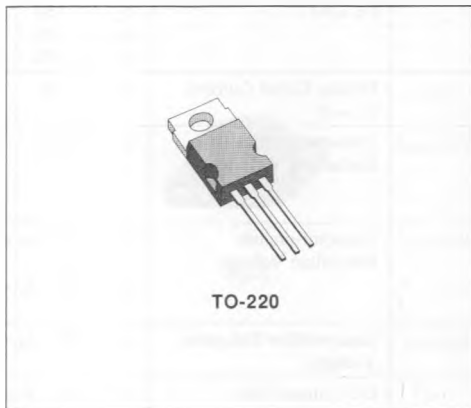


PNP LOW VOLTAGE TRANSISTOR

PRELIMINARY DATA

- LOW COLLECTOR SATURATION VOLTAGE
- EXCELLENT LINEARITY

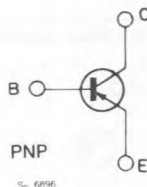


DESCRIPTION

The D45H1, D45H2, D45H4, D45H5, D45H7, D45H8 and D45H10 are silicon multi-epitaxial planar PNP transistors in TO-220 plastic package, intended for switching and general purpose applications.

The complementary NPN types are the D44H1, D44H2, D44H4, D44H5, D44H7, D44H8 and D44H10 respectively.

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | | | | Unit |
|-----------|---|----------------|----------------|----------------|--------|------------------|
| | | D45H1 D45H2 | D45H4 D45H5 | D45H7 D45H8 | D45H10 | |
| V_{CBO} | Collector-base Voltage ($I_E = 0$) | - 30 | - 45 | - 60 | - 80 | V |
| V_{CEO} | Collector-emitter Voltage ($I_B = 0$) | - 30 | - 45 | - 60 | - 80 | V |
| V_{EBO} | Emitter-base Voltage ($I_C = 0$) | - 5 | | | | V |
| I_C | Collector Current | - 10 | | | | A |
| I_{CM} | Collector Peak Current | - 20 | | | | A |
| I_B | Base Current | - 5 | | | | mA |
| P_{tot} | Total Dissipation at $T_C < 25^\circ\text{C}$ | 50 | | | | W |
| T_{stg} | Storage Temperature | - 55 to 150 | | | | $^\circ\text{C}$ |
| T_j | Max. Operating Junction Temperature | 150 | | | | $^\circ\text{C}$ |

THERMAL DATA

| | | | | |
|------------------|----------------------------------|-----|-----|------|
| $R_{th(j-case)}$ | Thermal Resistance Junction-case | max | 2.5 | °C/W |
|------------------|----------------------------------|-----|-----|------|

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|-----------------|---|--|--------------------------|-----------------------|--------------------------|--|
| I_{CBO} | Collector Cutoff Current ($I_E = 0$) | $V_{CB} = -30\text{V}$ for D45H1/2 $V_{CB} = -45\text{V}$ for D45H4/5 $V_{CB} = -60\text{V}$ for D45H7/8 $V_{CB} = -80\text{V}$ for D45H10 | | | -10 -10 -10 -10 | μA μA μA μA |
| I_{EBO} | Emitter Cutoff Current ($I_C = 0$) | $V_{EB} = -5\text{V}$ | | | -0.1 | mA |
| $V_{CE(sus)}^*$ | Collector-emitter Sustaining Voltage | $I_C = -0.1\text{A}$ for D45H1/2 for D45H4/5 for D45H7/8 for D45H10 | -30 -45 -60 -80 | | | V V V V |
| $V_{CE(sat)}^*$ | Collector-emitter Saturation Voltage | $I_C = -8\text{A}$ $I_B = -0.4\text{A}$ for D45H2/5/8 $I_C = -8\text{A}$ $I_B = -0.8\text{A}$ for D45H1/4/7/10 | | | -1 -1 | V V |
| $V_{BE(sat)}^*$ | Base-emitter Saturation Voltage | $I_C = -8\text{A}$ $I_B = -0.8\text{A}$ | | | -1.5 | V |
| h_{FE}^* | DC Current Gain | $I_C = -2\text{A}$ $V_{CE} = -1\text{V}$ for D45H2/5/8 for D45H1/4/7/10 $I_C = -4\text{A}$ $V_{CE} = -1\text{V}$ for D45H2/5/8 for D45H1/4/7/10 | 60 35 40 20 | 120 60 70 50 | | |

* Pulsed : Pulse duration = 300 μs , duty cycle = 1.5%.