ETA-USA

The Power Professionals

ODC30 SC/WC — 30W DC/DC

Features

- 4:1 Wide input range VDC
- Compact size 1/1" package
- Efficiency 88%~ 92%
- Wide operating temperature from -40°C to +105°C
- EMI class A without external circuit
- No minimum load required
- Meet EN62368-1
- Available Inputs Voltage (nominal):
  24VDC Nom (DC 9~36V)
  48VDC Nom (DC 18~75V)
- ODC15-22WC • -22: 12V, 12V
- ODC15-23WC • -22: 15V, 15V

RoHS

MODEL/CHANNEL		Unit	ODC30-03SC24	ODC30-05SC24	ODC30-12SC24	ODC30-15SC24	ODC30-24SC24
OUTPUT	Nominal Voltage	V	3.3	5	12	15	24
	Current	A	7	6	2.5	2	1.25
	Total Power	W	23.1	30	30	30	30
	Efficiency Typ.	%	88	89	89	89	90
	Capacitative Load Max	µs	10000	7200	1200	1000	380
	Load Regulations	%	+/-0.2				
	Cross Regulations	%	+/-5				
	Operating Frequency	KHZ	400				
	Voltage Adjustability	%	+/-10				
	Transient	µs	250				
	Line Regulations	%	+/-0.2				
	Ripple and Noise	mVp-p	75 max				

MODEL/CHANNEL		Unit	ODC30-SC/WC24	ODC30-SC/WC48
INPUT	Nominal Voltage	V	DC 24V(9~36)	DC 48V(18~75)
	Current Typ	mA	10	
	Voltage, Frequency	V	60 sec.; typ. 1.6KVDC	
	Current Typ.	A	Min. 1000 MΩ	
	Voltage Surge 24VDC 48VDC	VDC	Typ. 170% Typ. 190%	
	Input Voltage	-	Typ. 1200pF	
	Start Up Time	-	Nom. Vin at 100% load Typ. 30ms.	
	Remote On/Off	-	Open or 3.5~15VDC Short or 0~1.2VDC Input current (remote off mode) typ. 2mA	
	Voltage Surge	-	Max. 50VDC Max. 100VDC	
	Voltage Lockdown	-	Typ. 7.5VDC Typ. 16VDC	

ETA-USA 16170 Vineyard Blvd. Suite 180 Morgan Hill, CA 95037 http://www.eta-usa.com
Toll-free (US only): 800-ETA-POWR (800-382-7697) Telephone: 408 778-2793 FAX: 408-779-2753

ODC30

	MODEL/CHANNEL	Unit	ODC30-03SC48	ODC30-05SC48	ODC30-12SC48	ODC30-15SC48	ODC30-24SC48
OUTPUT	Nominal Voltage	V	3.3	5	12	15	24
	Current	A	7	6	2.5	2	1.25
	Total Power	W	23.1	30	30	30	30
	Efficiency Typ.	%	88	89	89	89	90
	Capacitative Load Max	µs	10000	7200	1200	1000	380
	Load Regulations	%	+/-0.2				
	Cross Regulations	%	+/-5				
	Operating Frequency	KHZ	400				
	Voltage Adjustability	%	+/-10				
	Transient	µs	250				
	Line Regulations	%	+/-0.2				
	Ripple and Noise	mVp-p	75				

	MODEL/CHANNEL	Unit	ODC30-22WC24	ODC30-23WC24	ODC30-22WC48	ODC30-23SC48
OUTPUT	Nominal Voltage	V	+/-12	+/-15	+/-12	+/-15
	Current	A	+/-1.25	+/-1	+/-1.25	+/-1
	Efficiency Typ.	%	89	91	91	92
	Capacitative Load Max	µs	750	500	750	500
	Load Regulations	%	+/-1			
	Line Regulations	%	+/-0.5			
	Total Power	W	30			
	Cross Regulations	%	+/-5			
	Operating Frequency	KHZ	400			
	Voltage Adjustability	%	+/-10			
	Transient	µs	250			
	Ripple and Noise	mVp-p	75			

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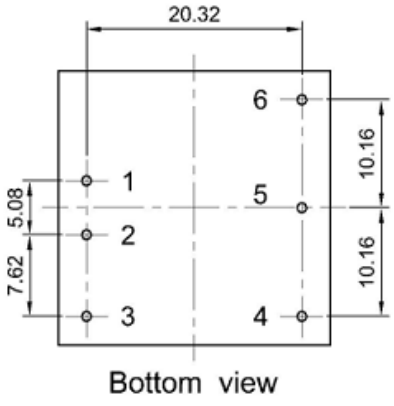
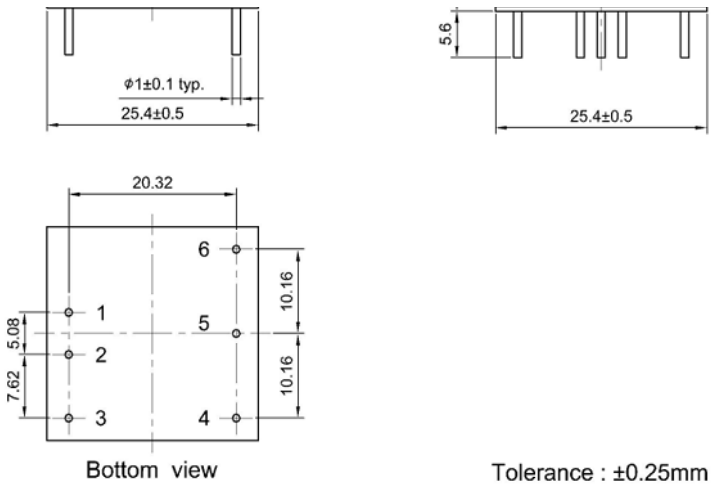
MODEL/CHANNEL		Unit	ODC30-SC/WC24	ODC30-SC/WC48
Function	Case Material Potting Material	-	Nickel plated metal with FR-4 base Silicone	
	Overload Protection 24VDC 48VDC	A	Typ. 170% Typ. 190% 3.3VDC output Typ. 5.3VDC 5VDC output Typ. 6.2VDC 12VDC output Typ. 15VDC	
	Over voltage Protection	-	+/-12VDC output Typ. +/-15 VDC; +/-15VDC output Typ. +/-18 VDC 15VDC output Typ.18VDC; 24 VDC output Typ. 30 VDC	
	Isolation	-	60 sec. typ. 1.6KVDC	
	Cooling / O.T.P	-	Convection	
	Resistance	-	Min. 1000MΩ	
	Capacitence	-	Typ. 1200pF	
Environment	Operating temp. & Hum.	-	-40 ~ +105°C	
	Storage temp. & Hum.	-	-55 ~ +125°C	
	Vibration	-	Mil. STD-202G	
Dimension	Size(WxLxH) / Weight	mm/g	25.4x25.4x10/17	
	Safety	-	ROHS	
	Emission	-	EMI EN55032; Class A/B; ESD EN61000-4-2, Air±8Kv; Contact±6kV; Perf. Criteria A; Radiated immunity EN61000-4-3; Criteria A; Fast transient; EN61000-4-4, ±2kV Criteria A; Surge; EN61000-4-5, ±2kV; Criteria Al Conducted immunity EN61000-4-6; Criteria A; Magnetic field immunity EN61000-4-8; Criteria AMeet EN62368-1; Criteria A	

Pin Output



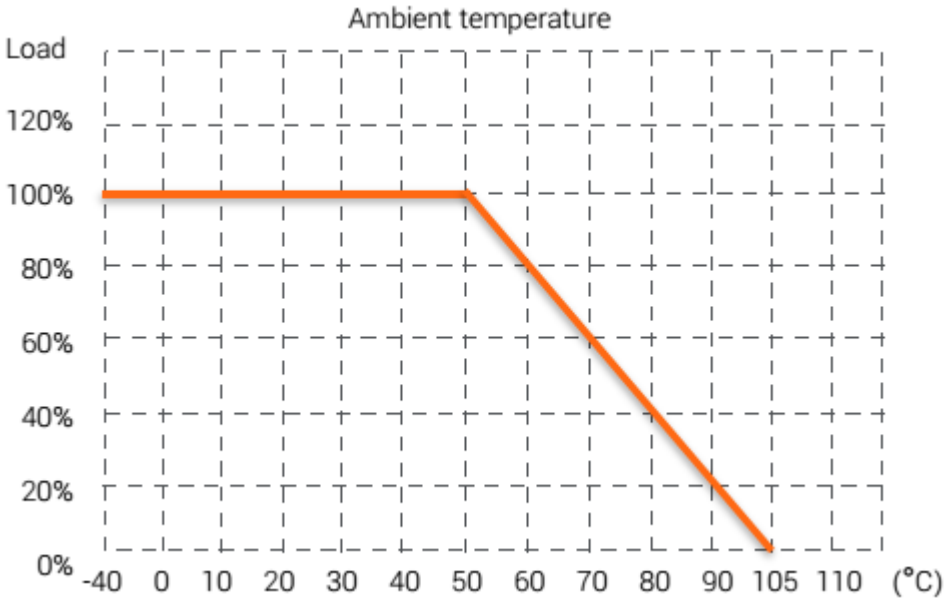
PIN	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	Remote ON/OFF	Remote ON/OFF
4	-Vout	-Vout
5	Trim	Com.
6	+Vout	+Vout

Dimensional Drawing(mm)

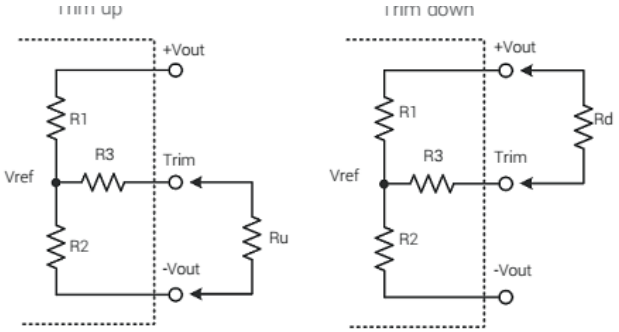


Tolerance : ±0.25mm

Output Derating Curve



External Output



Formula for trim resistor:

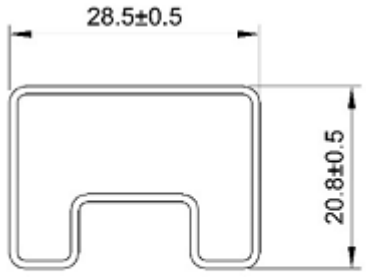
UP: $Ru=\frac{aR_2}{R_2-a}-R_3$ $a=\frac{V_{ref}}{V_o'-V_{ref}}\cdot R_1$

DOWN: $Rd=\frac{bR_1}{R_1-b}-R_3$ $b=\frac{V_o'-V_{ref}}{V_{ref}}\cdot R_2$

NOTE:
1.Ru, Rd is mean trim resistor, please check the formula.
2.a & b: user define parameter, no actual meanings.
3. V_o' is mean trim up/down voltage.
4.Value for R1, R2, R3 and V_{ref} refer to the table below.

Model	R1	R2	R3	Vref
ODC30-05SC**	10kΩ	10kΩ	35.7kΩ	2.5 V
ODC30-12SC**	38kΩ	10kΩ	48.7kΩ	2.5 V
ODC30-15SC**	50.1kΩ	10kΩ	51kΩ	2.5 V
ODC30-24SC**	86.32kΩ	10kΩ	73.2kΩ	2.5 V

Packaging (In tubes of 8)



UNIT:mm
1 Tube = 8 pcs
Length:260±2mm