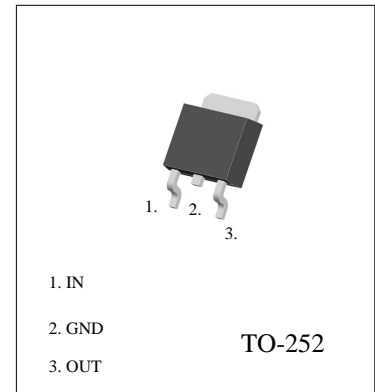


FEATURES

Maximum output current
 I_{OM} : 0.5 A
 Output voltage
 V_O : 12V
 Continuous total dissipation
 P_D : 1.25 W ($T_a = 25\text{ }^\circ\text{C}$)
 15 W ($T_c = 25\text{ }^\circ\text{C}$)

78M12

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies)

| Parameter | Symbol | Value | Unit |
|--------------------------------------|--------|---------|------------------|
| Input Voltage | V_I | 35 | V |
| Operating Junction Temperature Range | TOPR | 0-125 | $^\circ\text{C}$ |
| Storage Temperature Range | TSTG | -65-150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = 10\text{V}$, $I_o = 350\text{mA}$, $C_i = 0.33\mu\text{F}$, $C_o = 0.1\mu\text{F}$, unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------|--------------|--|---------------------------------|------|------|---------------|
| Output Voltage | V_o | $25\text{ }^\circ\text{C}$ | 11.5 | 12 | 12.5 | V |
| | | $14.5 \leq V_i \leq 27\text{V}$, $I_o = 5\text{mA} - 350\text{mA}$ $P_o \leq 1.25\text{W}$ | $0 - 125\text{ }^\circ\text{C}$ | 11.4 | 12 | 12.6 |
| Load Regulation | ΔV_o | $I_o = 5\text{mA} - 500\text{mA}$ | $25\text{ }^\circ\text{C}$ | 25 | 240 | mV |
| | | $I_o = 5\text{mA} - 200\text{mA}$ | $25\text{ }^\circ\text{C}$ | 10 | 120 | mV |
| Line Regulation | ΔV_o | $14.5\text{V} \leq V_i \leq 30\text{V}$, $I_o = 200\text{mA}$ | $25\text{ }^\circ\text{C}$ | 10 | 100 | mV |
| | | $16\text{V} \leq V_i \leq 30\text{V}$, $I_o = 200\text{mA}$ | $25\text{ }^\circ\text{C}$ | 3 | 50 | mV |
| Quiescent Current | I_q | $25\text{ }^\circ\text{C}$ | | 4.6 | 6 | mA |
| Quiescent Current Change | ΔI_q | $14.5\text{V} \leq V_i \leq 30\text{V}$, $I_o = 200\text{mA}$ | $0 - 125\text{ }^\circ\text{C}$ | | 0.8 | mA |
| | ΔI_q | $5\text{mA} \leq I_o \leq 350\text{mA}$ | $0 - 125\text{ }^\circ\text{C}$ | | 0.5 | mA |
| Output Noise Voltage | V_N | $10\text{Hz} \leq f \leq 100\text{KHz}$ | $25\text{ }^\circ\text{C}$ | 75 | | μV |
| Ripple Rejection | RR | $15 \leq V_i \leq 25\text{V}$, $f = 120\text{Hz}$, $I_o = 300\text{mA}$ | $0 - 125\text{ }^\circ\text{C}$ | 55 | 80 | dB |
| Dropout Voltage | V_d | $I_o = 350\text{mA}$ | $25\text{ }^\circ\text{C}$ | 2 | | V |
| Short Circuit Current | I_{sc} | $V_i = 19\text{V}$ | $25\text{ }^\circ\text{C}$ | 240 | | mA |
| Peak Current | I_{pk} | $25\text{ }^\circ\text{C}$ | | 0.7 | | A |