



The Future of Analog IC Technology®

EV6219DN-00A

Programmable Current Limit (2A) Power Distribution Switch EV Board

DESCRIPTION

The EV6219DN-00A is the evaluation board for the MP6219DN, a protection device designed to protect circuitry on the output (source) from transients on input (V_{CC}). It also protects V_{CC} from undesired shorts and transients coming from the source.

Besides the input capacitor and output capacitor, EV6219DN-00A contains a low power resistor to set the current limit (I_{LIMIT}). The current limit is set to the “trip current (I_{TRIP})” level when the output (source voltage) is near V_{CC} . As the output decreasing, the current limit is decreased to the “hold current (I_{HOLD})” level.

The demo board defaults are for a 3.6 V turn on point and a 6.65V over voltage clamp. The trip current is set at 3.0A, and the hold current is set at 2.0A (24Ω).

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	V_{IN}	3.6-5.5	V
Output Voltage Clamp	V_{OUT}	6.65	V
Trip Current	I_{TRIP}	3.0	A
Hold Current	I_{HOLD}	2.0	A

FEATURES

- Active High
- 3.0A Trip Current and 2.0A Hold Current
- Integrated Power FET Thermal Protection
- Over Voltage Limit

APPLICATIONS

- USB Power Distribution
- PCI Bus Power
- Notebook PC
- In Rush Current Limit
- Heavy Capacitive Loads

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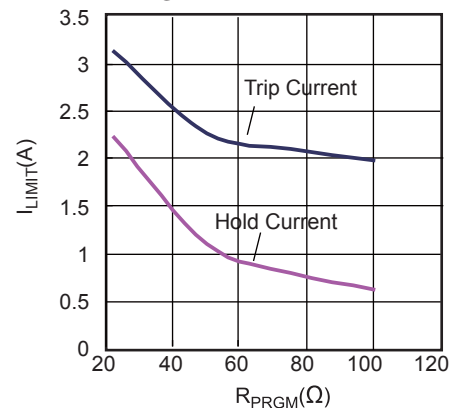
EV6219DN-00A EVALUATION BOARD

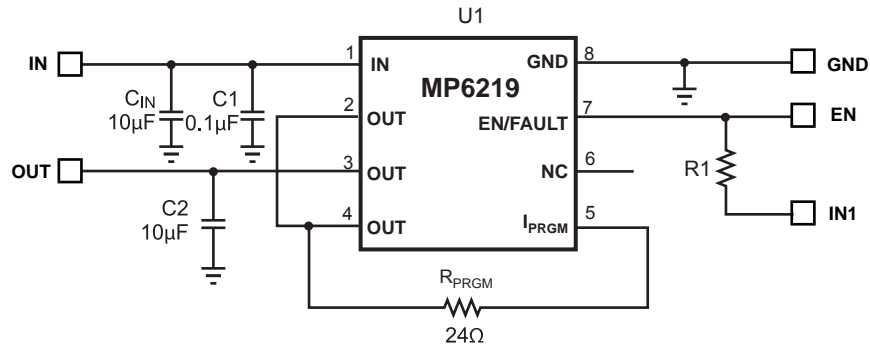


(L x W x H) 2.5" x 2.5" x 0.12"
(6.35cm x 6.35cm x 0.3cm)

Board Number	MPS IC Number
EV6219DN-00A	MP6219DN

Current Adjustment vs. R_{PRGM}



EVALUATION BOARD SCHEMATIC

EV6219DN-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Manufacturer P/N
1	C1	1uF	Ceramic Cap., 16V, X7R	SM0603	Murata	GRM188R71C105KA12D
2	CIN, C2	10uF	Ceramic Cap., 10V, X7R	SM1206	Murata	GRM31CR71A106KA01L
1	R _{PRGM}	24Ω	Film Res., 1%	SM0603	Yageo	RC0603FR-0724RL
1	R1	NS	Not Stuffed			
1	U1		MP6219DN	SOIC-8	MPS	MP6219DN

PRINTED CIRCUIT BOARD LAYOUT

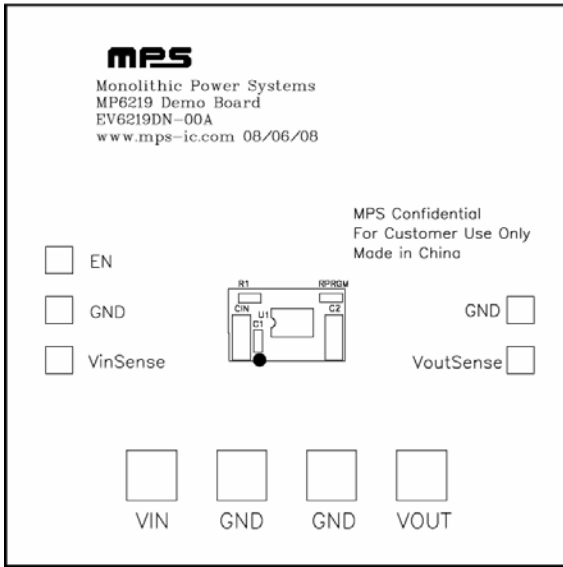


Figure 1—Top Silk Layer

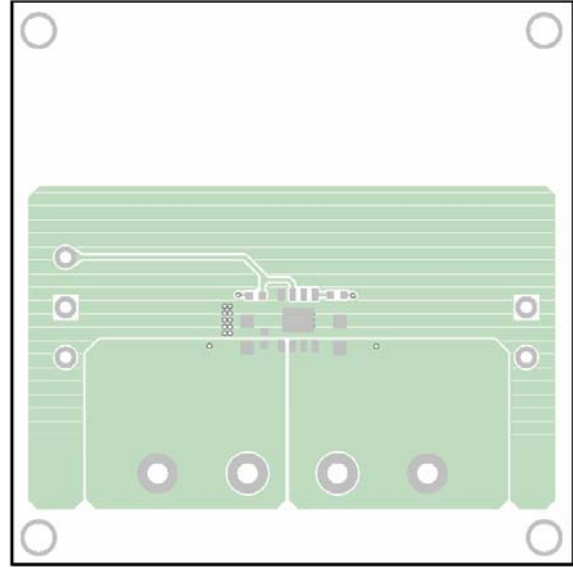


Figure 2—Top Layer

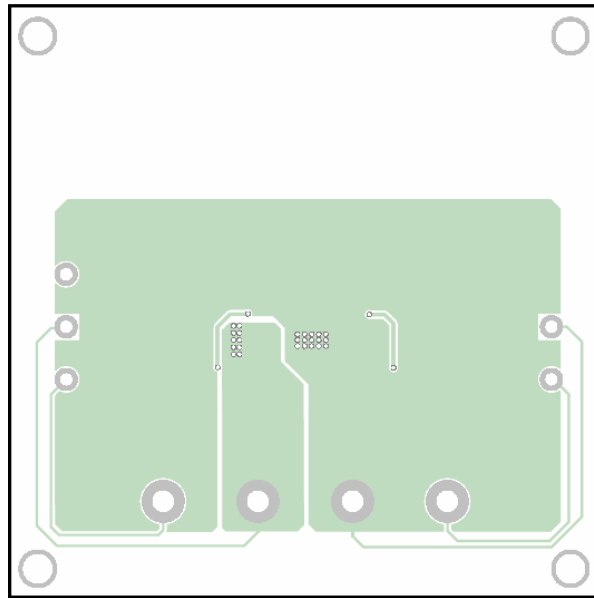


Figure 3—Bottom Layer

QUICK START GUIDE

1. Connect the positive terminal of the load to VOUT pins, and the negative terminal of the load to GND pins.
2. Preset the power supply output to 3.6V-5.5V and turn off the power supply.
3. Connect the positive terminal of the power supply output to the VIN pin and the negative terminal of the power supply output to the GND pin.
4. Turn the power supply on. The MP6219DN will automatically startup.
5. To use the Enable function, apply a digital input to EN pin. Drive EN higher than 2.5V to turn on the regulator, drive EN less than 0.5V to turn it off.
6. A thermal fault will cause a mid level on the enable pin, and will set the fault flag. V_{IN} restart or a low voltage on EN/FAULT pin can clear fault flag.
7. The trip current value of this board is set to 3.0A, the hold current value is set to 2.0A. The parameter can be programmed. For detailed application, please refer to the MP6219DN datasheet.

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