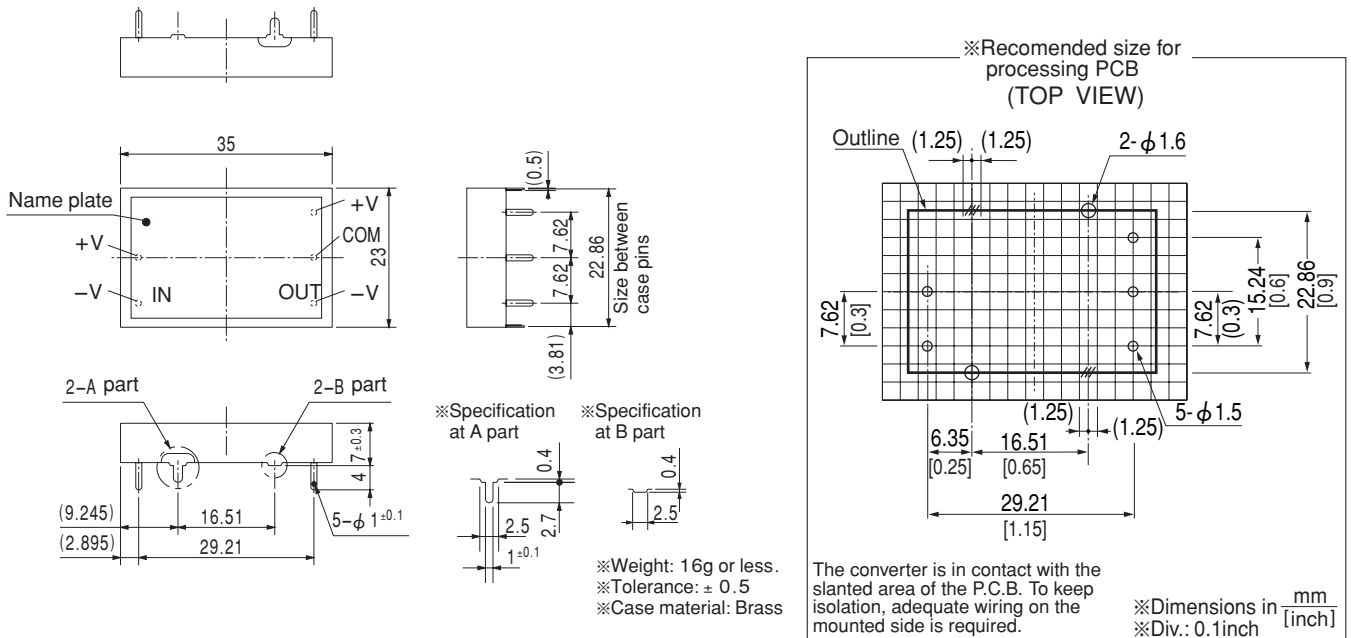
\*2 Measured by 20MHz oscilloscope.

\*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.

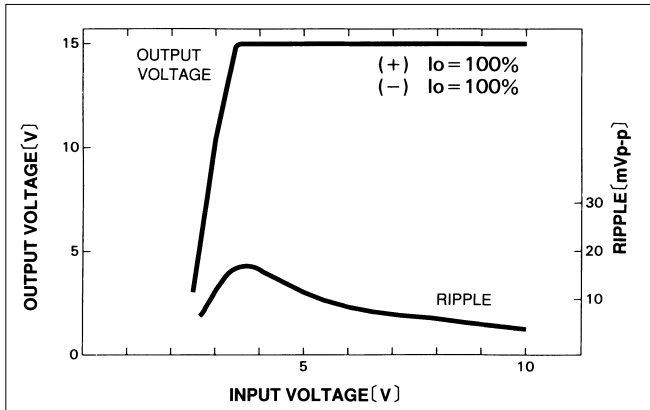
\* In series connection with other model is not possible.

External view

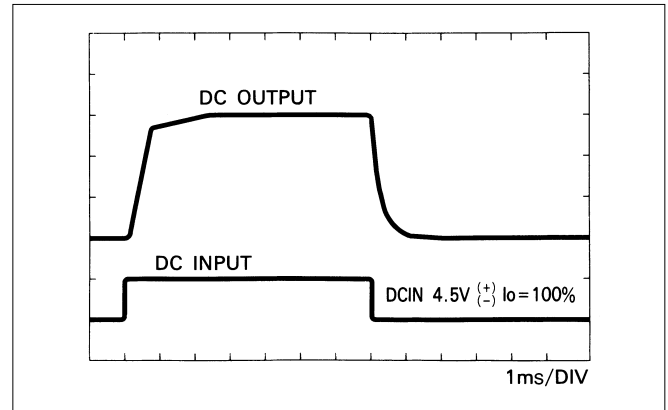


Performance data

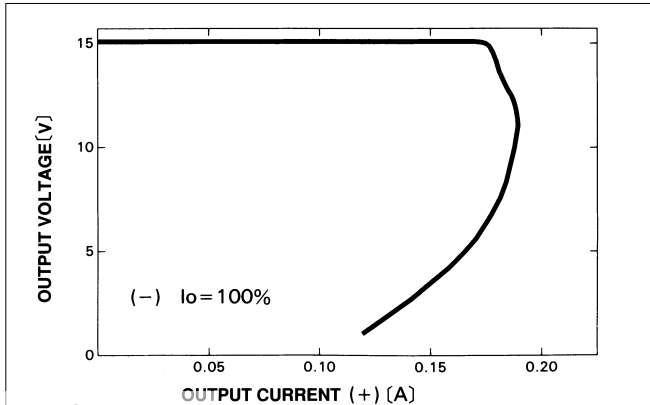
■ STATIC CHARACTERISTICS (ZUW30515)



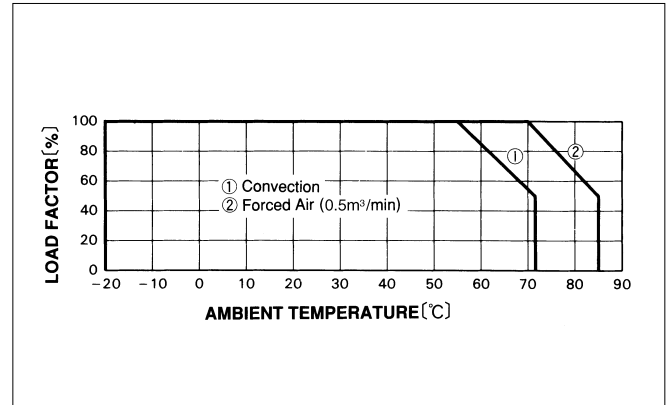
■ RISE TIME & FALL TIME (ZUW30515:+15V)

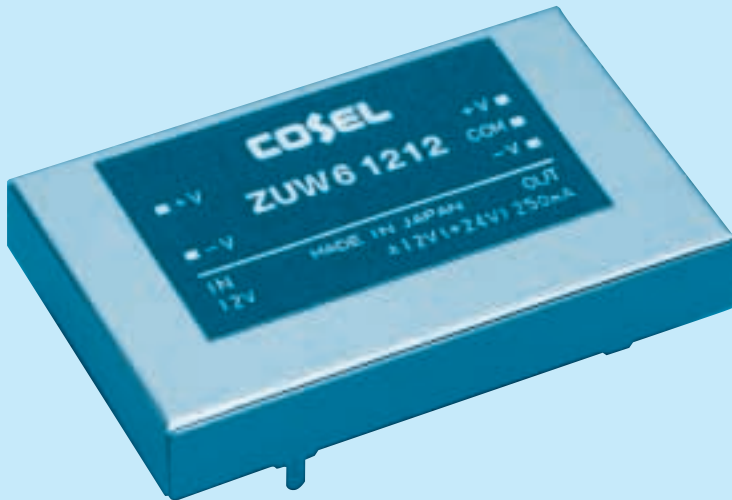


■ OVERCURRENT CHARACTERISTICS (ZUW30515)



■ DERATING CURVE





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

MODEL	ZUW60512	ZUW60515	ZUW61212	ZUW61215	ZUW62412	ZUW62415	ZUW64812	ZUW64815	
MAX OUTPUT WATTAGE[W]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	
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	±15 or +30
	CURRENT[A]	0.25	0.20	0.25	0.20	0.25	0.20	0.25	0.20

## SPECIFICATIONS

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

	MODEL	ZUW60512	ZUW60515	ZUW61212	ZUW61215	ZUW62412	ZUW62415	ZUW64812	ZUW64815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72		
	CURRENT[A]	*1 1.60typ	1.60typ	0.65typ	0.65typ	0.33typ	0.33typ	0.17typ	0.17typ	
	EFFICIENCY[%]	*1 75typ	75typ	77typ	77typ	77typ	77typ	77typ	77typ	
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	
	CURRENT[A]	0.25	0.20	0.25	0.20	0.25	0.20	0.25	0.20	
	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	180max
	DRIFT[mV]	*3 50max	60max	50max	60max	50max	60max	50max	60max	
	START-UP TIME[ms]	20max (Minimum input, I <sub>o</sub> =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, 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, I<sub>o</sub>=100%.

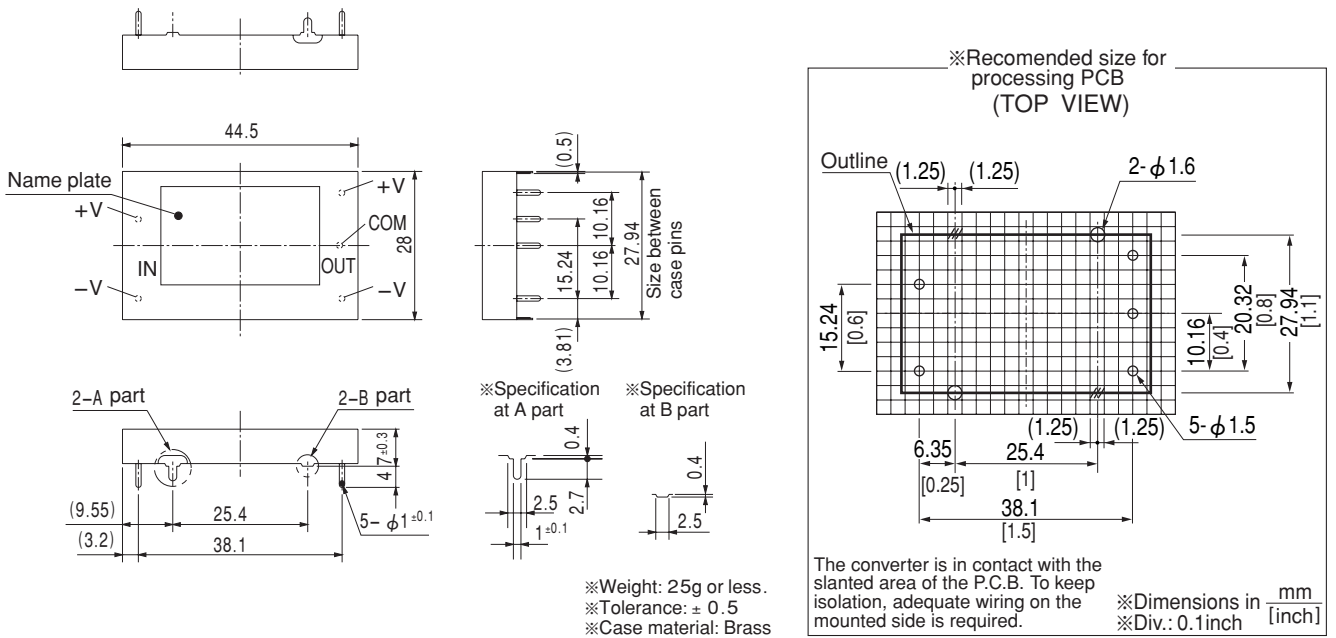
\*2 Measured by 20MHz oscilloscope.

\*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.

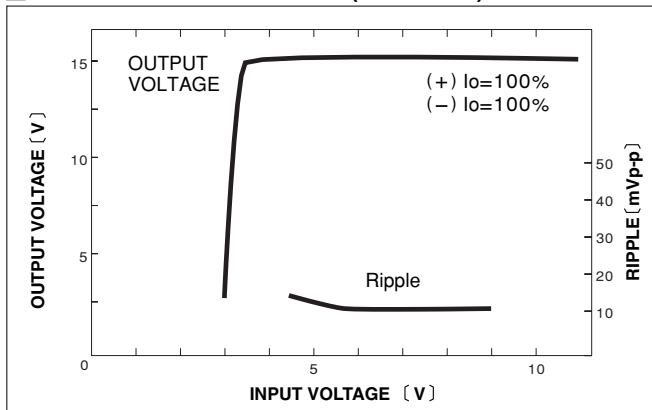
\* The output specification with other model is not possible.

External view

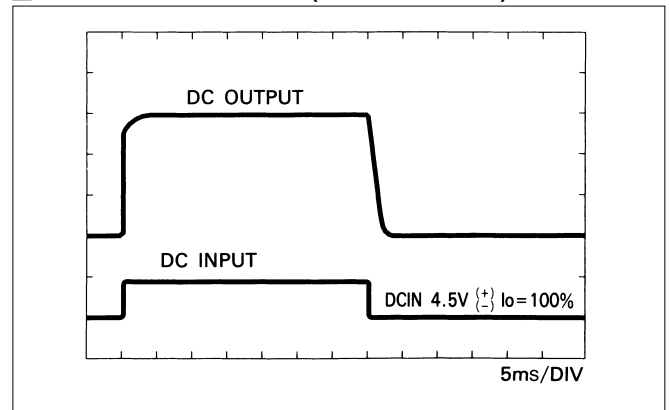


Performance data

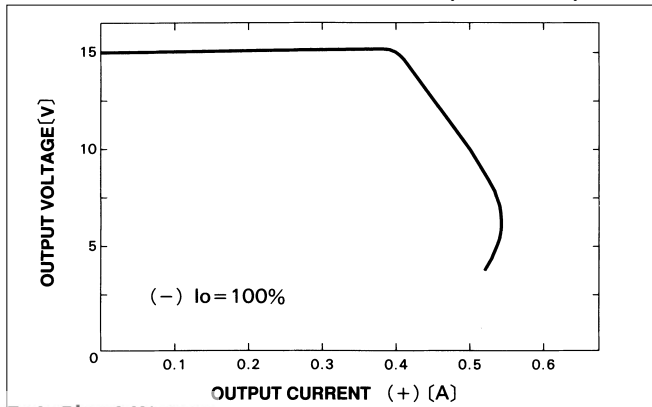
■ STATIC CHARACTERISTICS (ZUW60515)



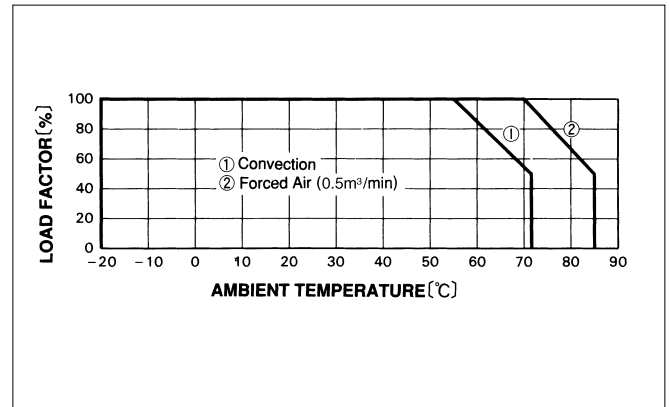
■ RISE TIME & FALL TIME (ZUW60515:+15V)



■ OVERCURRENT CHARACTERISTICS (ZUW60515)



■ DERATING CURVE





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

MODEL	ZUW100512	ZUW100515	ZUW101212	ZUW101215	ZUW102412	ZUW102415	ZUW104812	ZUW104815
MAX OUTPUT WATTAGE[W]	8.4	9.0	10.8	10.5	10.8	10.5	10.8	10.5
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]	0.35	0.30	0.45	0.35	0.45	0.35	0.45

## SPECIFICATIONS

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

	MODEL	ZUW100512	ZUW100515	ZUW101212	ZUW101215	ZUW102412	ZUW102415	ZUW104812	ZUW104815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72		
	CURRENT[A]	*1 2.24typ	2.40typ	1.12typ	1.09typ	0.56typ	0.55typ	0.28typ	0.28typ	
	EFFICIENCY[%]	*1 75typ	75typ	81typ	81typ	81typ	81typ	81typ	81typ	
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	
	CURRENT[A]	0.35	0.30	0.45	0.35	0.45	0.35	0.45	0.35	
	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, I <sub>o</sub> =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, 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, I<sub>o</sub>=100%.

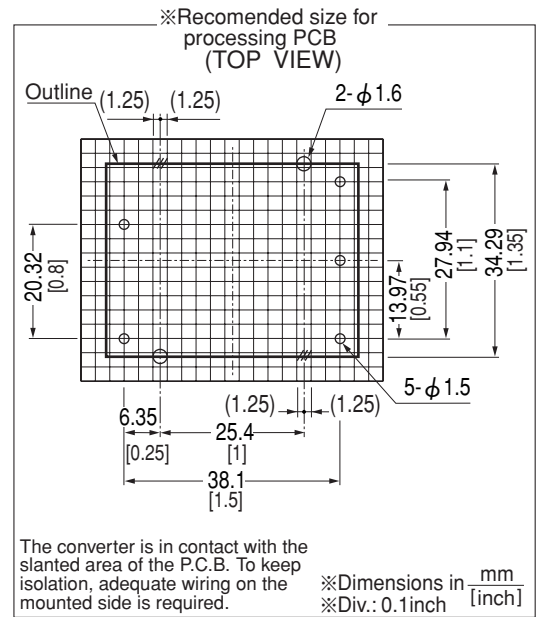
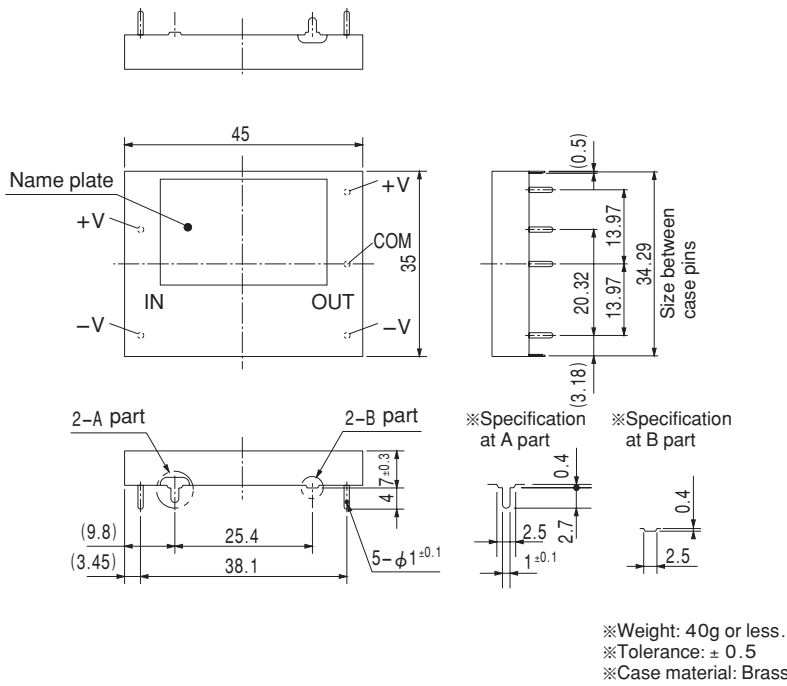
\*2 Measured by 20MHz oscilloscope.

\*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.

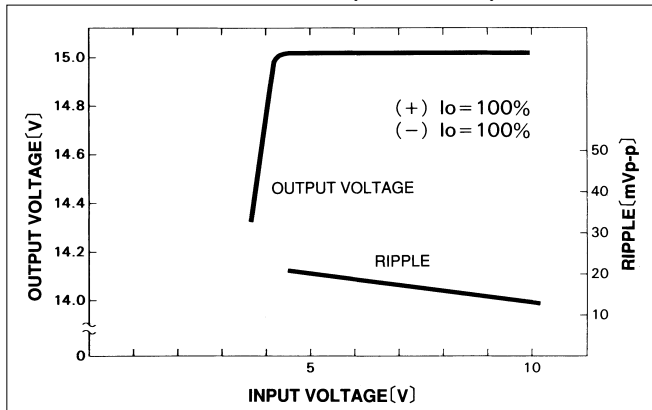
\* The series name is not possible with other model is not possible.

External view

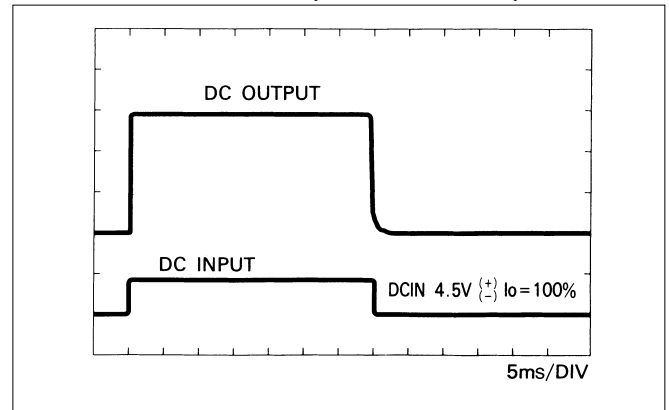


Performance data

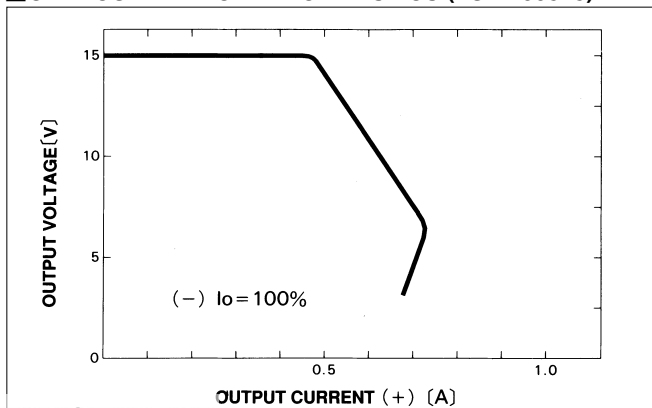
■ STATIC CHARACTERISTICS (ZUW100515)



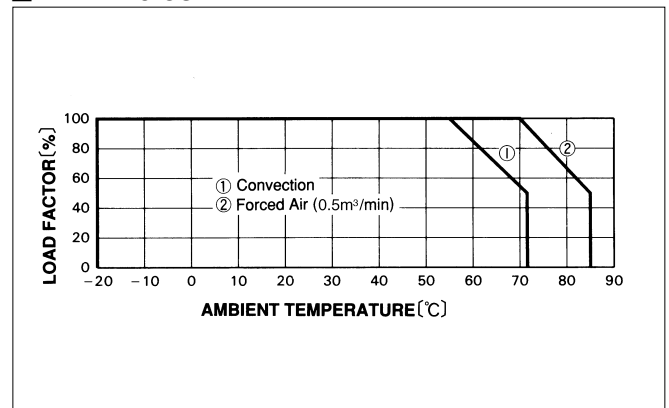
■ RISE TIME & FALL TIME (ZUW100515:+15V)



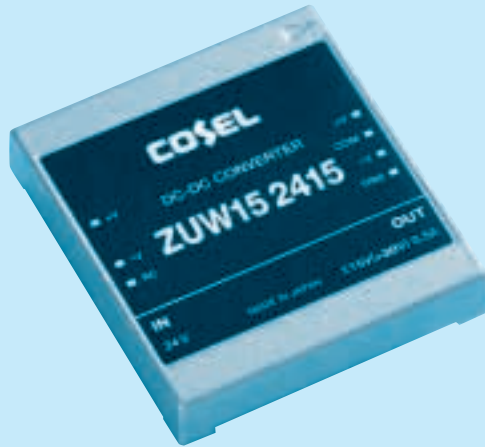
■ OVERCURRENT CHARACTERISTICS (ZUW100515)



■ DERATING CURVE







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

MODEL	ZUW150512	ZUW150515	ZUW151212	ZUW151215	ZUW152412	ZUW152415	ZUW154812	ZUW154815
MAX OUTPUT WATTAGE[W]	14.4	15.0	15.6	15.0	15.6	15.0	15.6	15.0
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]	0.6	0.5	0.65	0.5	0.65	0.5	0.65

## SPECIFICATIONS

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

	MODEL	ZUW150512	ZUW150515	ZUW151212	ZUW151215	ZUW152412	ZUW152415	ZUW154812	ZUW154815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 75		
	CURRENT[A]	*1 3.56typ	3.70typ	1.57typ	1.51typ	0.78typ	0.75typ	0.39typ	0.38typ	
	EFFICIENCY[%]	*1 81typ	81typ	83typ	83typ	83typ	83typ	83typ	83typ	
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	
	CURRENT[A]	0.60	0.50	0.65	0.50	0.65	0.50	0.65	0.50	
	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]	0 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]	100max (Minimum input, I <sub>o</sub> =100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Internally fixed (TRM pin open), ±5% adjustable by external VR								
PROTECTION CIRCUIT	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	
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
	OVERVOLTAGE PROTECTION	Works at 115 - 140% of rating (Total of +V and -V)								
ISOLATION	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								
	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)								
ENVIRONMENT	OUTPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
	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								
SAFETY	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each X, Y and Z axis								
	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, I<sub>o</sub>=100%.

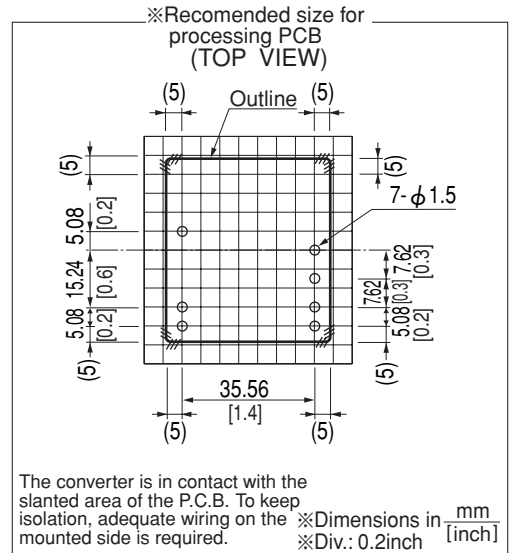
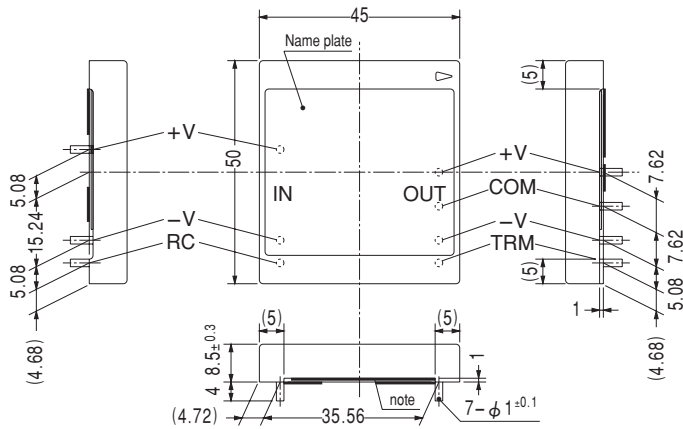
\*2 Measured by 20MHz oscilloscope.

\*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 ZUW15 is not possible with other model is not possible.

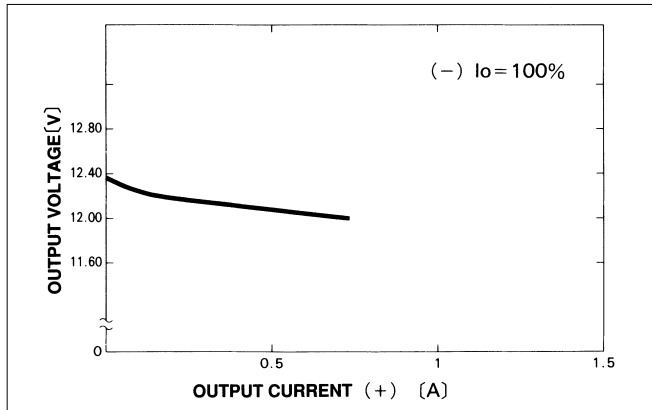
External view



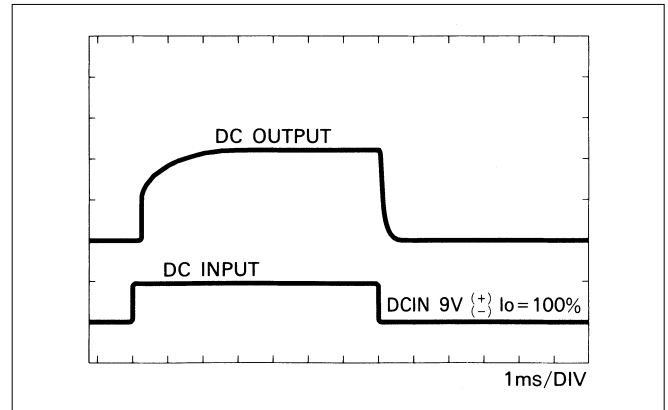
note) Internal parts  
 ※Weight: 55g or less.  
 ※Tolerance: ± 0.5  
 ※Case material: Aluminum

Performance data

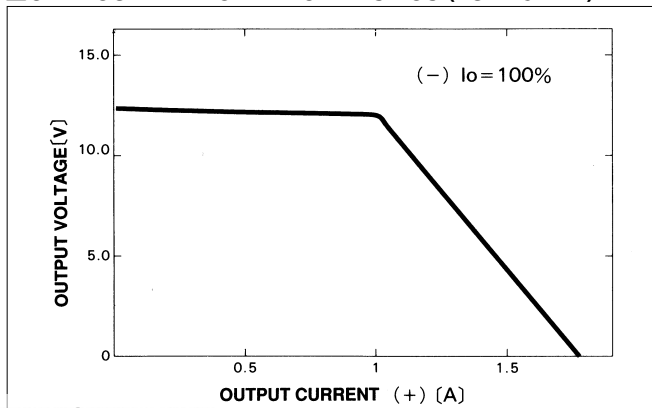
■ STATIC CHARACTERISTICS (ZUW151212)



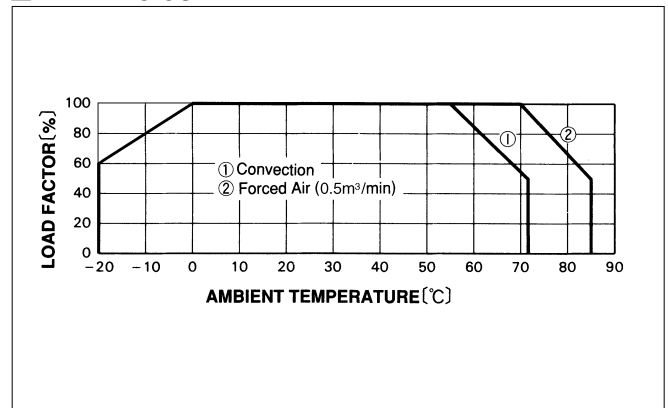
■ RISE TIME & FALL TIME (ZUW151212:+12V)



■ OVERCURRENT CHARACTERISTICS (ZUW151212)



■ DERATING CURVE





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

MODEL	ZUW250512	ZUW250515	ZUW251212	ZUW251215	ZUW252412	ZUW252415	ZUW254812	ZUW254815	
MAX OUTPUT WATTAGE[W]	20.2	20.1	25.2	25.5	25.2	25.5	25.2	25.5	
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	±15 or +30
	CURRENT[A]	0.84	0.67	1.05	0.85	1.05	0.85	1.05	0.85

## SPECIFICATIONS

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

	MODEL	ZUW250512	ZUW250515	ZUW251212	ZUW251215	ZUW252412	ZUW252415	ZUW254812	ZUW254815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 75		
	CURRENT[A]	*1 4.92typ	4.90typ	2.47typ	2.50typ	1.23typ	1.25typ	0.62typ	0.63typ	
	EFFICIENCY[%]	*1 82typ	82typ	85typ	85typ	85typ	85typ	85typ	85typ	
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	
	CURRENT[A]	0.84	0.67	1.05	0.85	1.05	0.85	1.05	0.85	
	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]	0 to +55°C	150max	180max	150max	180max	150max	180max	150max	180max
	DRIFT[mV]	*3 50max	60max	50max	60max	50max	60max	50max	60max	
	START-UP TIME[ms]	100max (Minimum input, I <sub>o</sub> =100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Internally fixed (TRM pin open), ±5% adjustable by external VR								
PROTECTION CIRCUIT	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	
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
	OVERVOLTAGE PROTECTION	Works at 115 - 140% of rating (Total of +V and -V)								
ISOLATION	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								
	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)								
ENVIRONMENT	OUTPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
	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								
SAFETY	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each X, Y and Z axis								
	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, I<sub>o</sub>=100%.

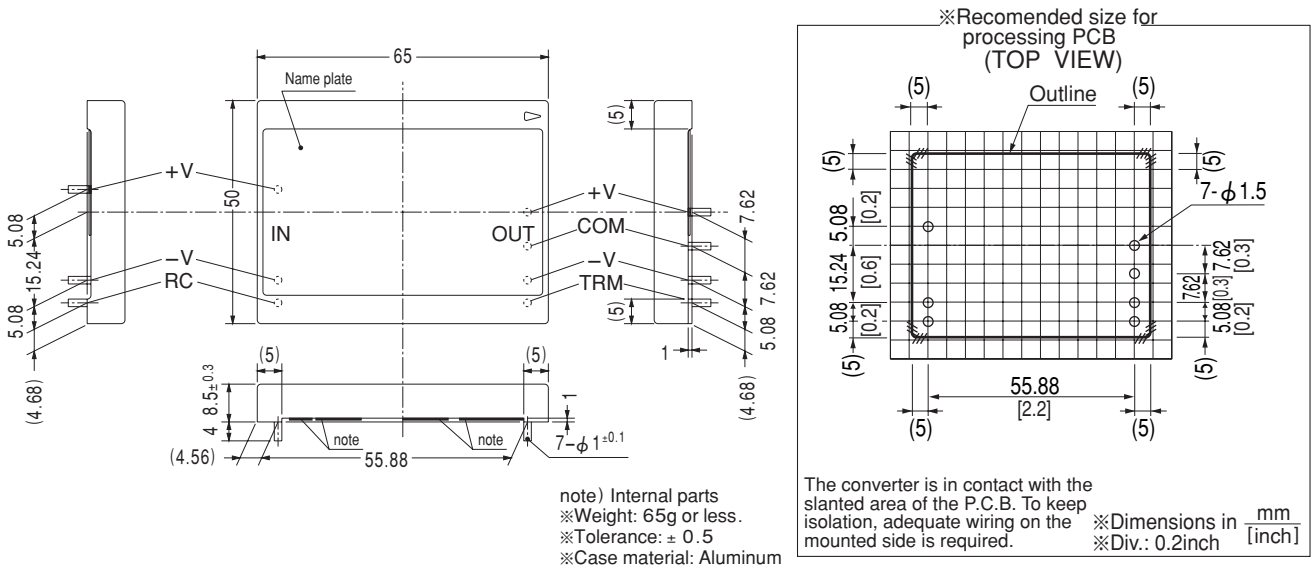
\*2 Measured by 20MHz oscilloscope.

\*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.

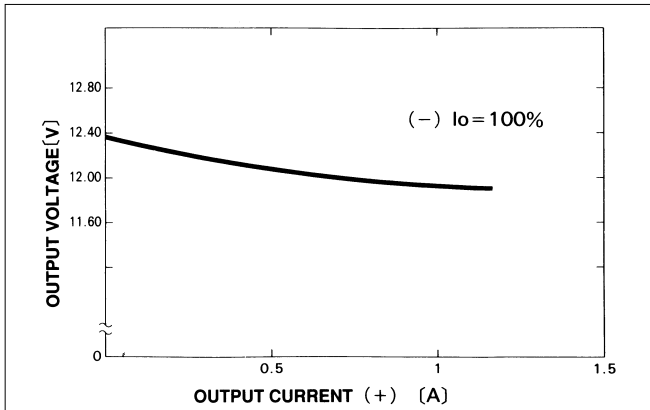
\* The output specification with other model is not possible.

External view

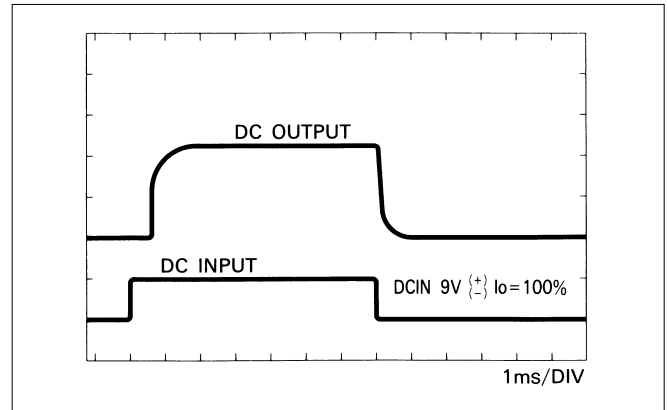


Performance data

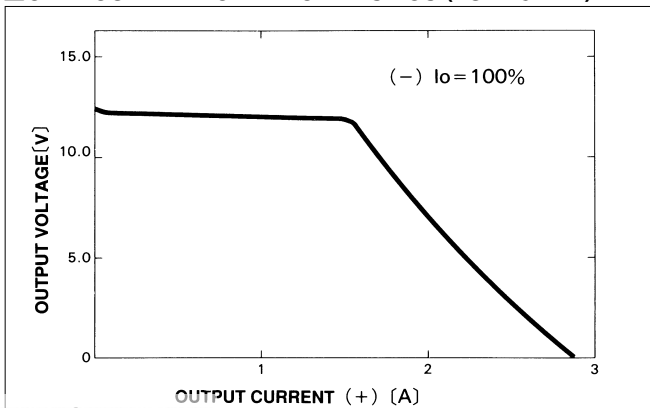
■ STATIC CHARACTERISTICS (ZUW251212)



■ RISE TIME & FALL TIME (ZUW251212:+12V)



■ OVERCURRENT CHARACTERISTICS (ZUW251212)



■ DERATING CURVE

