

## / Descriptions

TO-252 Voltage Regulator in a TO-252 Plastic Package.

## / Features

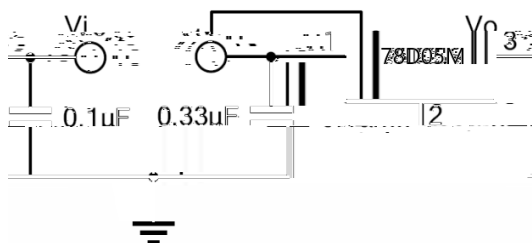
318D/

3-Terminal regulators ,output current up to 0.5A, internal thermal overload protection and short-circuit limiting, HF Product.

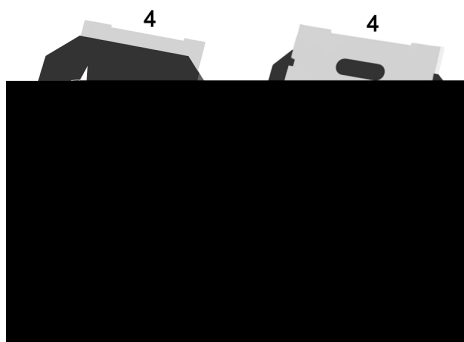
## / Applications

Voltage Regulator.

## / Equivalent Circuit or Application Circuit



## / Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

## / Marking

See Marking Instructions.

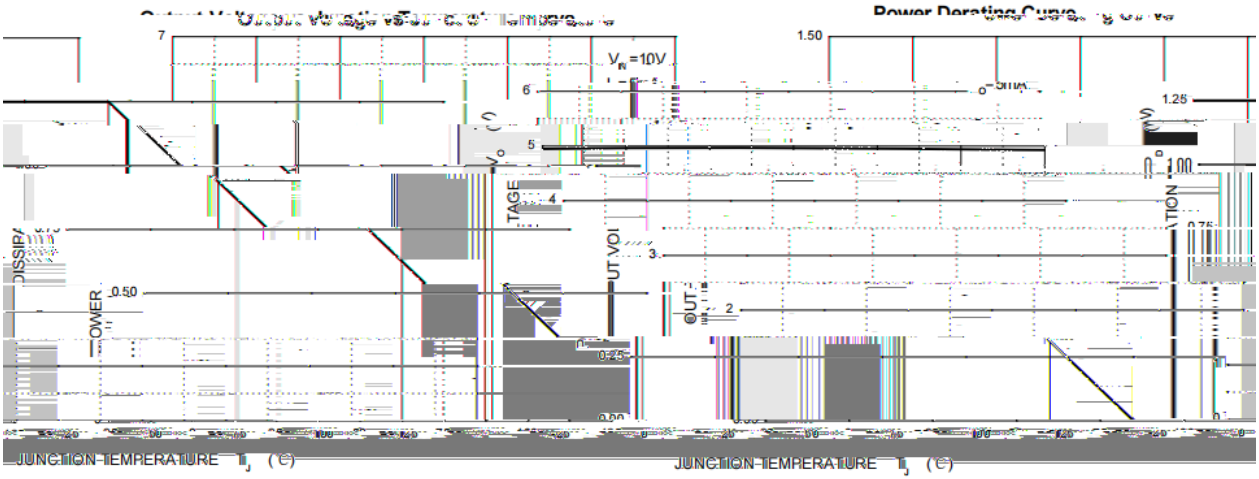
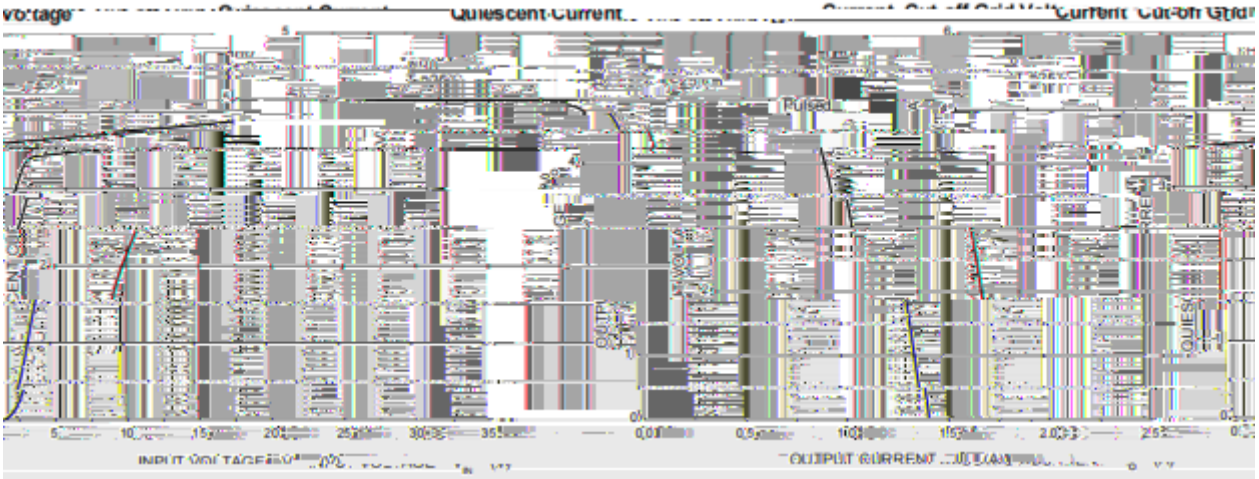
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                           | Symbol          | Rating             | Unit |
|-------------------------------------|-----------------|--------------------|------|
| Input voltage                       | $V_I$           | 35                 | V    |
| Power Dissipation                   | $P_D$           | Internally Limited | W    |
| Thermal Resistance Junction-Ambient | $R_{\theta JA}$ | 105                | /W   |
| Thermal Resistance Junction-Case    | $R_{\theta JC}$ | 10                 | /W   |
| Operating Temperature Range         | $T_{OPR}$       | -40 125            |      |
| Storage temperature range           | $T_{stg}$       | -65 150            |      |

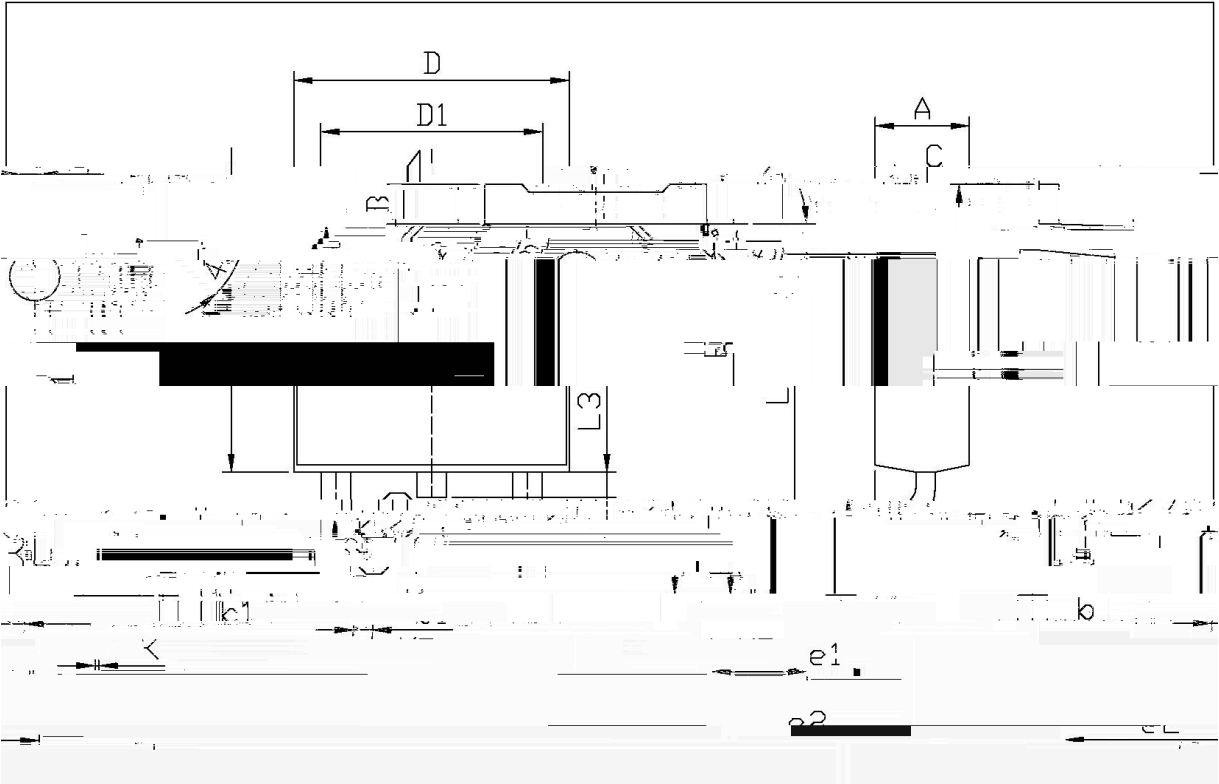
**/ Electrical Characteristics( $V_i=10V, I_o=350mA, T_j=0 \sim 125$  ,unless otherwise specified**

| Parameter                | Symbol     | Test Conditions                           | Min  | Typ | Max  | Unit        |
|--------------------------|------------|-------------------------------------------|------|-----|------|-------------|
| Output Voltage           | $V_o$      | $T_j=25$                                  | 4.8  | 5.0 | 5.2  | V           |
|                          |            | $V_i=7V \sim 20V$<br>$I_o=5mA \sim 350mA$ | 4.75 | 5.0 | 5.25 | V           |
| Load Regulation          | $V_{Load}$ | $T_j=25 \quad I_o=5mA \sim 500mA$         |      |     | 100  | mV          |
|                          |            | $T_j=25 \quad I_o=5mA \sim 200mA$         |      |     | 50   | mV          |
| Line Regulation          | $V_{Line}$ | $T_j=25 \quad V_i=7V \sim 25V$            |      |     | 100  | mV          |
|                          |            | $T_j=25 \quad V_i=8V \sim 25V$            |      |     | 50   | mV          |
| Quiescent Current        | $I_q$      | $T_j=25$                                  |      |     | 6.0  | mA          |
| Quiescent Current Change | $I_q$      | $V_i=8V \sim 25V$                         |      |     | 0.8  | mA          |
|                          |            | $I_o=5mA \sim 350mA$                      |      |     | 0.5  | mA          |
| Output Voltage Drift     | $V_o / T$  | $I_o=5mA \quad T_j=0 \sim 125$            |      | 0.5 |      | mV/         |
| Output Noise Voltage     | eN         | B=10Hz~100KHz<br>$T_j=25$                 |      | 40  |      | $\mu V/V_o$ |
| Supply Voltage Rejection | SVR        | $V_i=8V \sim 18V \quad f=120Hz$           | 62   |     |      | dB          |
| Dropout Voltage          | $V_d$      | $T_j=25$                                  |      | 2.0 |      | V           |
| Short Circuit Current    | Isc        | $T_j=25$                                  |      | 700 |      | mA          |

/ Electrical Characteristic Curve



I Package Dimensions

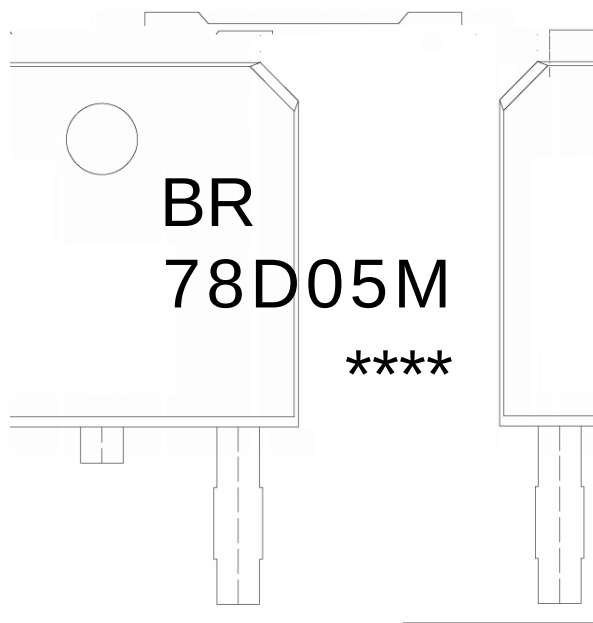


单位: mm

| Dimensions, Millimeters |      | Symbol |      | Dimensions, In Millimeters |     | Symbol |      |
|-------------------------|------|--------|------|----------------------------|-----|--------|------|
| Min                     | Max  |        |      | Min                        | Max |        |      |
| 0.10                    | 0.15 | B      | 0.95 | 4.25                       | e1  | 2.24   | 2.34 |
| 0.35                    | 0.40 |        | 0.70 | 0.60                       |     | 1.73   | 1.83 |
| 0.35                    | 0.40 |        | 0.15 | 0.55                       |     | 0.85   | 0.95 |
| 0.10                    | 0.15 |        | 0.55 | 0.55                       |     | 1.50   | 1.60 |
| 6.75                    | 6.75 |        | 0.60 | 0.60                       |     | 0.60   | 0.70 |
| 0.10                    | 0.10 |        | 5.10 | 5.50                       |     | 0.60   | 0.70 |

T0-252

/ Marking Instructions



EU

: ; G38 P

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Note:

BR: Company Code

78D05M: Product Type

\*\*\*\*: Lot No. Code, code change with Lot No



**/ Notices**

PCB