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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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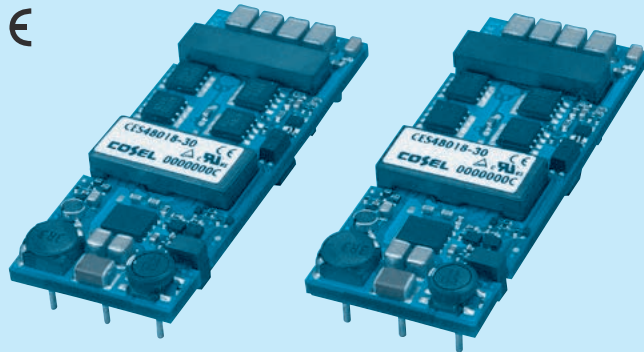
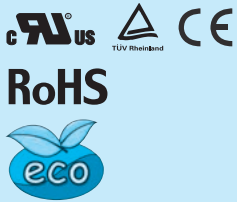
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CES

CE S 48 018 -30 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Input voltage
24 :DC18 - 36V
48 :DC36 - 76V
- ④ Output voltage
015:1.5V
018:1.8V
025:2.5V
033:3.3V
050:5V
060:6V
120:12V
150:15V
- ⑤ Output current
- ⑥ Optional
S :SMD
R :with Remote ON/OFF
Positive logic control
V :Output voltage setting ±1%
N :Auto restart from thermal protection

MODEL	CES24033-25	CES24050-16	CES24120-6	CES24150-4
MAX OUTPUT WATTAGE[W]	82.5	80.0	72.0	60.0
DC OUTPUT	3.3V 25A	5V 16A	12V 6A	15V 4A

SPECIFICATIONS

	MODEL	CES24033-25	CES24050-16	CES24120-6	CES24150-4	
INPUT	VOLTAGE[V]	DC18 - 36			DC20 - 33	
	CURRENT[A]	*1 3.78typ	3.67typ	3.30typ	2.75typ	
	EFFICIENCY[%]	*1 91typ	91typ	91typ	91typ	
	START-UP VOLTAGE[V]	DC16 - 18			DC18 - 20	
	HYSTERESIS VOLTAGE[V]	DC1 min				
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	25	16	6	4	
	LINE REGULATION[mV]	10max	10max	24max	30max	
	LOAD REGULATION[mV]	10max	10max	24max	30max	
	RIPPLE	[mVrms] *2	20max	20max	40max	40max
		[mVp-p] *2	60max	80max	120max	120max
	RIPPLE NOISE[mVp-p] *2	100max	120max	150max	150max	
	TEMPERATURE REGULATION[mV]	66max	100max	240max	300max	
	DRIFT[mV] *3	16max	20max	40max	50max	
	START-UP TIME[ms]	200max (DCIN 24V, Io=100%)				
OUTPUT VOLTAGE ADJUSTMENT RANGE *4	Fixed (TRM pin open), adjustable by external resistor					
	-15% / +15%	-20% / +20%	-20% / +10%	-20% / +5%		
OUTPUT VOLTAGE SETTING	±1.6%					
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating, low voltage protection (shut down) function is built-in.				
	OVERVOLTAGE PROTECTION	125% - 135%	125% - 135%	117% - 127%		
	REMOTE SENSING	Provided				
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)				

MODEL	Standard type							High wattage type		
	CES48015-30	CES48018-30	CES48025-25	CES48033-25	CES48050-16	CES48120-6	CES48150-4	CES48033-30	CES48050-20	CES48060-17
MAX OUTPUT WATTAGE[W]	45.0	54.0	62.5	82.5	80.0	72.0	60.0	99.0	100.0	102.0
DC OUTPUT	1.5V 30A	1.8V 30A	2.5V 25A	3.3V 25A	5V 16A	12V 6A	15V 4A	3.3V 30A	5V 20A	6V 17A

SPECIFICATIONS

	MODEL	CES48015-30	CES48018-30	CES48025-25	CES48033-25	CES48050-16	CES48120-6	CES48150-4	CES48033-30	CES48050-20	CES48060-17	
INPUT	VOLTAGE[V]	DC36 - 76							DC40 - 60	DC36 - 76		
	CURRENT[A]	*1 1.1typ	1.3typ	1.45typ	1.89typ	1.84typ	1.65typ	1.37typ	2.29typ	2.32typ	2.36typ	
	EFFICIENCY[%]	*1 86typ	87typ	90typ	91typ	91typ	91typ	91typ	90typ	90typ	92typ	
	START-UP VOLTAGE[V]	DC32 - 36							DC36 - 40	DC32 - 36		
	HYSTERESIS VOLTAGE[V]	DC2 min										
OUTPUT	VOLTAGE[V]	1.5	1.8	2.5	3.3	5	12	15	3.3	5	6	
	CURRENT[A]	30	30	25	25	16	6	4	30	20	17	
	LINE REGULATION[mV]	10max	10max	10max	10max	10max	24max	30max	10max	10max	10max	
	LOAD REGULATION[mV]	10max	10max	10max	10max	10max	24max	30max	10max	10max	10max	
	RIPPLE	[mVrms] *2	20max	20max	20max	20max	25max	40max	40max	20max	25max	25max
		[mVp-p] *2	60max	60max	60max	60max	80max	120max	120max	60max	100max	100max
	RIPPLE NOISE[mVp-p] *2	100max	100max	100max	100max	120max	150max	150max	100max	150max	150max	
	TEMPERATURE REGULATION[mV]	66max	66max	66max	66max	100max	240max	300max	66max	100max	100max	
	DRIFT[mV] *3	16max	16max	16max	16max	20max	40max	50max	16max	20max	20max	
	START-UP TIME[ms]	200max (DCIN 48V, Io=100%)										
OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open), adjustable by external resistor											
	-20% / +10%		-15% / +15%	-20% / +10%		-20% / +5%	-15% / +15%	-20% / +10%				
OUTPUT VOLTAGE SETTING	±1.6%											
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating, low voltage protection (shut down) function is built-in.										
	OVERVOLTAGE PROTECTION	117% - 127%		125% - 135%	117% - 127%		125% - 135%	117% - 127%				
	REMOTE SENSING	Provided										
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)										

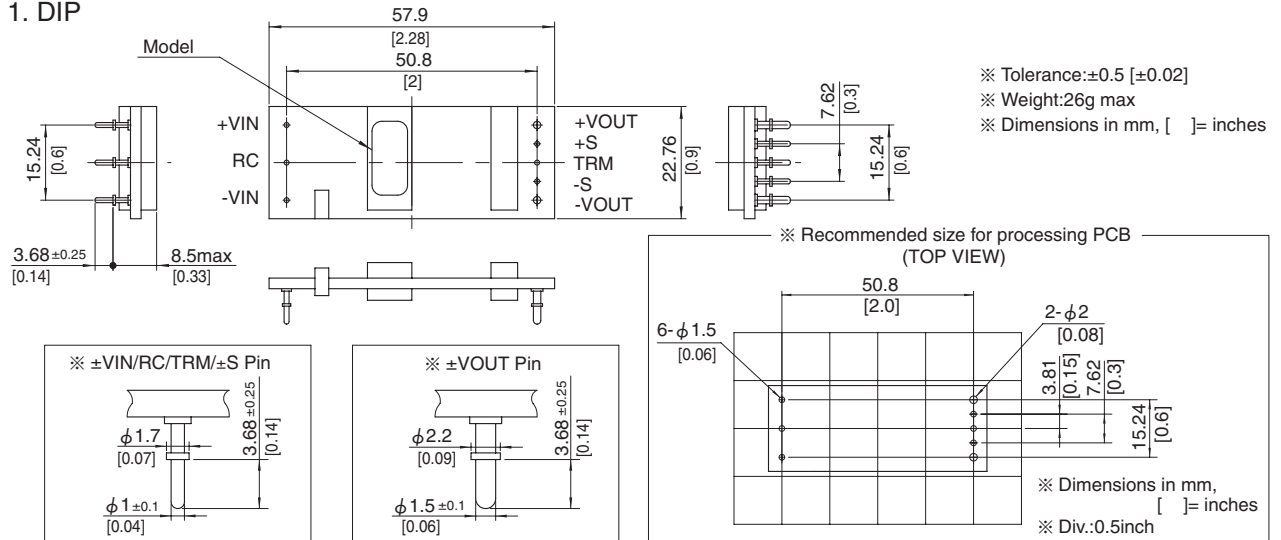
GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20 ± 15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max (Option S: Refer to the instruction Manual)
	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 along X, Y and Z axis
	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1
OTHERS	CASE SIZE/WEIGHT	57.9 × 8.5 × 22.76mm [2.28 × 0.33 × 0.9 inches] (W × H × D) / 26g max
	COOLING METHOD	Convection / Forced air

- *1 At rated input(DC24V,DC48V) and rated load and 25°C, 2m/s.
- *2 Ripple and ripple noise is measured by using measuring board with ceramic capacitor 22 μF. Refer to the Instruction Manual.
- *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 Refer to the instruction manual for input voltage derating.

External view

1. DIP



2. SMD(optionS)

