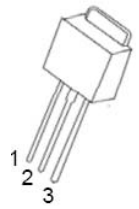
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

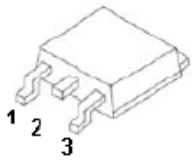
# TO-251-3L/TO-252-2L Plastic-Encapsulate Regulators

**CJ78M05** Three-terminal positive voltage regulator

**TO-251-3L**
**TO-252-2L**




1.IN
2.GND
3.OUT




## FEATURES

Maximum output current
$I_{OM}$: 0.5 A
Output voltage
$V_O$: 5V
Continuous total dissipation
$P_D$: 1.25 W

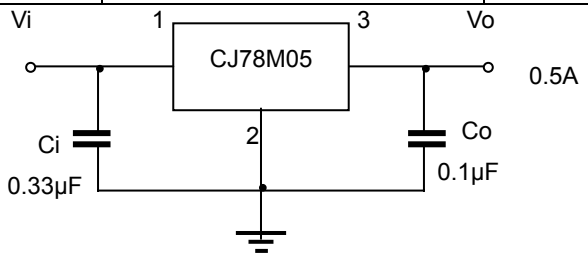
## ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| **Input Voltage** | $V_i$ | 25 | V |
| **Operating Junction Temperature Range** | $T_{OPR}$ | 0-+125 | ℃ |
| **Storage Temperature Range** | $T_{STG}$ | -65-+150 | ℃ |

**ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE** (Vi=10V,Io=350mA, Ci=0.33μF,Co=0.1μF,unless otherwise specified)

| Parameter | Symbol | Test conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| **Output Voltage** | Vo | | 25℃ | 4.8 | 5 | 5.2 | V |
| | | 7V≤$V_i$≤20V, Io=5mA-350mA Po≤ 15W | 0-125℃ | 4.75 | 5 | 5.25 | V |
| **Load Regulation** | ΔVo | Io=5mA-0.5A | 25℃ | | 15 | 100 | mV |
| | | Io=5mA-200mA | 25℃ | | 5 | 50 | mV |
| **Line Regulation** | ΔVo | 7V≤$V_i$≤25V, Io=200mA | 25℃ | | 3 | 100 | mV |
| | | 8V≤$V_i$≤25V, Io=200mA | 25℃ | | 1 | 50 | mV |
| **Quiescent Current** | Iq | | 25℃ | | 4.2 | 6 | mA |
| **Quiescent Current Change** | ΔIq | 8V≤$V_i$≤25V, Io=200mA | 0-125℃ | | | 0.8 | mA |
| | ΔIq | 5mA≤$I_O$≤350mA | 0-125℃ | | | 0.5 | mA |
| **Output Noise Voltage** | $V_N$ | 10Hz≤ f ≤100KHz | 25℃ | | 40 | 200 | μV |
| **Ripple Rejection** | RR | 8V≤$V_i$≤18V,f=120Hz,Io=300mA | 0-125℃ | 62 | 80 | | dB |
| **Dropout Voltage** | Vd | Io=350mA | 25℃ | | 2 | 2.5 | V |
| **Short Circuit Current** | Isc | Vi=10V | 25℃ | | 300 | | mA |
| **Peak Current** | Ipk | | 25℃ | | 0.5 | | A |

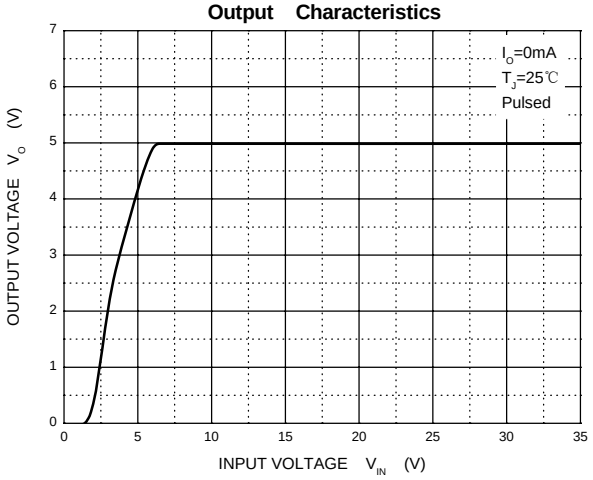
**TYPICAL APPLICATION**



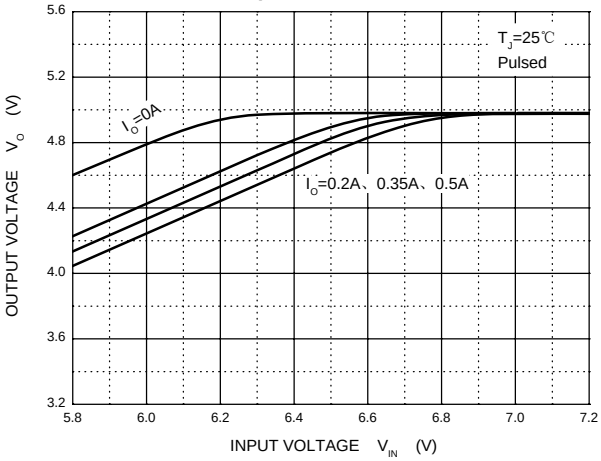

C,Apr,2014

# Typical Characterisitics CJ78M05

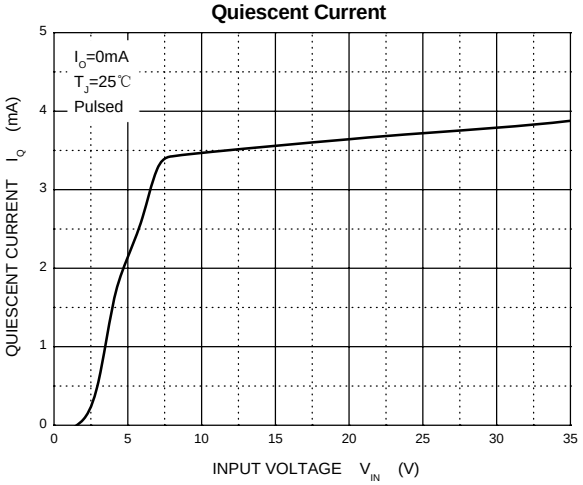
**Output Characteristics**



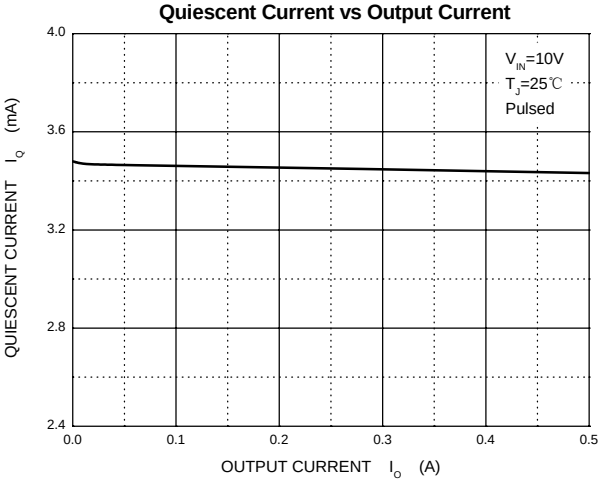

**Dropout Characteristics**



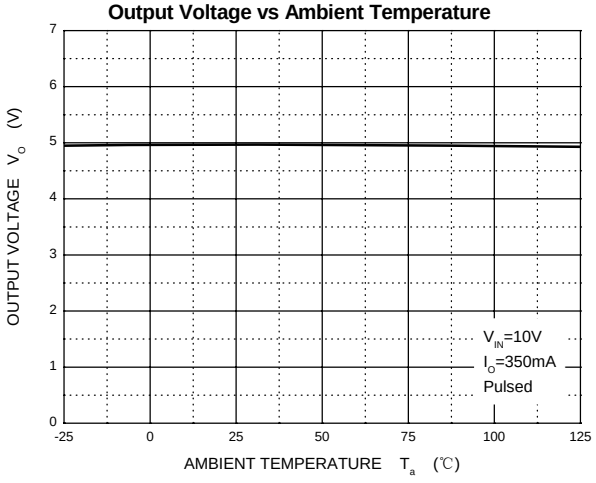

**Quiescent Current**



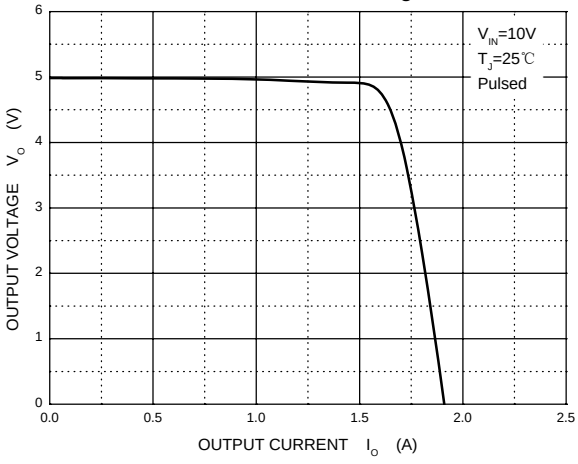

**Quiescent Current vs Output Current**



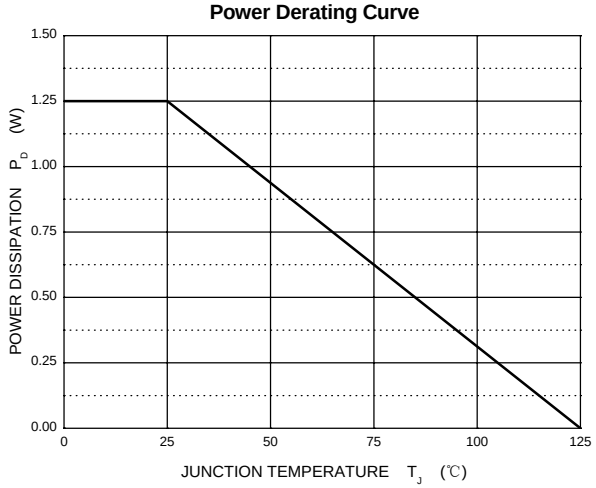

**Output Voltage vs Ambient Temperature**




**Current Cut-off Grid Voltage**




**Power Derating Curve**




C,Apr,2014