



## MC818B

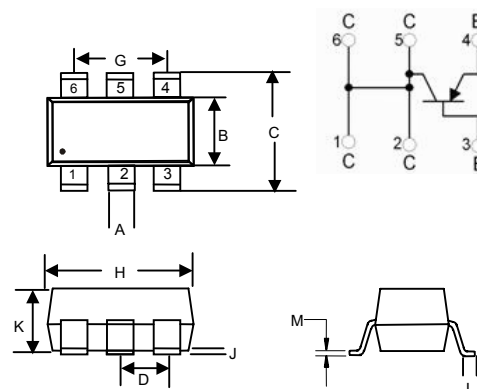
### PNP Plastic-Encapsulate Transistors

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant (P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 818B

| Symbol          | Parameter                                | Value      | Unit |
|-----------------|------------------------------------------|------------|------|
| $V_{CEO}$       | Collector-Emitter Voltage                | -30        | V    |
| $V_{CBO}$       | Collector-Base Voltage                   | -30        | V    |
| $V_{EBO}$       | Emitter-Base Voltage                     | -5         | V    |
| $I_C$           | Collector Current Continuous             | -3         | A    |
| $T_J$           | Junction Temperature                     | 150        | °C   |
| $T_{STG}$       | Storage Temperature Range                | -55 to 150 | °C   |
| $P_{tot}$       | Total Dissipation $T_c=25^\circ\text{C}$ | 1.2        | W    |
| $R_{\theta JA}$ | Thermal Resistance, Junction-to-Ambient  | 357        | °C/W |

### SOT-23-6L



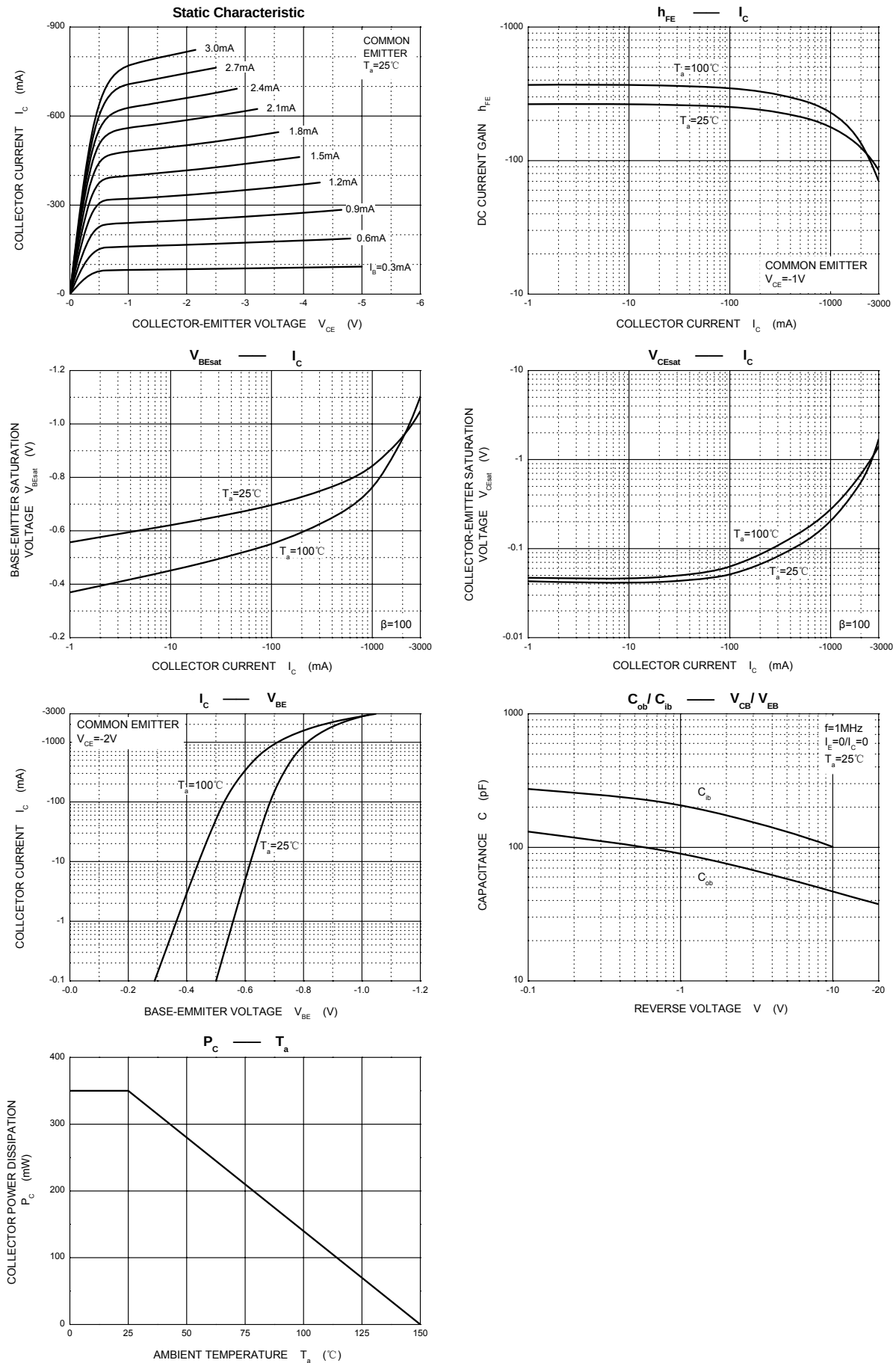
| DIMENSIONS |        |      |         |      |      |
|------------|--------|------|---------|------|------|
| DIM        | INCHES |      | MM      |      | NOTE |
|            | MIN    | MAX  | MIN     | MAX  |      |
| A          | .012   | .020 | 0.30    | 0.50 |      |
| B          | .059   | .067 | 1.50    | 1.70 |      |
| C          | .104   | .116 | 2.65    | 2.95 |      |
| D          | .037   |      | 0.95BSC |      |      |
| G          | .071   | .079 | 1.80    | 2.00 |      |
| H          | .111   | .119 | 2.82    | 3.02 |      |
| J          | .000   | .004 | 0.00    | 0.10 |      |
| K          | .041   | .045 | 1.05    | 1.15 |      |
| L          | .012   | .024 | 0.30    | 0.60 |      |
| M          | .004   | .008 | 0.10    | 0.20 |      |

# **ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)**

| Parameter                            | Symbol          | Test conditions                       | Min | Typ | Max   | Unit          |
|--------------------------------------|-----------------|---------------------------------------|-----|-----|-------|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$   | $I_C=-100\mu\text{A}, I_E=0$          | -30 |     |       | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}^*$ | $I_C=-10\text{mA}, I_B=0$             | -30 |     |       | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$   | $I_E=-100\mu\text{A}, I_C=0$          | -5  |     |       | V             |
| Collector cut-off current            | $I_{CBO}$       | $V_{CB}=-30\text{V}, I_E=0$           |     |     | -0.1  | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$       | $V_{EB}=-5\text{V}, I_C=0$            |     |     | -0.1  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}^*$      | $V_{CE}=-1\text{V}, I_C=-0.5\text{A}$ | 100 |     |       |               |
|                                      |                 | $V_{CE}=-3\text{V}, I_C=-2.5\text{A}$ | 100 |     |       |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}^*$ | $I_C=-0.5\text{A}, I_B=-5\text{mA}$   |     |     | -0.15 | V             |
|                                      |                 | $I_C=-1.2\text{A}, I_B=-12\text{mA}$  |     |     | -0.45 | V             |
|                                      |                 | $I_C=-2\text{A}, I_B=-20\text{mA}$    |     |     | -0.8  | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}^*$ | $I_C=-0.5\text{A}, I_B=-5\text{mA}$   |     |     | -1.1  | V             |
|                                      |                 | $I_C=-1.2\text{A}, I_B=-12\text{mA}$  |     |     | -1.1  | V             |
|                                      |                 | $I_C=-2\text{A}, I_B=-20\text{mA}$    |     |     | -1.2  | V             |
| Base-emitter on voltage              | $V_{BE(on)}^*$  | $I_C=-0.5\text{A}, V_{CE}=-2\text{V}$ |     |     | -1.1  | V             |

\*Pulse test: Pulse width $\leq 300\mu\text{s}$ , duty cycle $\leq 2.0\%$ .

## Typical Characteristics





## Ordering Information :

| Device         | Packing              |
|----------------|----------------------|
| Part Number-TP | Tape&Reel:3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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