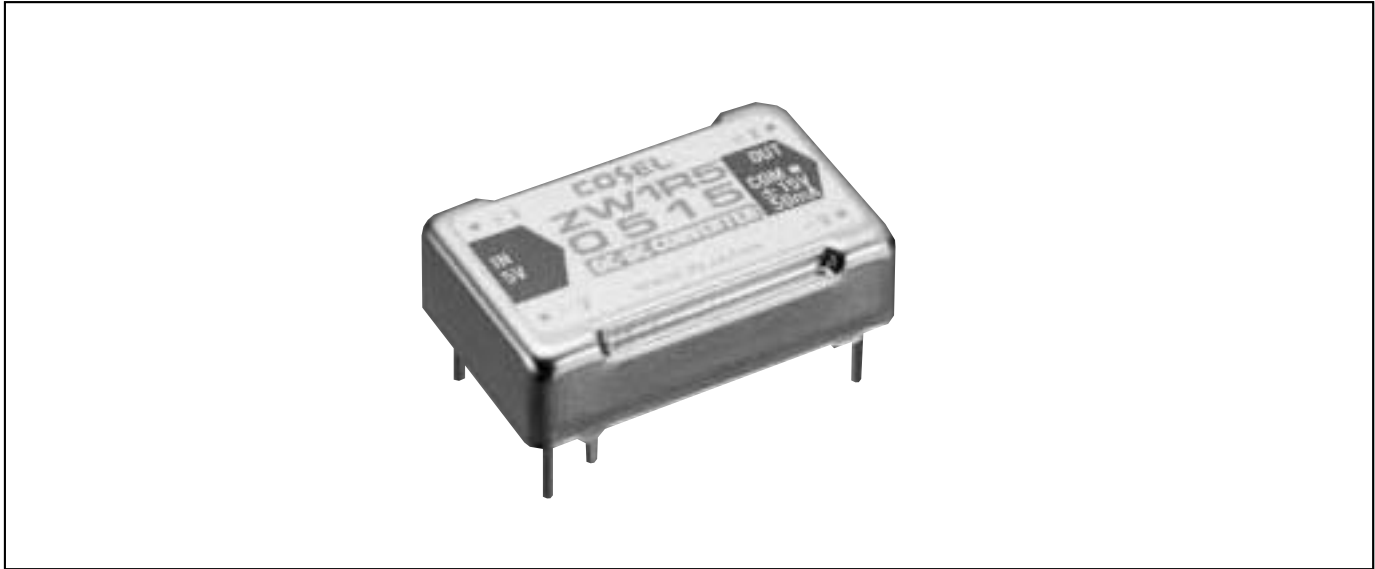


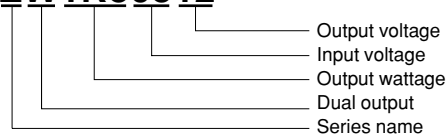
ZW1R5



- Z Series DC/DC converter designed for small size and high reliability
- Isolated between input-output
 - Built-in overcurrent protection circuit
 - Small and compact size
 - Five-year warranty

ORDERING INFORMATION

ZW1R50512



SPECIFICATIONS

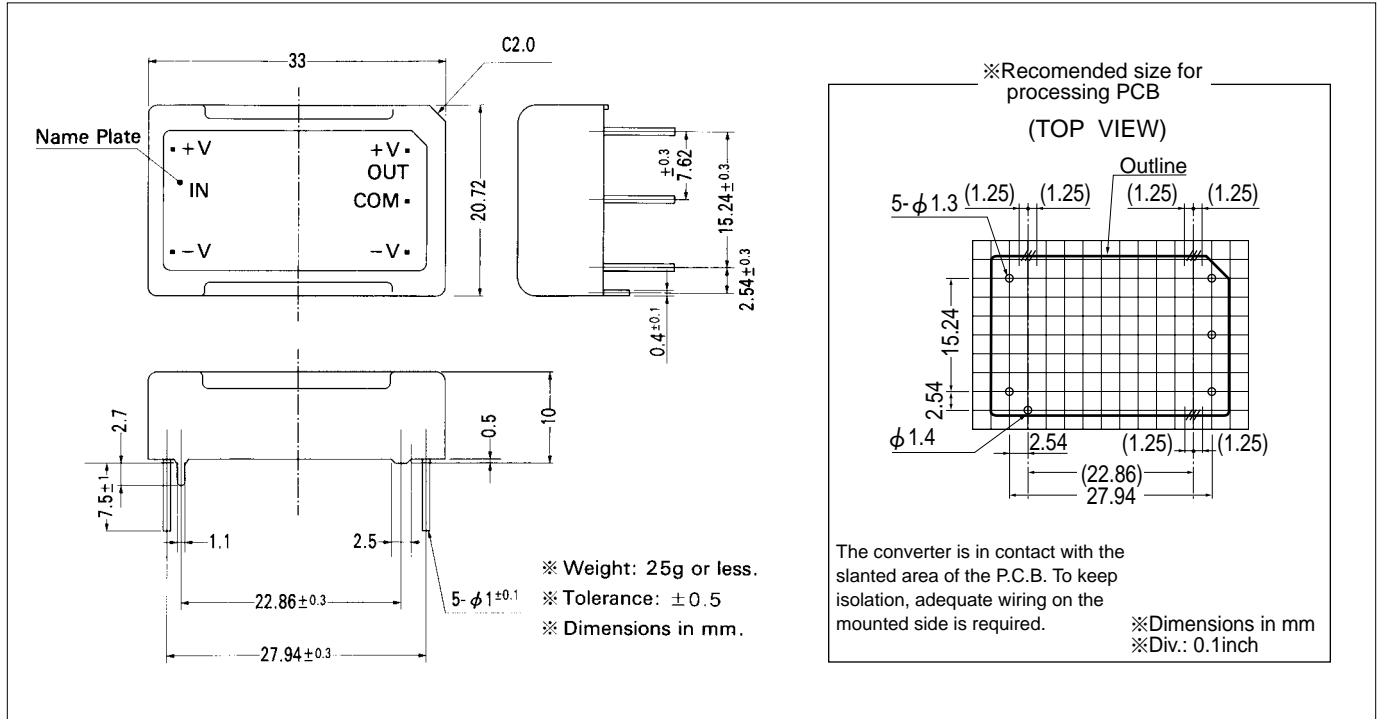
Output pins can be connected in series to make a 24V/30V output.

MODEL		ZW1R50512	ZW1R50515	ZW1R51212	ZW1R51215	ZW1R52412	ZW1R52415	ZW1R54812	ZW1R54815
INPUT	VOLTAGE [V]	5 (4.5~6.0)		12 (10~15)		24 (20~30)		48 (35~63)	
	CURRENT [A]※1	0.480typ	0.500typ	0.183typ	0.192typ	0.092typ	0.096typ	0.046typ	0.048typ
	EFFICIENCY [%]※1	60 typ		65 typ		65 typ		65typ	
OUTPUT	VOLTAGE [V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT [A]	0.06	0.05	0.06	0.05	0.06	0.05	0.06	0.05
	LINE REGULATION [mV]	60max	75max	60max	75max	60max	75max	60max	75max
	LOAD REGULATION [mV]	600max	750max	600max	750max	600max	750max	600max	750max
	RIPPLE ※2 [mVp-p]	120max		120max		120max		120max	
	RIPPLE NOISE ※2 [mVp-p]	120max		120max		120max		120max	
	TEMPERATURE REGULATION [mV] 0~+50°C	120max	150max	120max	150max	120max	150max	120max	150max
	OUTPUT VOLTAGE ADJUSTMENT RANGE [V]	FIXED							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ISOLATION	INPUT,OUTPUT,CASE	AC500V, 1 minute, Cutoff current=10mA, DC500V, 50MΩ min. (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP. HUMID. AND ALTITUDE	-10~+60°C, 20~90%RH (Non condensing) (Refer to DERATING CURVE) , 3,000m (10,000feet) max							
	STORAGE TEMP. HUMID. AND ALTITUDE	-20~+75°C, 20~90%RH (Non condensing) , 9,000m (30,000feet) max							
	VIBRATION	10~55Hz, 19.6m/s ² (2G) , 3 minutes period, 30 minutes along X, Y and Z axis							
	IMPACT	490.3m/s ² (50G) , 11ms, once on each X,Y and Z axis							

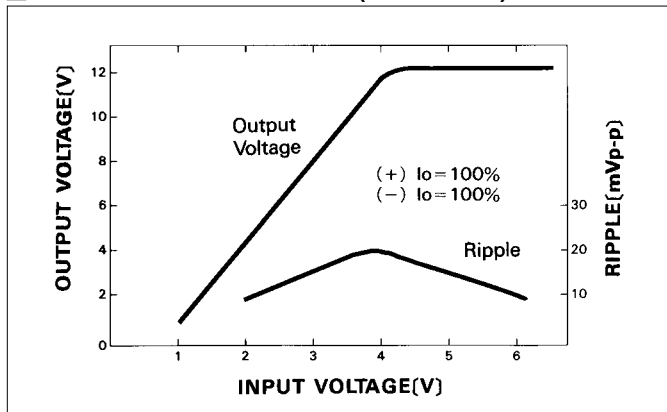
※1 Rated input 5V, 12V, 24V or 48V DC, I_o=100%
 ※2 Measured by 20MHz oscilloscope.
 ※ The output specification is at ±12V and ±5V.
 ※ Parallel operation with other model is not possible.

MODEL	ZW1R5			ZW1R5				
	0512	1212	2412	4812	0515	1215	2415	4815
MAX OUTPUT WATTAGE	1.44W			1.50W				
DC OUTPUT VOLTAGE	$\pm 12V(+24V)$			$\pm 15V(+30V)$				
DC OUTPUT CURRENT	0.06A			0.05A				

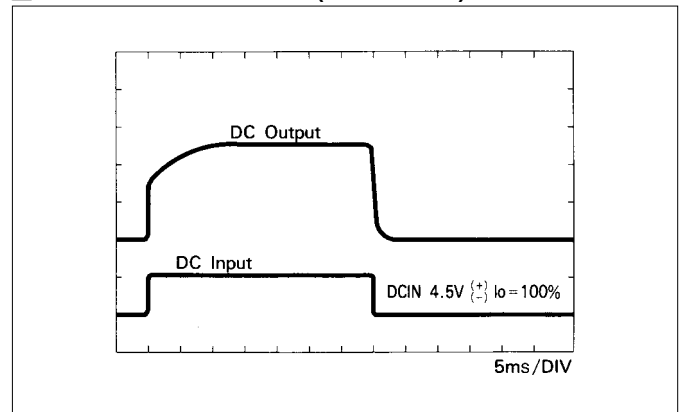
EXTERNAL VIEW



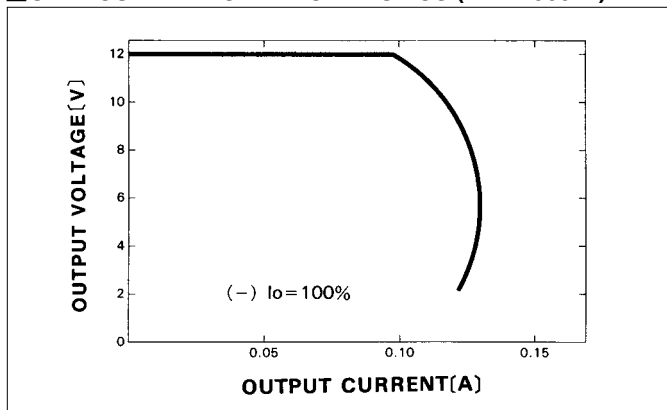
STATIC CHARACTERISTICS (ZW1R50512)



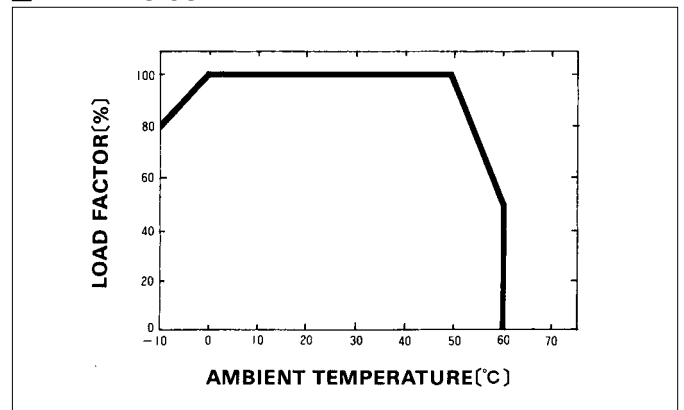
RISE TIME & FALL TIME (ZW1R50512)



OVERCURRENT CHARACTERISTICS (ZW1R50512)



DERATING CURVE



Z

Basic characteristics data

Model	Circuit method	Switching frequency [kHz]	Input current [A]	Rated input fuse	Inrush current protection	PCB/Pattern			Series/Parallel operation availability	
						Material	Single sided	Double sided	Series operation	Parallel operation
ZS1R5 ZW1R5	Flyback converter	350~1300	*1	Refer to table No.1	—	glass fabric base, epoxy resin		Yes	*2	*2
ZS3 ZW3	Flyback converter	250~1400			—	glass fabric base, epoxy resin	Yes		*2	*2
ZS6 ZW6	Flyback converter	250~1500			—	glass fabric base, epoxy resin	Yes		*2	*2
ZS10 ZW10	Single ended forward converter	250~ 400			—	glass fabric base, epoxy resin		Yes	*2	*2

*1 Refer to Specification.

*2 Refer to Instruction Manual.

Table 1. Rated Input Fuse

Output Power	Input Voltage			
	5V	12V	24V	48V
1.5W	63V 1.2 A	63V 0.8 A	63V 0.8 A	63V 0.8A
3 W	72V 2.0 A	72V 1.2 A	72V 0.8 A	72V 0.8A
6 W	125V 3.15A	125V 3.15A	125V 3.15A	125V 1.0A
10 W	125V 5.0 A	125V 3.15A	125V 3.15A	125V 1.0A