



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MJE13002B

NPN Silicon Plastic-Encapsulate Transistor

Features

- Capable of 900mWatts of Power Dissipation.
- Collector-current 0.8A
- Collector-base Voltage 600V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|--------|-----------|-----|-----|-------|
|--------|-----------|-----|-----|-------|

OFF CHARACTERISTICS

| | | | | |
|---------------|--|-----|-----|---------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_C=1.0mA$, $I_B=0$) | 400 | | Vdc |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=100\mu A$, $I_E=0$) | 600 | | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=100\mu A$, $I_C=0$) | 6.0 | | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=600Vdc$, $I_E=0$) | | 100 | μA |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=6.0Vdc$, $I_C=0$) | | 100 | μA |

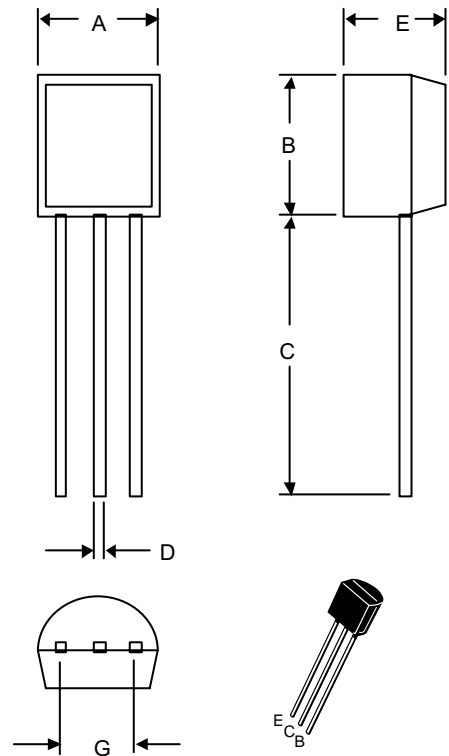
ON CHARACTERISTICS

| | | | | |
|---------------|--|-----|-----|-----|
| $h_{FE(1)}$ | DC Current Gain ($I_C=10mA$, $V_{CE}=10Vdc$) | 6 | | |
| $h_{FE(2)}$ | DC Current Gain ($I_C=200mA$, $V_{CE}=10Vdc$) | 9.0 | 40 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=200mA$, $I_B=40mA$) | | 0.5 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage ($I_C=200mA$, $I_B=40mA$) | | 1.1 | Vdc |

SMALL-SIGNAL CHARACTERISTICS

| | | | | |
|-------|--|------------------------------|-----|---------|
| f_T | Transistor Frequency ($I_C=10mA$, $V_{CE}=10Vdc$, $f=1.0MHz$) | 5.0 | | MHz |
| t_F | Fall Time | $V_{CC}=100V$, $I_C=1.0A$, | 0.5 | μS |
| t_S | Storage Time | $I_{B1}=I_{B2}=0.2A$ | 2.5 | μS |

TO-92



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .175 | .185 | 4.45 | 4.70 | |
| B | .175 | .185 | 4.46 | 4.70 | |
| C | .500 | --- | 12.7 | --- | |
| D | .016 | .020 | 0.41 | 0.63 | |
| E | .135 | .145 | 3.43 | 3.68 | |
| G | .095 | .105 | 2.42 | 2.67 | |



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Ordering Information :

| Device | Packing |
|----------------|------------------------------|
| Part Number-AP | Ammo Packing: 2Kpcs/Ammo Box |
| Part Number-BP | Bulk: 100Kpcs/Carton |

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