

# ZTS1R5

ZT S 1R5 12 05

① ② ③ ④ ⑤



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



MODEL	ZTS1R50505	ZTS1R50512	ZTS1R50515	ZTS1R51205	ZTS1R51212	ZTS1R51215	ZTS1R52405	ZTS1R52412	ZTS1R52415	ZTS1R54805	ZTS1R54812	ZTS1R54815	
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	ZTS1R50505	ZTS1R50512	ZTS1R50515	ZTS1R51205	ZTS1R51212	ZTS1R51215	ZTS1R52405	ZTS1R52412	ZTS1R52415	ZTS1R54805	ZTS1R54812	ZTS1R54815	
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, Io=100%)												
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed												
OUTPUT VOLTAGE SETTING[V]	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		
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, C-UL, EN60950-1 Complies with IEC60950-1												
OTHERS	CASE SIZE/WEIGHT	28×21×10mm (W×H×D) / 15g max												
	COOLING METHOD	Convection												

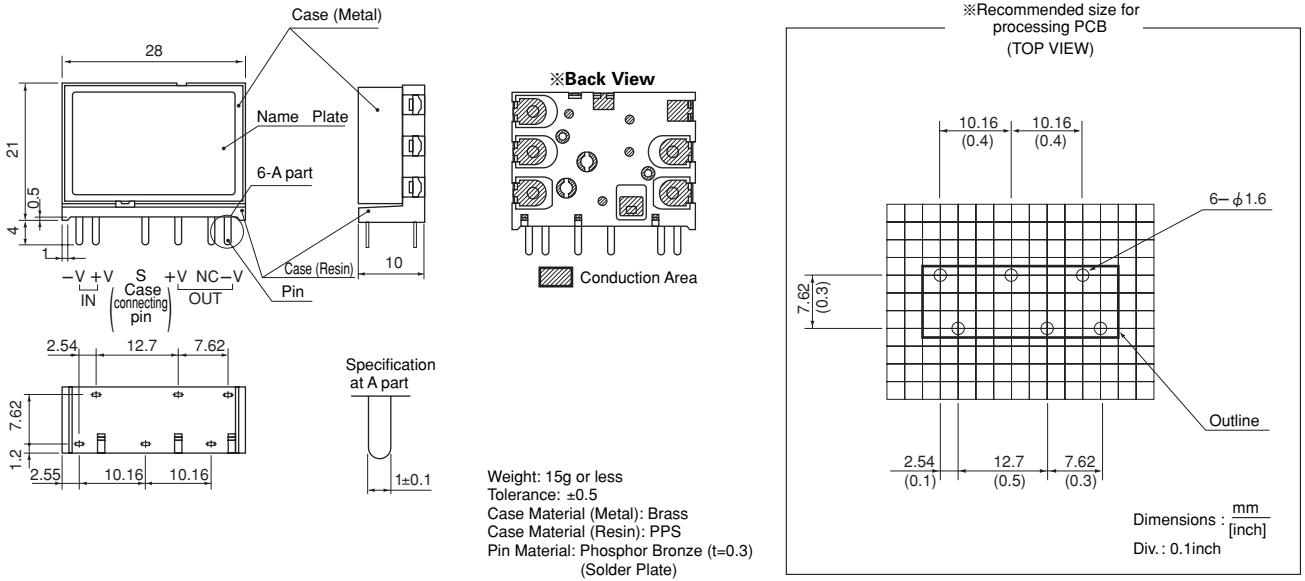
\*1 Rated input. 5V, 12V, 24V or 48V DC, Io=100%

\*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.

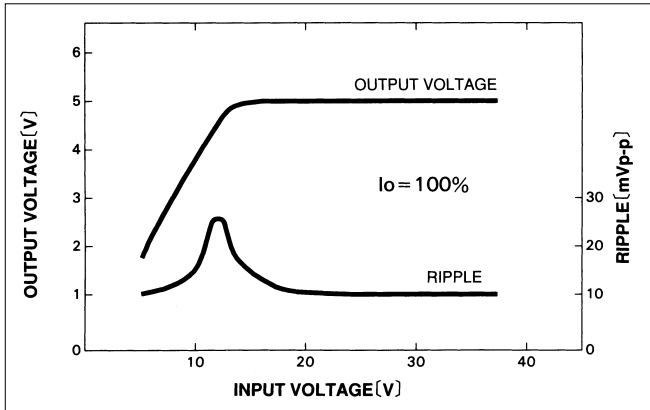
\* Series/Parallel operation with other model is not possible.

External view

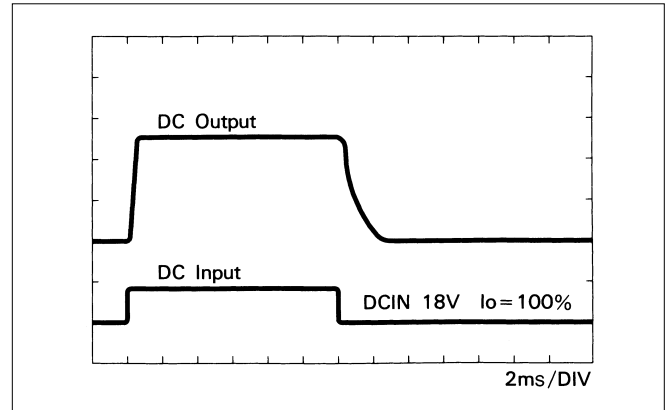


Performance data

■ STATIC CHARACTERISTICS (ZTS1R52405)

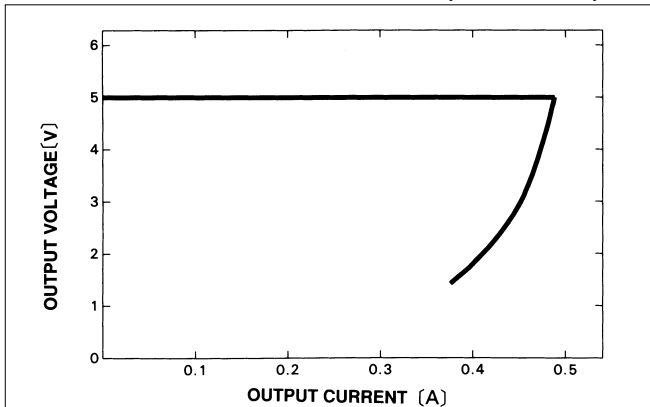


■ RISE TIME & FALL TIME (ZTS1R52405)



ZU/ZT

■ OVERCURRENT CHARACTERISTICS (ZTS1R52405)



# ZTS3

ZT S 3 12 05

① ② ③ ④ ⑤



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

MODEL	ZTS30505	ZTS30512	ZTS30515	ZTS31205	ZTS31212	ZTS31215	ZTS32405	ZTS32412	ZTS32415	ZTS34805	ZTS34812	ZTS34815	
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	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

## SPECIFICATIONS

	MODEL	ZTS30505	ZTS30512	ZTS30515	ZTS31205	ZTS31212	ZTS31215	ZTS32405	ZTS32412	ZTS32415	ZTS34805	ZTS34812	ZTS34815	
INPUT	VOLTAGE[V]	DC4.5 - 9			DC9 - 18			DC18 - 36			DC36 - 72			
	CURRENT[A]	*1 0.896typ	0.857typ		0.357typ	0.338typ		0.176typ	0.167typ		0.088typ	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	180max
	DRIFT[mV]	*3 20max	48max	60max	20max	48max	60max	20max	48max	60max	20max	48max	60max	
	START-UP TIME[ms]	20max (Minimum input, I <sub>o</sub> =100%)												
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed												
OUTPUT VOLTAGE SETTING[V]	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		
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, C-UL, EN60950-1 Complies with IEC60950-1												
OTHERS	CASE SIZE/WEIGHT	35.5×26×10mm (W×H×D) / 25g max												
	COOLING METHOD	Convection												

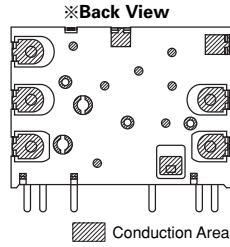
\*1 Rated input. 5V, 12V, 24V or 48V DC, I<sub>o</sub>=100%

\*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.

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

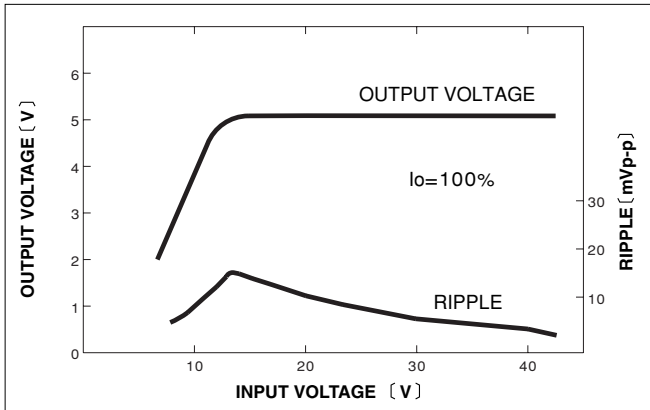
External view



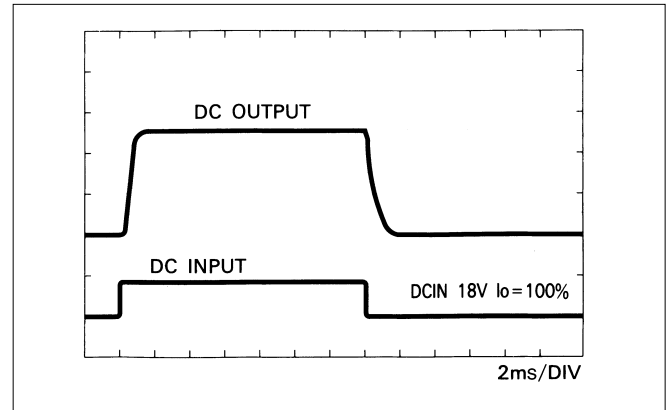
Weight: 25g or less  
Tolerance: ±0.5  
Case Material (Metal): Brass  
Case Material (Resin): PPS  
Pin Material: Phosphor Bronze (t=0.3)  
(Solder Plate)

Performance data

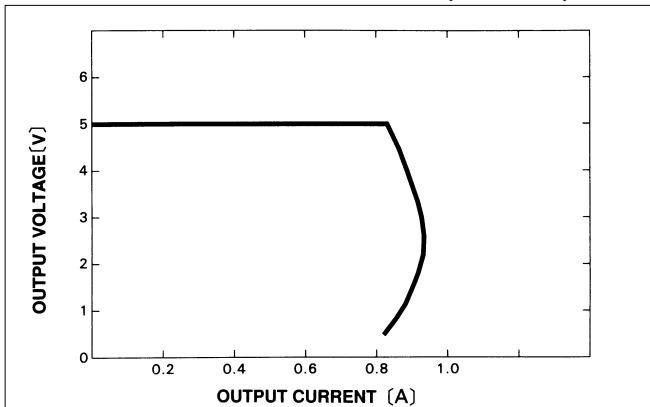
■ STATIC CHARACTERISTICS (ZTS32405)



■ RISE TIME & FALL TIME (ZTS32405)



■ OVERCURRENT CHARACTERISTICS (ZTS32405)



ZU/ZT