



Micro Commercial Components

Micro Commercial Components
 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

MC78L12F

Three-Terminal Low Current Positive Voltage Regulator

Features

- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

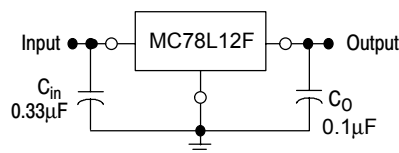
Maximum Ratings

| Parameter | Symbol | Value | Unit |
|--------------------------------|-----------|------------|------|
| Input Voltage | V_1 | 35 | V |
| Operating Junction Temperature | T_{OPR} | -20---+120 | °C |
| Storage Temperature Range | T_{STG} | -55---+150 | °C |

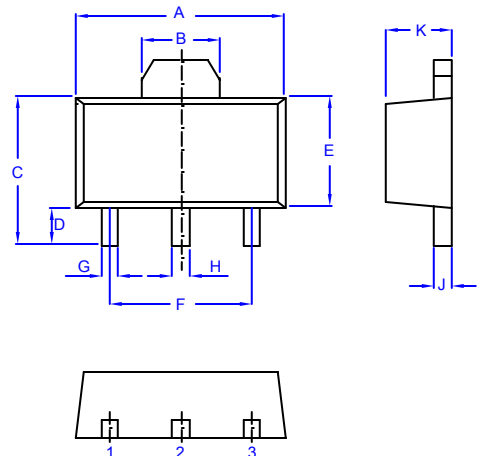
Electrical Characteristics ($V_1=19V, I_o=500mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

| Parameter | Sym | Min | Typ | Max | Test conditions |
|--------------------------|-----------------------|-------|--------------|----------------|--|
| Output Voltage | V_o | 11.5V | 12V | 12.5V | $T_j=25^\circ C$ |
| | | 11.4V | | 12.6V | $14.5V \leq V_1 \leq 27V, I_o=1mA-40mA$ |
| | | 11.4V | | 12.6V | $14.5V \leq V_1 \leq V_{MAX}, I_o=1mA-70mA$ (Note) |
| Load Regulation | ΔV_o | | 25mV | 150mV | $I_o=1mA-100mA, T_j=25^\circ C,$ |
| | | | 12mV | 75mV | $I_o=1mA-40mA, T_j=25^\circ C,$ |
| Line regulation | ΔV_o | | 25mV 20mV | 300mV 250mV | $14.5V \leq V_1 \leq 27V, T_j=25^\circ C$ $16V \leq V_1 \leq 27V, T_j=25^\circ C$ |
| Quiescent Current | I_q ΔI_q | | 2.0mA | 6.0mA | $16V \leq V_1 \leq 27V$ |
| | | | | 1.5mA | |
| Quiescent Current Change | ΔI_q | | | 0.1mA | $1mA \leq I_o \leq 40mA$ |
| Output Noise Voltage | V_N | | 80uV | | $10Hz \leq f \leq 100KHz$ |
| Ripple Rejection | RR | | 37dB | 65dB | $15V \leq V_1 \leq 25V$ $f=120Hz, T_j=25^\circ C$ |
| Dropout Voltage | V_d | | 1.7V | | $T_j=25^\circ C$ |

*Note: Bypass Capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators
 Typical Application:



SOT-89



1. OUT
2. GND
3. IN

| DIM | DIMENSIONS | | | | NOTES |
|-----|------------|-------|------|-------|-------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .173 | .181 | 4.39 | 4.60 | |
| B | .063 | .071 | 1.60 | 1.80 | |
| C | .154 | .165 | 3.91 | 4.19 | |
| D | .031 | .039 | 0.80 | 1.00 | |
| E | .092 | .100 | 2.34 | 2.54 | |
| F | .118 | ----- | 3.00 | ----- | TYP |
| G | .013 | .019 | 0.33 | 0.48 | |
| H | .015 | .021 | 0.38 | 0.53 | |
| J | .015 | .016 | 0.38 | 0.41 | |
| K | .055 | .063 | 1.40 | 1.60 | |



TM

Micro Commercial Components

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. *Micro Commercial Components Corp.* does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

*****APPLICATIONS DISCLAIMER*****

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.

www.mccsemi.com