

isc Three Terminal Positive Voltage Regulator

NJM7805

FEATURES

- Output current in excess of 1A
- Output voltage of 5V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

| SYMBOL | PARAMETER | RATING | UNIT |
|-----------|--------------------------------|--------------------|--------------------|
| V_i | DC input voltage | 35 | V |
| I_o | Output current | internally limited | A |
| P_{tot} | Power dissipation | internally limited | W |
| T_{OP} | Operating junction temperature | -40~85 | $^{\circ}\text{C}$ |
| T_{stg} | Storage temperature | -40~150 | $^{\circ}\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|-----------------------------------------|-----|----------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 3 | $^{\circ}\text{C/W}$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 50 | $^{\circ}\text{C/W}$ |

DPAK

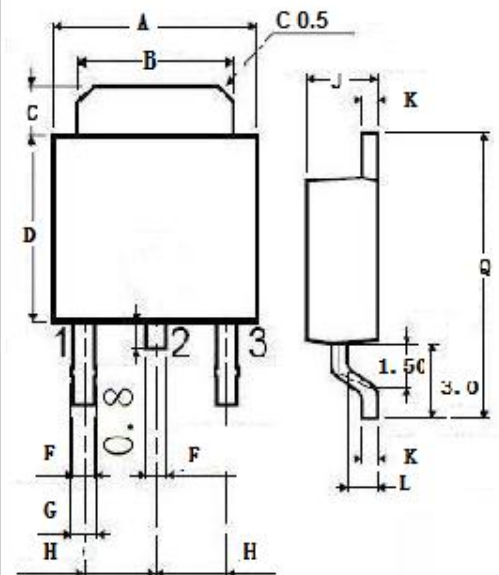


PIN: 1. Input

2. Ground

3. Output

TO-252 package



| DIM | mm | |
|-----|------|------|
| | MIN | MAX |
| A | 6.40 | 6.60 |
| B | 5.20 | 5.40 |
| C | 1.15 | 1.35 |
| D | 5.70 | 6.10 |
| F | 0.65 | |
| G | 0.75 | |
| H | 2.10 | 2.50 |
| J | 2.10 | 2.40 |
| K | 0.40 | 0.60 |
| L | 0.90 | 1.10 |
| Q | 9.90 | 10.1 |

isc Three Terminal Positive Voltage Regulator**NJM7805****• ELECTRICAL CHARACTERISTICS** $T_j=25^{\circ}\text{C}$ ($C_i=0.33\ \mu\text{F}$, $C_o=0.1\ \mu\text{F}$ unless otherwise specified)

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|--------------------------|--------------------------------------------------------------|-----|-----|------|
| V_o | Output Voltage | $V_{in}=10\text{V}$; $I_o=0.5\text{A}$ | 4.8 | 5.2 | V |
| ΔV_v | Line Regulation | $7\text{V}\leq V_{in}\leq 25\text{V}$; $I_o=0.5\text{A}$ | | 50 | mV |
| ΔV_i | Load Regulation | $5.0\text{mA}\leq I_o\leq 1.5\text{A}$; $V_{in}=10\text{V}$ | | 100 | mV |
| I_q | Quiescent Current | $V_{in}=10\text{V}$; $I_o=1.5\text{A}$ | | 6.0 | mA |
| Δ_{q1} | Quiescent Current Change | $5.0\text{mA}\leq I_o\leq 1.0\text{A}$; $V_{in}=10\text{V}$ | | 0.5 | mA |
| Δ_{q2} | Quiescent Current Change | $7\text{V}\leq V_{in}\leq 25\text{V}$; $I_o=0.5\text{A}$ | | 1.0 | mA |

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