

FEATURE

- Low gate charge
- Low C_{iss}
- Fast switching
- 100% avalanche tested
- Improved dv/dt capability

Maximum output current

$$I_{OM}: 0.5 \text{ A}$$

Output voltage

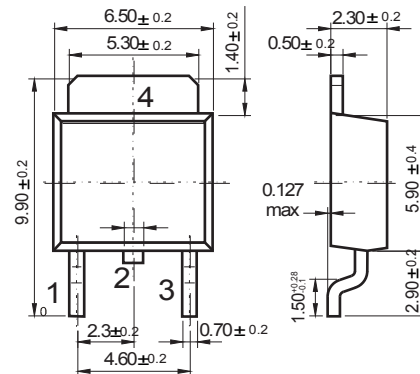
$$V_O: 12\text{V}$$

Continuous total dissipation

$$P_D: 1.25 \text{ W } (T_a = 25^\circ\text{C})$$

TO-252

Unit: mm



Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--------------------------------------|-----------|----------|------|
| Input Voltage | V_i | 35 | V |
| Operating Junction Temperature Range | T_{OPR} | 0-+125 | °C |
| Storage Temperature Range | T_{STG} | -65-+150 | °C |

ELECTRICAL CHARACTERISTICS ($V_i=19\text{V}, I_o=350\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

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

TYPICAL APPLICATION

