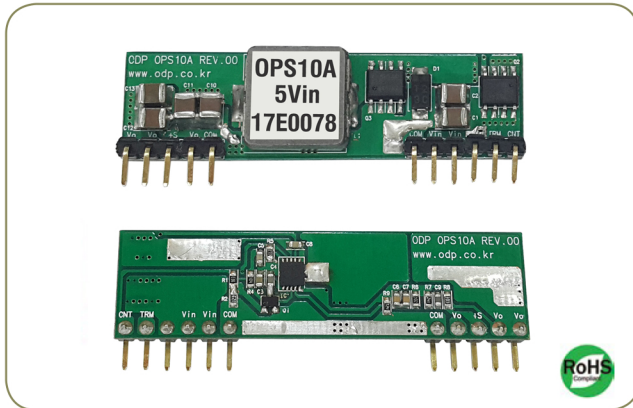


OPS10A

MAX. Output Current 10A Non-Isolated POL DC-DC Converter

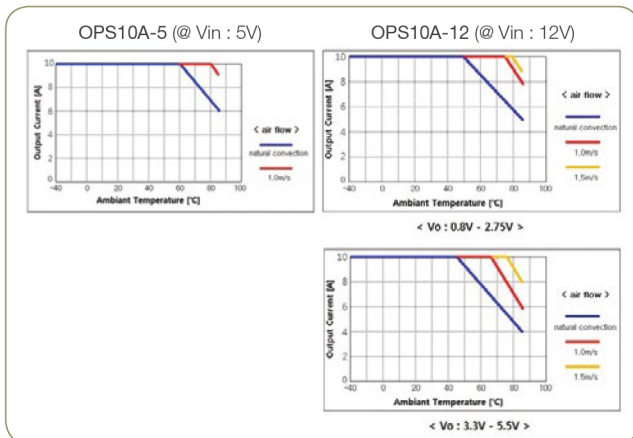
OPS10A Non-Isolated POL DC-DC Converter



Features

- Non-Isolated POL DC-DC Converter
- Input Voltage : 3.5V - 5.5V, 8V - 14V
- Wide Output Voltage Adj. Range (via external resister)
OPS10A-5 : 0.65V - 3.63V, OPS10A-12 : 0.8V - 5.5V
- Output Current Range : 0A - 10A
- High Efficiency to 95%
- Remote on/off Control Function
- Built-in over current protection
- Built-in short-circuit protection
- Built-in over temperature protection
- Wide operating temperature range
- Available RoHS compliant
- Long Life Design (Employ only Ceramic Capacitor)
- Safety standard : CB, CE approvals pending
- 3-years warranty

Derating Curve



Environment

- Operating Temperature : -40°C ~ 85°C (Refer to derating curve)
- Operating Humidity : 5% ~ 95% RH (Non condensing)
- Storage Temperature : -40°C ~ 125°C
- Cooling : Free-Air Convection or Forced air
- MTBF : 5.1×10^5 hrs

General Specifications

Input	Input Voltage Range	5V (3.5V - 5.5V), 12V (8V - 14V)
	Efficiency	78% ~ 96%
Output	Output Voltage	0.65V ≤ Vo ≤ 3.63V (@ Vin : 5V) 0.8V ≤ Vo ≤ 5.5V (@ Vin : 12V)
	Line Regulation	± 0.2%
	Load Regulation	± 1.0%
	Output Voltage Accuracy	± 2.0%
	Output Voltage adj. Range	0.65V ≤ Vo ≤ 3.63V (@ Vin : 5V) 0.8V ≤ Vo ≤ 5.5V (@ Vin : 12V)
Protection Circuit	Over Current Protection	Works at 115% ~ 185% of rating and recovers automatically
	Short Circuit Protection	30s
	Over Temperature Protection	Tref. = 135°C (Refer to datasheet)
	Over Voltage Protection	None

OPS10A Series Ordering Information

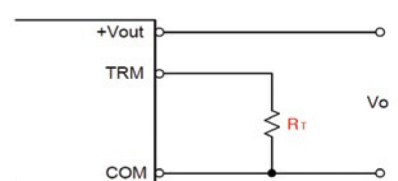
MODEL		OPS10A-5	OPS10A-12
Input Voltage (V)		5(3.5~5.5)	12(8~14)
Output	Vout (V)	3.3(0.65~3.63)	5(0.8~5.5)
	Iout (A)	10.0	10.0
Maximum Power (W)		36.3	55.0
Ripple & Noise(mVp-p)		30	50
Efficiency Typ.(%)		79~96	78 ~ 95

External Resistor Values for setting output voltage

OPS10A-5			OPS10A-12		
Vo	R _T	Vin	Vo	R _T	Vin
0.65V	open	DC 3.5V - 5.5V	0.8V	open	DC 8.0V - 14.0V
0.8V	40.2kΩ		1.0V	30.0kΩ	
1.0V	16.9kΩ		1.5V	8.66kΩ	
1.2V	11.0kΩ		2.0V	4.99kΩ	
1.5V	6.98kΩ		2.5V	3.48kΩ	
1.8V	5.23kΩ		3.0V	2.4kΩ	
2.0V	4.42kΩ		4.0V	1.87kΩ	
2.5V	3.24kΩ		4.5V	1.62kΩ	
3.3V	2.26kΩ	DC 4.5V - 5.5V	5.0V	1.43kΩ	
3.63V	2.0kΩ		5.5V	1.3kΩ	

R_T is recommended resistor of 1% standard values to consideration of the output voltage accuracy.

External resistor(R_T) connecting & calculating method

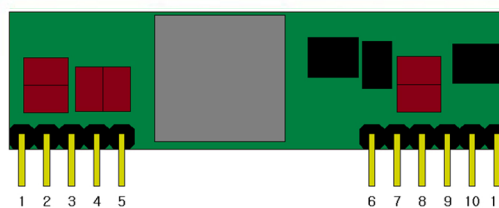


$$R_T = \frac{6}{V_o - 0.65} \text{ [k}\Omega\text{]} \quad (\text{OPS10A-5})$$

$$R_T = \frac{6}{V_o - 0.8} \text{ [k}\Omega\text{]} \quad (\text{OPS10A-12})$$

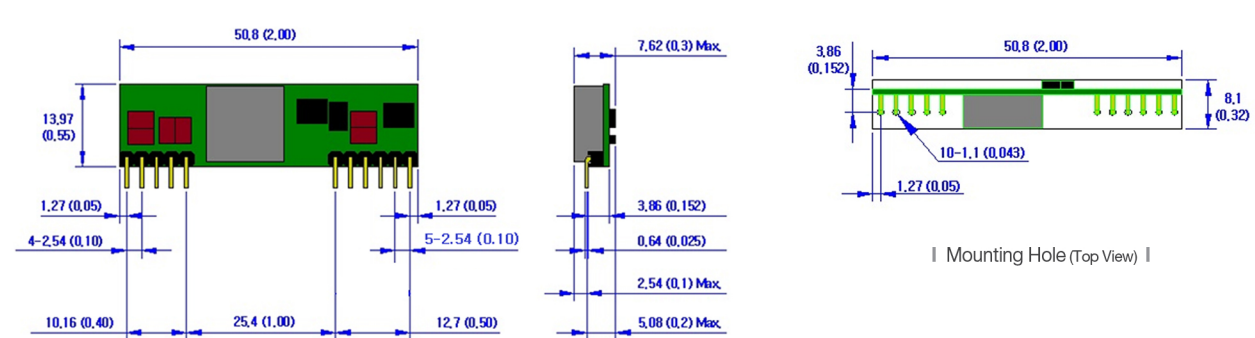
Vo adj. Range		
Model No.	Vin	Vo
OPS10A-5	DC 3.5V - 4.5V	DC 0.65V - 2.75V
	DC 4.5V - 5.5V	DC 0.65V - 3.63V
OPS10A-12	DC 8V - 14V	DC 0.8V - 5.5V

Pin assignments & Function



Pin No.	Single
1	+Vout
2	+Vout
3	+Sense
4	+Vout
5	COM
6	COM
7	+Vin
8	+Vin
9	N.C
10	TRM
11	CNT

Outline Dimensions : <Unit : mm (inch)>



| Mounting Hole (Top View) |