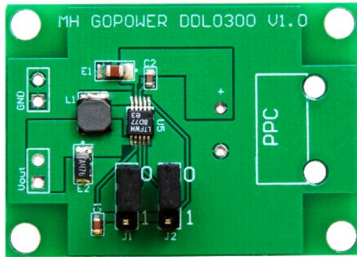


MIH[®] Step-Down DC/DC Converter

DDL0300

Datasheet



Key Features:

- Input Voltage Range: 2.7V to 20V
- Output Voltages: 1.2V, 1.5V, 1.8V, 2.5V
- Up to 80mA of Output Current
- Efficiency up to 90%

Applications:

- Power over Fiber (PoF)
- Remote Sensors
- Portable Products
- Battery-Operated Devices

Product Description

MH GoPower (“MHGP”) provides high efficiency low power step-down DC/DC converter modules which are capable of supplying up to 80mA of load current. With 2.7V to 20V input operating range, users can set the output voltage to 1.2V, 1.5V, 1.8V, 2.5V by pin selection. The DDL0300 also incorporates undervoltage lockout (UVLO) safety feature to disable the converter and maintain a low quiescent current state when the input voltage falls below 2.3V. Although the DDL0300 is designed for MHGP’s YCH-L series Photovoltaic Power Converters (PPCs), it can also be used as a general purpose step-down DC/DC converter.

Absolute Maximum Ratings

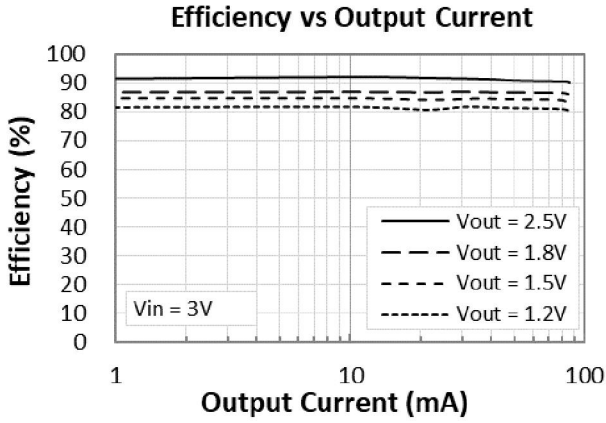
Parameter	Rating
Input Voltage	-0.3V ~ 22V
Output Current	0 ~ 80mA
Operating Temperature	-40°C ~ 85°C
Storage Temperature	-40°C ~ 105°C

Electrical Characteristics *

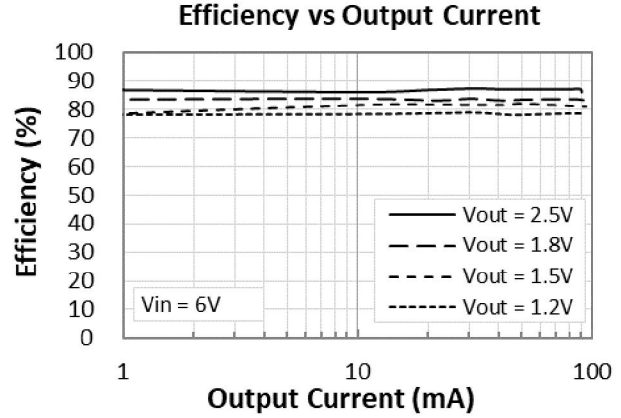
Parameter	Condition	MIN	TYP	MAX
Input Voltage (Vin)	-	2.70V	-	20V
Output Voltage (Vout)	Vin = 3V, Vset = 1.2V	1.15V	1.20V	1.22V
	Vin = 3V, Vset = 1.5V	1.35V	1.50V	1.51V
	Vin = 3V, Vset = 1.8V	1.73V	1.79V	1.80V
	Vin = 3V, Vset = 2.5V	2.34V	2.46V	2.47V
Vin Undervoltage Lockout Threshold (V _{UVLO})	-	2.15V	2.30V	-
Ripple	Vin = 3V, R _L = 30 Ω	-	-	100mVpp

* Typical converter performance with ambient temp of ~25°C

3V Input Voltage Efficiency

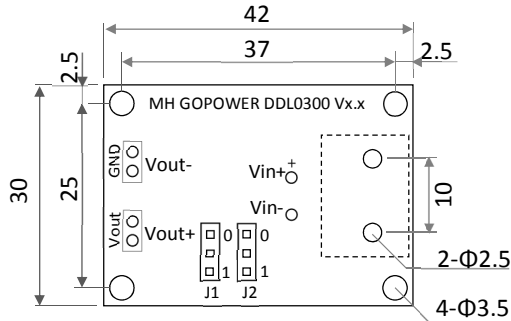


6V Input Voltage Efficiency



Mechanical Dimensions and Pin Configurations

(Unit: mm)



Weight: 7g

PPC installation area: YCH-L series PPC (available for purchase)

Output Voltage Selection

J1	J2	Vout
0	0	1.2V
0	1	1.5V
1	0	1.8V
1	1	2.5V