

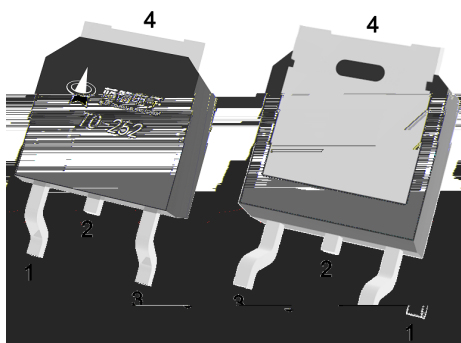
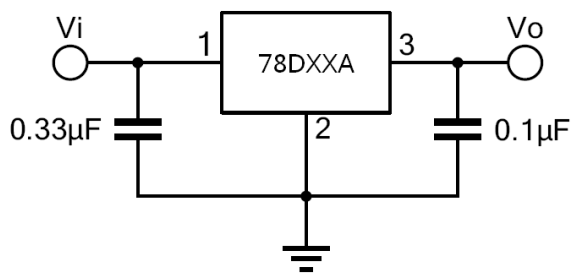
TO-252

Voltage Regulator in a TO-252 Plastic Package.

1.0A,

3-Terminal regulators ,output current up to 1.0A, internal thermal overload protection and short-circuit limiting, HF Product.

Voltage Regulator.



PIN1 IN

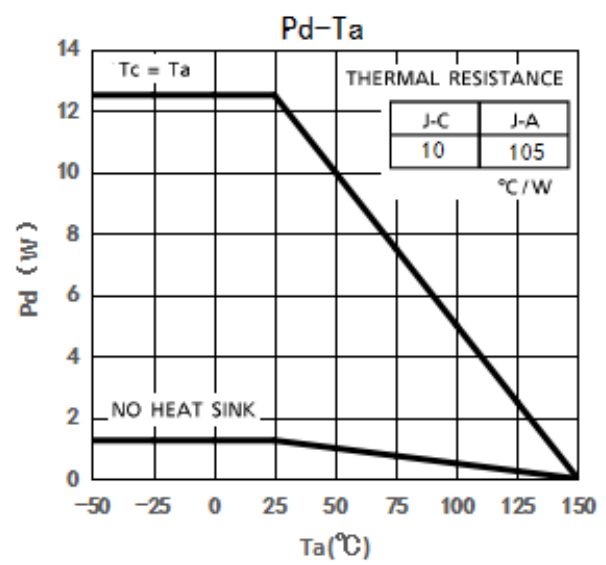
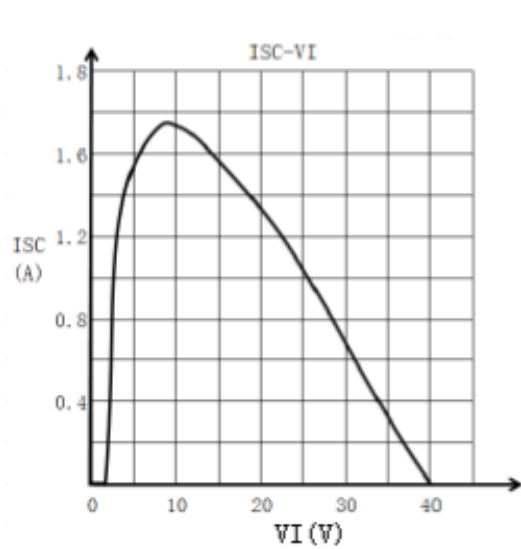
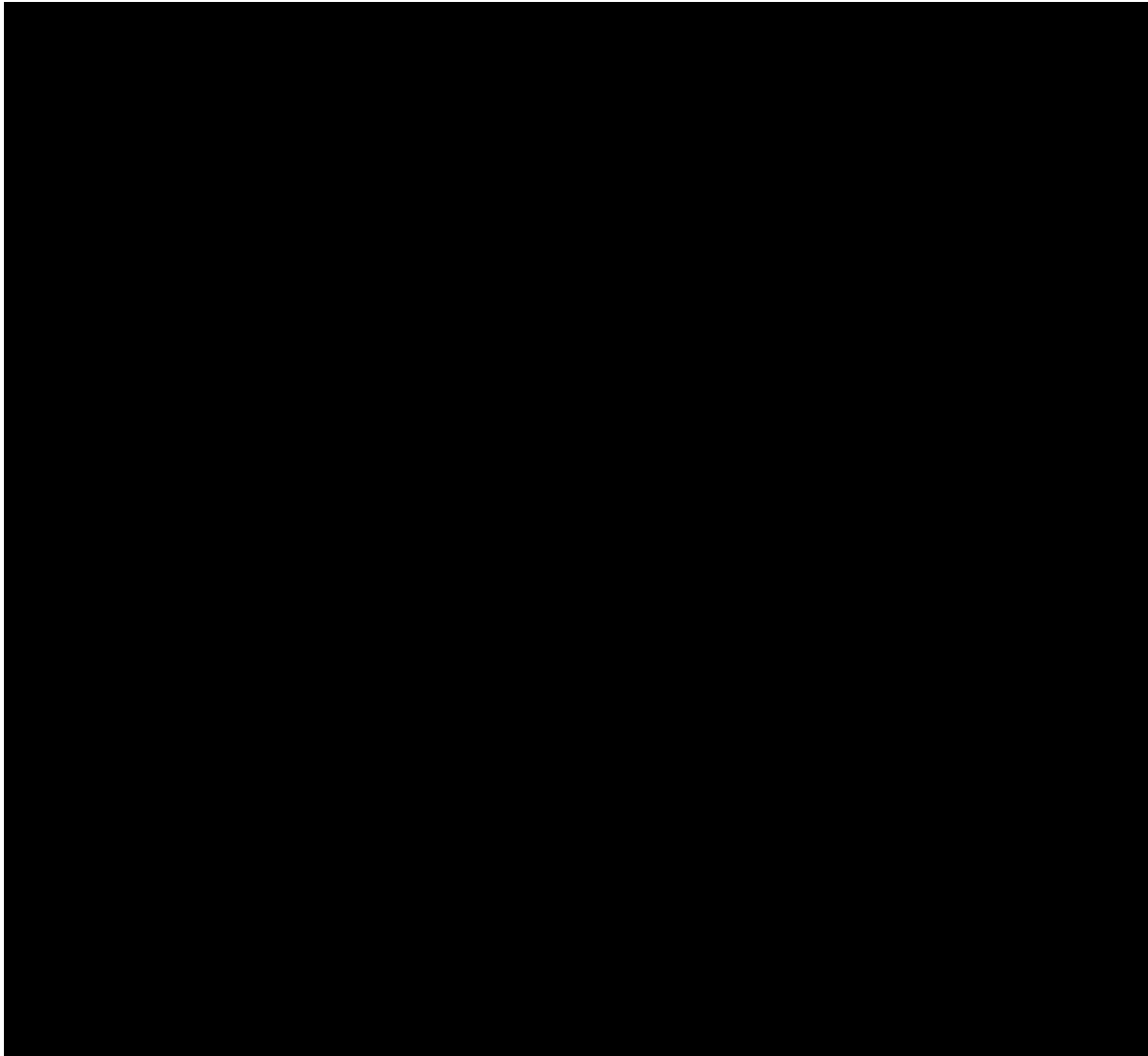
PIN 2 4 GND

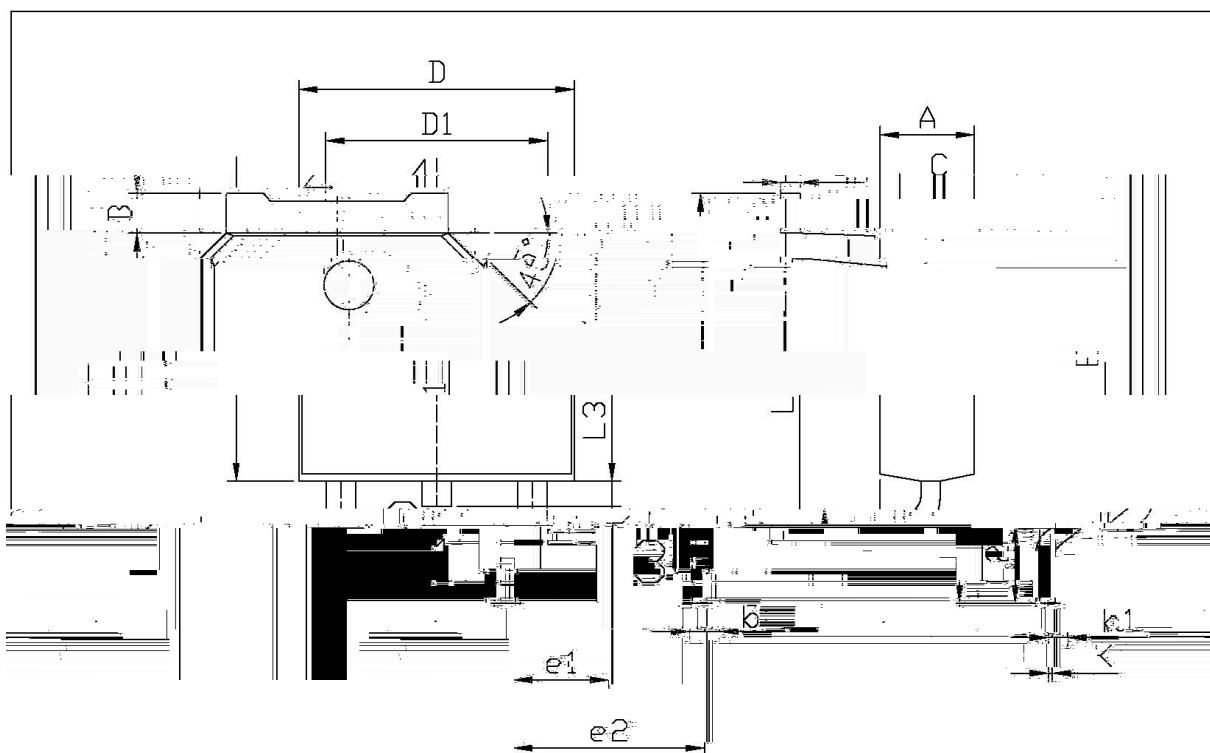
PIN 3 OUT

See Marking Instructions.

| Parameter                           | Symbol          | Rating             | Unit |
|-------------------------------------|-----------------|--------------------|------|
| Input voltage                       | $V_I$           | 17.5~35            | 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            |      |

| Parameter                | Symbol     | Test Conditions                                         | Min   | Typ  | Max   | Unit        |
|--------------------------|------------|---------------------------------------------------------|-------|------|-------|-------------|
| Output Voltage           | $V_O$      | $T_j=25$                                                | 14.4  | 15   | 15.6  | V           |
|                          |            | $V_i=17.5V\sim 30V$<br>$I_o=5mA\sim 1.0A$ $P_D\leq 15W$ | 14.25 | 15   | 15.75 | V           |
| Load Regulation          | $V_{Load}$ | $T_j=25$ $I_o=5mA\sim 1.0A$                             |       |      | 250   | mV          |
|                          |            | $T_j=25$<br>$I_o=250mA\sim 750mA$                       |       |      | 125   | mV          |
| Line Regulation          | $V_{Line}$ | $T_j=25$ $V_i=17.5V\sim 30V$                            |       |      | 250   | mV          |
|                          |            | $T_j=25$ $V_i=20V\sim 26V$                              |       |      | 125   | mV          |
| Quiescent Current        | $I_q$      | $T_j=25$                                                |       |      | 8.0   | mA          |
| Quiescent Current Change | $I_q$      | $V_i=17.5V\sim 30V$                                     |       |      | 1.0   | mA          |
|                          |            | $I_o=5mA\sim 1.0A$                                      |       |      | 0.5   | mA          |
| Output Voltage Drift     | $V_O / T$  | $I_o=5mA$ $T_j=0\sim 125$                               |       | -1.0 |       | mV/         |
| Output Noise Voltage     | eN         | B=10Hz~100KHz<br>$T_j=25$                               |       | 10   |       | $\mu V/V_O$ |
| Supply Voltage Rejection | SVR        | $V_i=18.5V\sim 28.5V$ $f=120Hz$                         | 54    |      |       | dB          |
| Dropout Voltage          | $V_d$      | $I_o=1.0A$ $T_j=25$                                     |       | 2.0  |       | V           |
| Output Resistance        | $R_o$      | $f=1KHz$                                                |       | 19   |       | m $\Omega$  |
| Short Circuit Current    | Isc        | $V_i=35V$ $T_j=25$                                      |       | 200  |       | mA          |

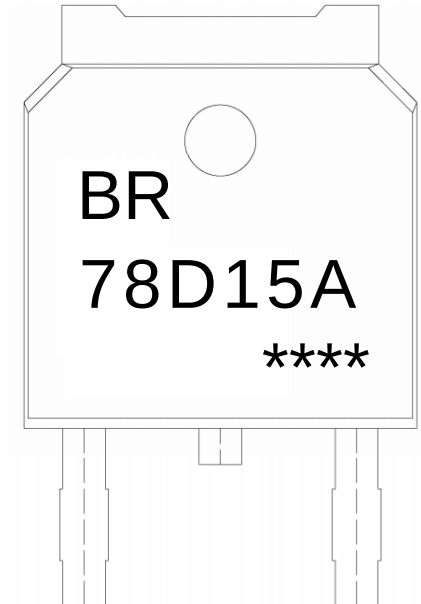




单位: mm

| Symbol | Dimensions In Millimeters |      | Symbol | Dimensions In Millimeters |      |
|--------|---------------------------|------|--------|---------------------------|------|
|        | Min                       | Max  |        | Min                       | Max  |
| A      | 2.25                      | 2.40 | E      | 5.95                      | 6.10 |
| B      | 0.95                      | 1.25 | e1     | 2.24                      | 2.40 |
| b      | 0.70                      | 0.90 | e2     | 4.43                      | 4.60 |
| D1     | 0.45                      | 0.55 | L1     | 9.3                       | 9.5  |
| D      | 0.55                      | 0.70 | L2     | 1.70                      | 2.00 |
| L3     | 0.90                      | 1.15 | L3     | 0.9                       | 1.1  |
| 0.00   | 0.10                      |      | D1     | 5.10                      | 5.50 |
|        |                           |      | K      |                           |      |

T0-252



BR

78D15A

Note:

BR: Company Code

78D15A: Product Type

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

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |     |     |    |         |                                                |
|---|-----|-----|----|---------|------------------------------------------------|
| 1 | 150 | 180 | 60 | 90sec;  | 1.Preheating:150~180 °C , Time:60~90sec.       |
| 2 | 245 | 5   | 5  | 0.5sec; | 2.Peak Temp.:245 ± 5 °C , Duration:5 ± 0.5sec. |
| 3 |     | 2   | 10 | /sec.   | 3. Cooling Speed: 2~10 °C/sec.                 |

260 ± 5 °C      10 ± 1 sec.      Temp.:260±5 °C      Time:10±1 sec

/ REEL

| Package Type | Units |   |       |   |        | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|-------|---|-------|---|--------|-----------------------------------|------------|-------------|
|              |       |   |       |   |        |                                   |            |             |
| TO-252       | 2,500 | 2 | 5,000 | 6 | 30,000 | 13 ×16                            | 360×360×50 | 380×335×366 |

/ TUBE

| Package Type | Units |    |       |   |        | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|-------|----|-------|---|--------|-----------------------------------|------------|-------------|
|              |       |    |       |   |        |                                   |            |             |
| TO-251/252   | 75    | 48 | 3,600 | 5 | 18,000 | 526×20.5×5.25                     | 555×164×50 | 575×290×180 |

PCB