

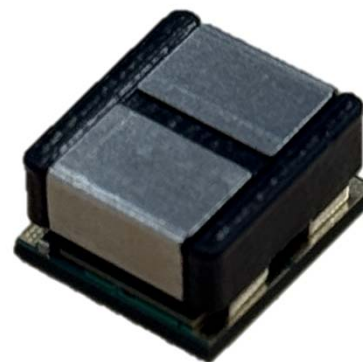
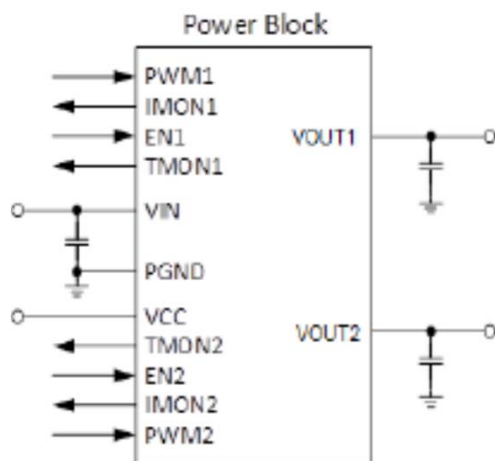
1. Features :

- 10 x 9 x 5 mm compact footprint.
- Maximum Peak Current: 140 A.
- Per phase 40 A, Dual output Maximum Continuous Current 80 A.
- Input Voltage Range from 5.0V to 16 V.
- Protections (OCP, UVP, OTP).
- Operating Temperature Range: -40°C to 125°C

2. Applications :

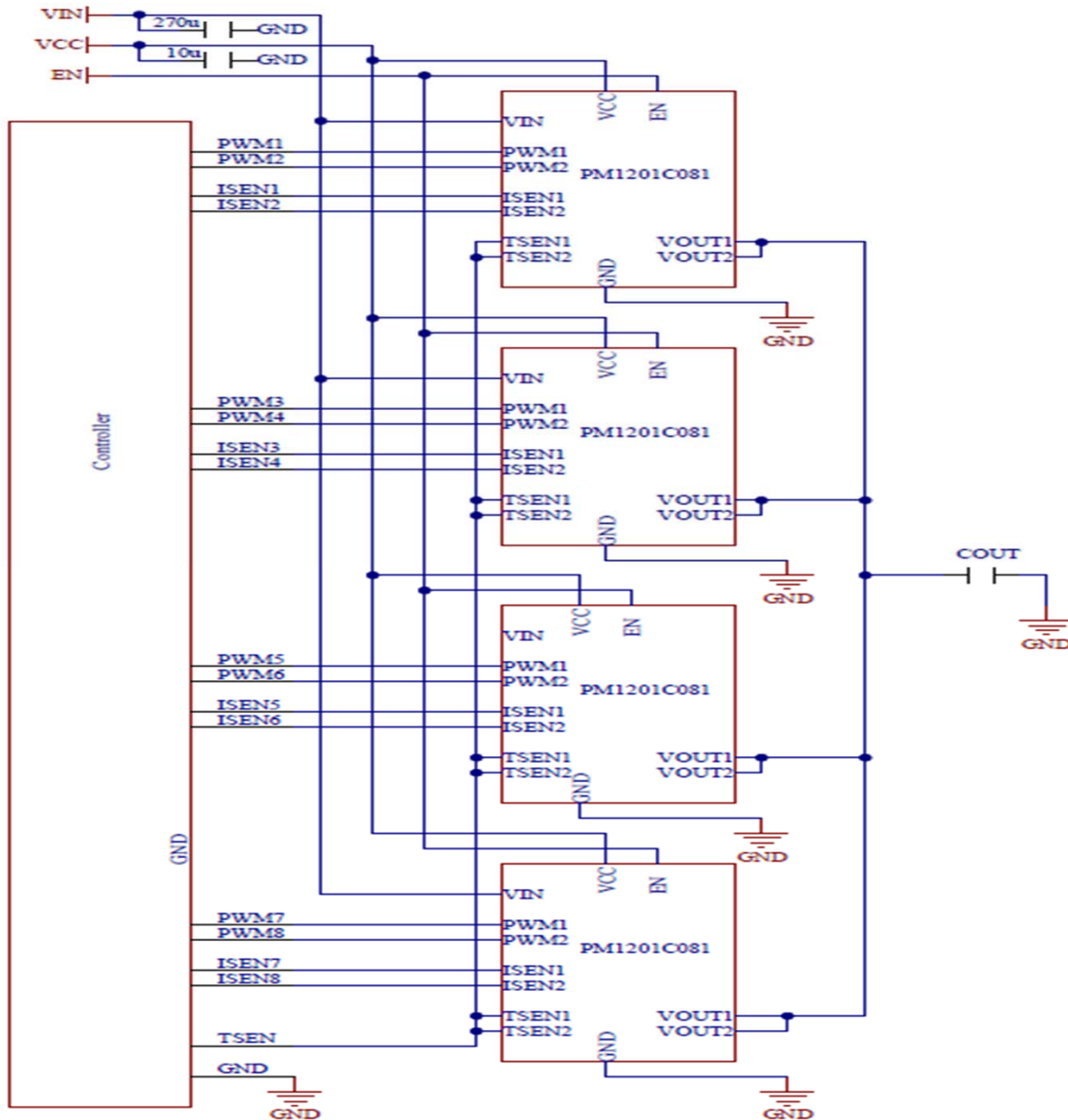
- High performance Computing.
- Data Center.
- Server System.
- Communications System.
- Artificial Intelligence.

3. Typical Application Circuit:



Type	Vin Typical (V)	Suggested Fsw	Typical Application	Module Size L x W x H (mm)
SMD	12.0	400KHz-800KHz	GPU/CPU/Memory	10.0 x 9.0 x 5.0

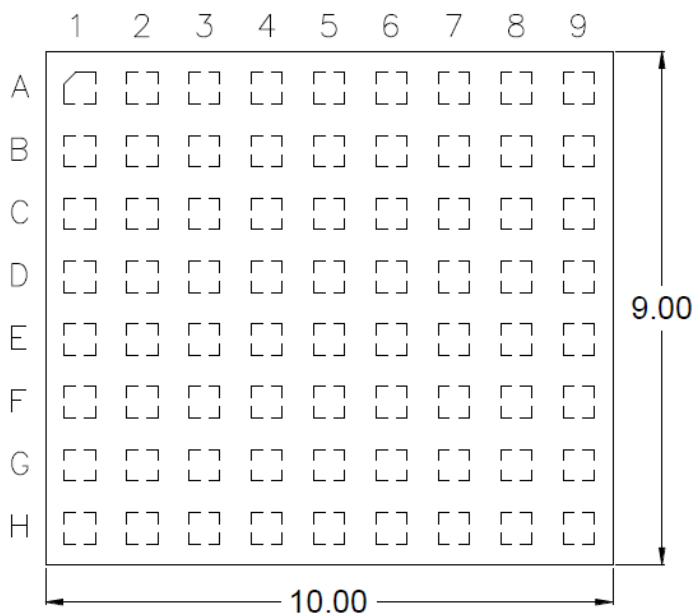
5. Typical Application Diagram



6. Order Number Examples

Part number	VIN	VOUT	Module Size L x W x H (mm)	Configuration
PM1201C081	12.0	0.5~1.8V	10.0 x 9.0 x 5.0	Standard 2 phases module, tape and reel Package

7. Pin Configuration:



Top View

8. Pin Description:

PIN NO.	NAME	DESCRIPTION
A1	PWM1	Buck1 pulse width modulation input support Tri-state Input
A2	IMON1	Buck1 current sense output. Use external resistor (1K Ω) to adjust the voltage proportional to the output current.
A3	EN1	Pull this pin to VCC to enable Buck 1
A4	TMON1	Buck1 temperature sense and fault reporting. This pin will be pull up to 3.3V when fault occurs
A5	VCC	External 5.5V power supply for driver
A6	TMON2	Buck2 temperature sense and fault reporting. This pin will be pull up to 3.3V when fault occurs
A7	EN2	Pull this pin to VCC to enable Buck 2
A8	IMON2	Buck2 current sense output. Use external resistor to adjust the voltage proportional to the output current.
A9	PWM2	Buck2 Pulse Width Modulation input. Support Tri-state input.
B1-B9	VIN	Power Input
C1-C9, D1-D9, E1-E9	PGND	Power Ground
F5-F9, G6-G9, H6-H9	VOUT 1	Power Output, phase1
F1-F4, G1-G5, H1-H5	VOUT 2	Power Output, phase2

9.1 Suggested Operating Conditions ⁽¹⁾:

- Supply Voltage VIN 5.0 V to 16V
- Driver Voltage VCC 4.5 V to 5.5 V
- Frequency of the PWM1 and PWM2..... 100 kHz to 2000 kHz
- EN1 and EN2 voltage 5.5V
- PWMX..... 3.6V
- Current Sense reference voltage 1.1V to 1.9V
- Ambient temperature..... 0 to +85°C
- Junction temperature 0 to +125°C

9.2 Absolute Maximum Ratings ⁽²⁾:

- Supply Voltage VIN 25 V
- VCC - 0.3 V to + 6.5 V
- All Other Pins - 0.3 V to VCC + 0.3 V
- Maximum average load current per phase 40A
- Maximum peak load current per phase 80 A
- Junction Temperature 125 °C
- Storage Temperature - 40 °C to + 125 °C
- Twave Wave soldering temperature(Surface temperature of module body or pins(5 seconds maximum))
..... 260 °C
- Treflow Solder reflow temperature(Surface temperature of module body or pins) 260° C ⁽³⁾
- Flammability UL94V-0

Notes:

- (1). Exceeding these ratings may damage the device.
- (2). The device is not guaranteed to function outside of its operating conditions.
- (3). During reflow of surface mount package version do not elevate peak temperature of the module, pins or internal components above the stated maximum.
- (4). The specification values indicated "AC" is VSW to PGND -8V (< 20 ns, 10 μJ), min. and 30 V (< 50 ns), max.

10.Package Information

