



# D45H5 D45H8 \ D45H11

## PNP SILICON POWER TRANSISTORS

- STM PREFERRED SALESTYPES
- LOW COLLECTOR-EMITTER SATURATION VOLTAGE
- FAST SWITCHING SPEED

### APPLICATIONS

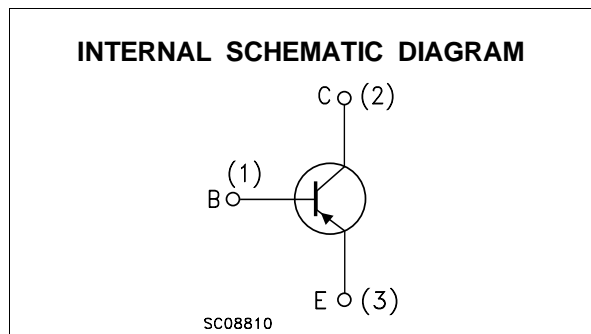
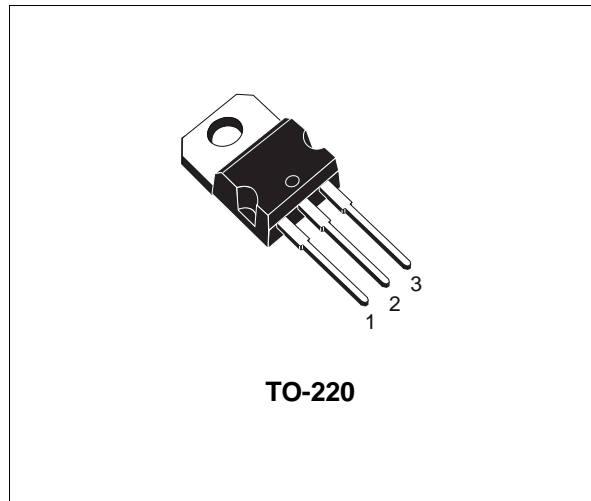
- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE SWITCHING AND AMPLIFIER

### DESCRIPTION

The D45H5, D45H8 and D45H11 are silicon multi-epitaxial planar PNP transistors mounted in Jedec TO-220 plastic package.

They are intended for various switching and general purpose applications.

D45H8, D45H11 are complementary with D44H8, D44H11.



### ABSOLUTE MAXIMUM RATINGS

| Symbol    | Parameter                                  | Value      |       |        | Unit       |
|-----------|--|------------|-------|--------|------------|
|           |  | D45H5      | D45H8 | D45H11 |            |
| $V_{CEO}$ | Collector-Emitter Voltage ( $I_B = 0$ )    | -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         |       |        | A          |
| $P_{tot}$ | Total Dissipation at $T_c \leq 25^\circ C$ | 50         |       |        | W          |
| $T_{stg}$ | Storage Temperature                        | -65 to 150 |       |        | $^\circ C$ |
| $T_j$     | Max. Operating Junction Temperature        | 150        |       |        | $^\circ C$ |

## D45H5/D45H8/D45H11

### THERMAL DATA

|                       |                                  |     |     |      |
|-----------------------|----------------------------------|-----|-----|------|
| R <sub>thj-case</sub> | Thermal Resistance Junction-case | Max | 2.5 | °C/W |
|-----------------------|----------------------------------|-----|-----|------|

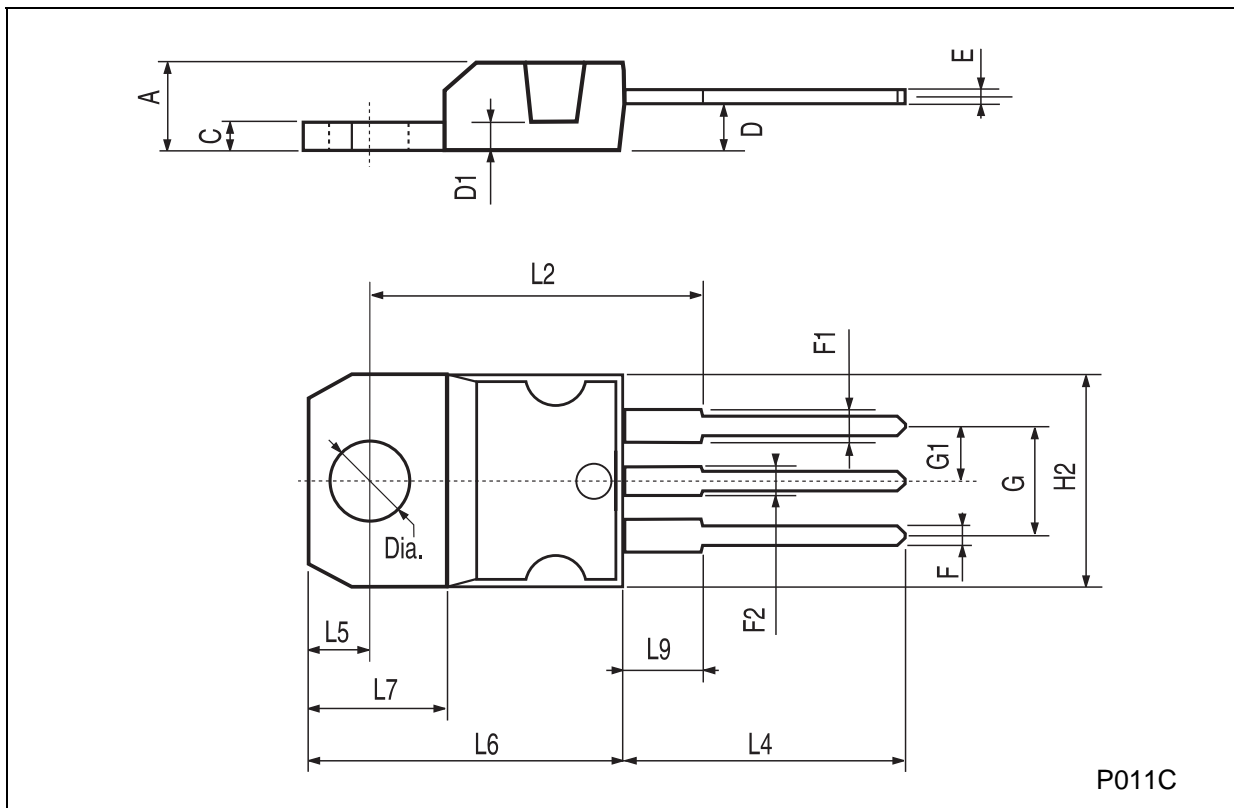
### ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

| Symbol                  | Parameter                                      | Test Conditions  | Min.              | Typ.      | Max.     | Unit   |
|-------------------------|--|--|-------------------|-----------|----------|--------|
| I <sub>CBO</sub>        | Collector Cut-off Current (I <sub>E</sub> = 0) | V <sub>CB</sub> = rated V <sub>CEO</sub>   |                   |           | -10      | μA     |
| I <sub>EBO</sub>        | Emitter Cut-off Current (I <sub>C</sub> = 0)   | V <sub>EB</sub> = -5V  |                   |           | -100     | μA     |
| V <sub>CEO(sus)</sub> * | Collector-Emitter Sustaining Voltage           | I <sub>C</sub> = -100 mA<br>for <b>D45H5</b><br>for <b>D45H8</b><br>for <b>D45H11</b>                | -45<br>-60<br>-80 |           |          | V<br>V |
| V <sub>CE(sat)</sub> *  | Collector-Emitter Saturation Voltage           | I <sub>C</sub> = -8 A    I <sub>B</sub> = -0.4 A<br>I <sub>C</sub> = -8 A    I <sub>B</sub> = -0.8 A |                   |           | -1<br>-1 | V<br>V |
| V <sub>BE(sat)</sub> *  | Base-Emitter Saturation Voltage                | I <sub>C</sub> = -8 A    I <sub>B</sub> = -0.8 A   |                   |           | -1.5     | V      |
| h <sub>FE</sub> *       | DC Current Gain                                | I <sub>C</sub> = -2 A    V <sub>CE</sub> = -1 V<br>I <sub>C</sub> = -4 A    V <sub>CE</sub> = -1 V   | 60<br>40          | 120<br>70 |          |        |

\* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %

**TO-220 MECHANICAL DATA**

| DIM. | mm    |      |       | inch  |       |       |
|------|-------|------|-------|-------|-------|-------|
|      | MIN.  | TYP. | MAX.  | MIN.  | TYP.  | MAX.  |
| A    | 4.40  |      | 4.60  | 0.173 |       | 0.181 |
| C    | 1.23  |      | 1.32  | 0.048 |       | 0.051 |
| D    | 2.40  |      | 2.72  | 0.094 |       | 0.107 |
| D1   |       | 1.27 |       |       | 0.050 |       |
| E    | 0.49  |      | 0.70  | 0.019 |       | 0.027 |
| F    | 0.61  |      | 0.88  | 0.024 |       | 0.034 |
| F1   | 1.14  |      | 1.70  | 0.044 |       | 0.067 |
| F2   | 1.14  |      | 1.70  | 0.044 |       | 0.067 |
| G    | 4.95  |      | 5.15  | 0.194 |       | 0.203 |
| G1   | 2.4   |      | 2.7   | 0.094 |       | 0.106 |
| H2   | 10.0  |      | 10.40 | 0.393 |       | 0.409 |
| L2   |       | 16.4 |       |       | 0.645 |       |
| L4   | 13.0  |      | 14.0  | 0.511 |       | 0.551 |
| L5   | 2.65  |      | 2.95  | 0.104 |       | 0.116 |
| L6   | 15.25 |      | 15.75 | 0.600 |       | 0.620 |
| L7   | 6.2   |      | 6.6   | 0.244 |       | 0.260 |
| L9   | 3.5   |      | 3.93  | 0.137 |       | 0.154 |
| DIA. | 3.75  |      | 3.85  | 0.147 |       | 0.151 |



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