COSEL **On-board type**

ZUS25

Ordering information

ZU	S	25	12	05	
①	②	③	④	⑤	

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

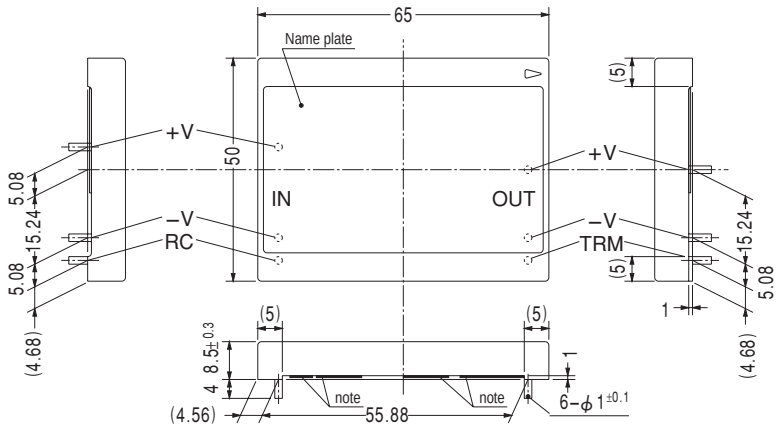
MODEL		ZUS25053R3	ZUS250505	ZUS250512	ZUS251205	ZUS251212	ZUS252405	ZUS252412	ZUS25483R3	ZUS254805	ZUS254812
MAX OUTPUT WATTAGE[W]		13.2	16.0	20.4	20.0	25.2	20.0	25.2	13.2	20.0	25.2
DC OUTPUT	VOLTAGE[V]	3.3	5	12	5	12	5	12	3.3	5	12
	CURRENT[A]	4.0	3.2	1.7	4.0	2.1	4.0	2.1	4.0	4.0	2.1

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℃	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									
		3.20 - 3.47	±5%						3.20 - 3.47	±5%	
	OUTPUT VOLTAGE SETTING[V]	3.20 - 3.47	4.85 - 5.25	11.4 - 12.6	4.85 - 5.25	11.4 - 12.6	4.85 - 5.25	11.4 - 12.6	3.20 - 3.47	4.85 - 5.25	11.4 - 12.6
PROTECTION CIRCUIT	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℃)									
	INPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)									
	OUTPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)									
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-20 to +71℃, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max									
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max									
	VIBRATION	10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis									
	IMPACT	490.3m/s² (50G), 11ms, once each X, Y and Z axis									
SAFETY	AGENCY APPROVALS	UL60950-1, EN60950-1, CSA C22.2 No.234 Complies with IEC60950-1									
OTHERS	CASE SIZE/WEIGHT	65×8.5×50mm (W×H×D) / 65g max									
	COOLING METHOD	Convection									

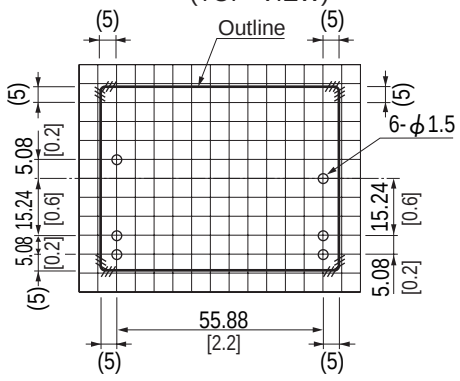
*1 Rated input. 5V, 12V, 24V or 48V DC, Io=100%
*2 Measured by 20MHz oscilloscope.
*3 The drift is a change at 25℃ of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.
* Series/Parallel operation with other model is not possible.

External view



note) Internal parts
※Weight: 65g or less.
※Tolerance: ± 0.5
※Case material: Aluminum

※Recomended size for processing PCB
(TOP VIEW)

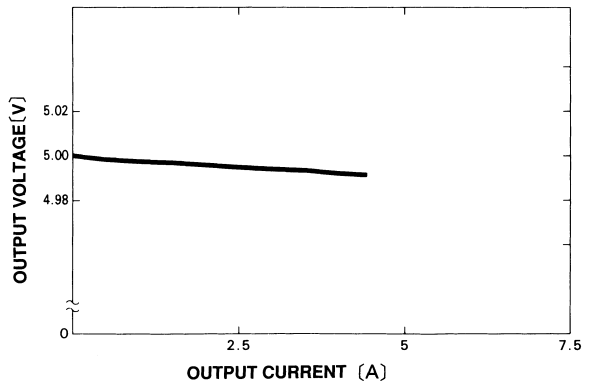


The converter is in contact with the slanted area of the P.C.B. To keep isolation, adequate wiring on the mounted side is required.

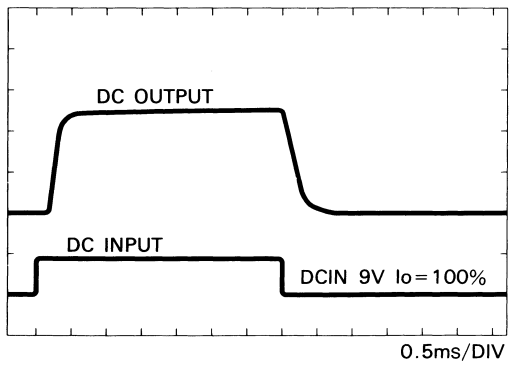
※Dimensions in mm [inch]
※Div.: 0.2inch

Performance data

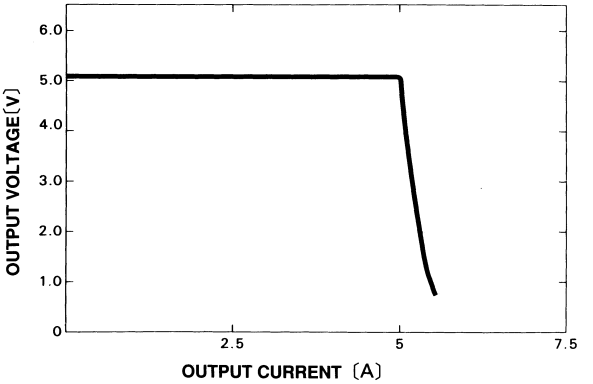
■STATIC CHARACTERISTICS (ZUS251205)



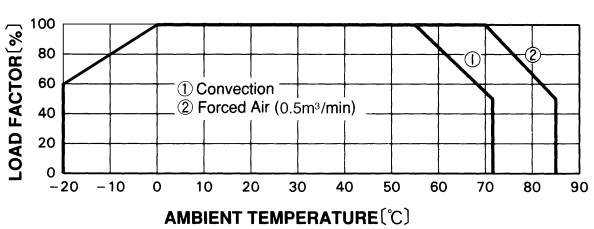
■RISE TIME & FALL TIME (ZUS251205)



■OVERCURRENT CHARACTERISTICS (ZUS251205)



■DERATING CURVE



ZU/ZT

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
ZUS1R5	Flyback converter	310 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUS3	Flyback converter	200 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUS6	Flyback converter	150 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUS10	Flyback converter	130 - 200	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	Yes	✻2
ZUS15	Single ended forward converter	330 - 400	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	Yes	✻2
ZUS25	Single ended forward converter	330 - 400	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	Yes	✻2
ZTS1R5	Flyback converter	310 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZTS3	Flyback converter	200 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUW1R5	Flyback converter	310 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUW3	Flyback converter	200 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUW6	Flyback converter	150 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZUW10	Flyback converter	130 - 200	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	Yes	✻2
ZUW15	Single ended forward converter	330 - 400	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	Yes	✻2
ZUW25	Single ended forward converter	330 - 400	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	Yes	✻2
ZTW1R5	Flyback converter	310 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2
ZTW3	Flyback converter	200 - 1600	✻1	Refer to table No.1	-	glass fabric base,epoxy resin		Yes	✻2	✻2

✻1 Refer to Specification.
✻2 Refer to Instruction Manual.

Table1. Rated input fuse

Output Power	Input Voltage			
	5V	12V	24V	48V
1.5W	72V 1.2A	72V 0.8A	72V 0.8A	72V 1.2A
3W	72V 2.0A	72V 1.2A	72V 1.2A	72V 1.2A
6W	72V 4.0A	72V 2.0A	72V 2.0A	72V 1.2A
10W	125V 6.3A	125V 3.5A	125V 2.0A	125V 1.0A
15W	125V 8.0A	125V 5.0A	72V 4.0A	72V 4.0A
25W	125V 10.0A	125V 6.3A	125V 3.15A	125V 2.0A