NEW PRODUCT

## Electrical Characteristics @$T_A$ = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| **OFF CHARACTERISTICS (Note 4)** | | | | | | |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -80 | — | — | V | $I_C$ = -100μA, $I_E$ = 0 |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -60 | — | — | V | $I_C$ = -10mA, $I_B$ = 0 |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | — | — | V | $I_E$ = -100μA, $I_C$ = 0 |
| Collector Cutoff Current | $I_{CBO}$ | — | — | -0.1<br>-10 | μA<br>μA | $V_{CB}$ = -60V, $I_E$ = 0<br>$V_{CB}$ = -60V, $I_E$ = 0, $T_A$ = 100°C |
| Emitter Cutoff Current | $I_{EBO}$ | — | — | -0.1 | μA | $V_{EB}$ = -4V, $I_C$ = 0 |
| **ON CHARACTERISTICS (Note 4)** | | | | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | —<br>— | -0.08<br>-0.2 | -0.3<br>-0.6 | V | $I_C$ = -1A, $I_B$ = -100mA<br>$I_C$ = -3A, $I_B$ = -300mA |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | — | -0.9 | -1.25 | V | $I_C$ = -1A, $I_B$ = -100mA |
| Base-Emitter Turn-On Voltage | $V_{BE(ON)}$ | — | -0.8 | -1 | V | $V_{CE}$ = -2V, $I_C$ = -1A |
| DC Current Gain | $h_{FE}$ | 70<br>100<br>80<br>40 | 200<br>180<br>160<br>140 | —<br>300<br>—<br>— | — | $V_{CE}$ = -2V, $I_C$ = -50mA<br>$V_{CE}$ = -2V, $I_C$ = -500mA<br>$V_{CE}$ = -2V, $I_C$ = -1A<br>$V_{CE}$ = -2V, $I_C$ = -2A |
| **AC CHARACTERISTICS** | | | | | | |
| Transition Frequency | $f_T$ | 100 | 145 | — | MHz | $V_{CE}$ = -10V, $I_C$ = -50mA, f = 100MHz |
| Output Capacitance | $C_{obo}$ | — | — | 30 | pF | $V_{CB}$ = -10V, f = 1MHz |
| Switching Times | $t_{on}$<br>$t_{off}$ | —<br>— | 45<br>200 | —<br>— | ns<br>ns | $I_C$ = -500mA, $V_{CC}$ = -10V<br>$I_{B1}$ = $I_{B2}$ = -50mA |

Notes: 4. Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤2%.

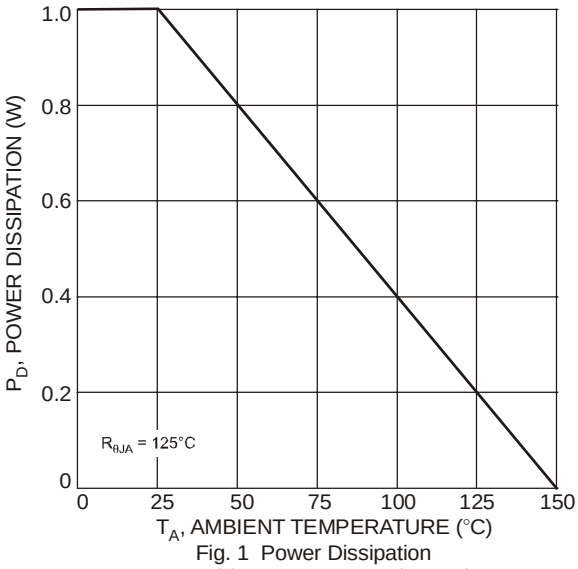



Fig. 1 Power Dissipation vs. Ambient Temperature (Note 3)

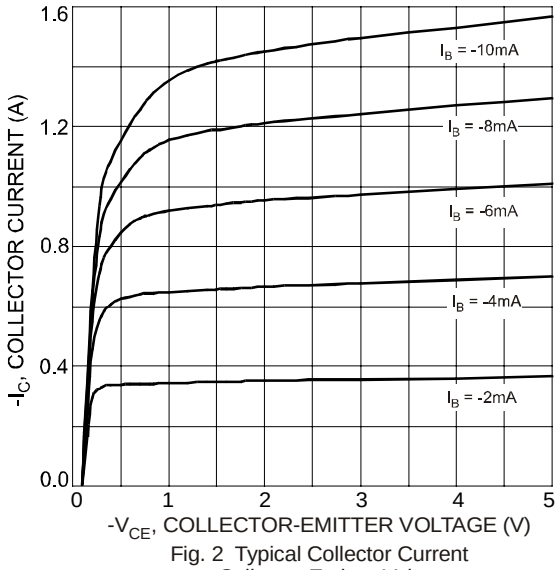



Fig. 2 Typical Collector Current vs. Collector-Emitter Voltage

NEW PRODUCT

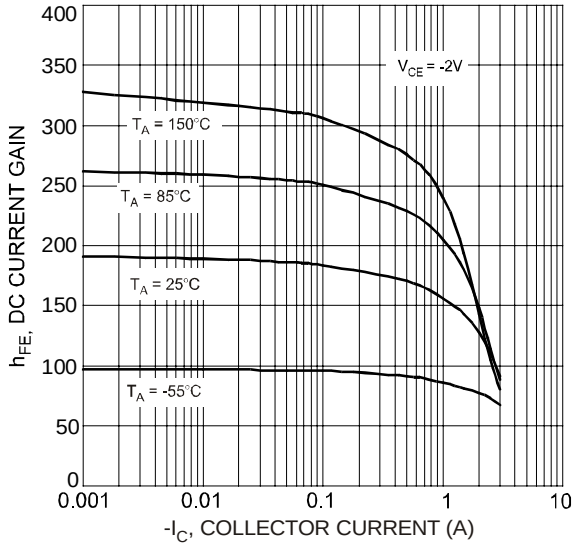



Fig. 3 Typical DC Current Gain vs. Collector Current

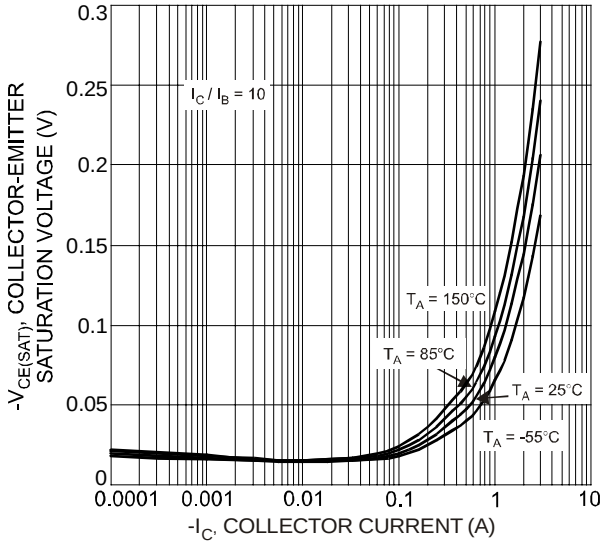



Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

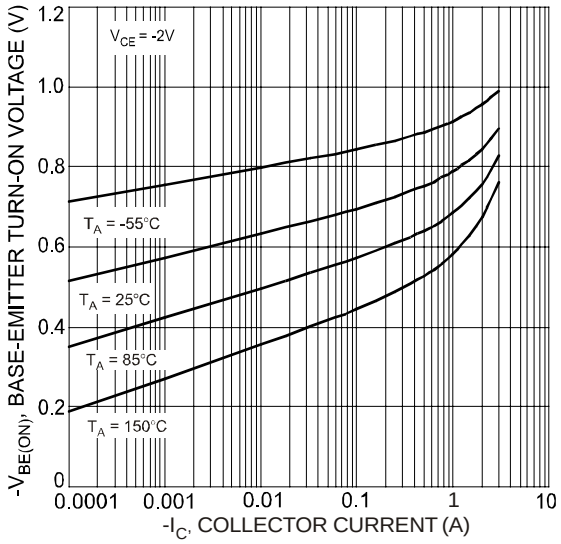



Fig. 5 Typical Base-Emitter Turn-On Voltage vs. Collector Current

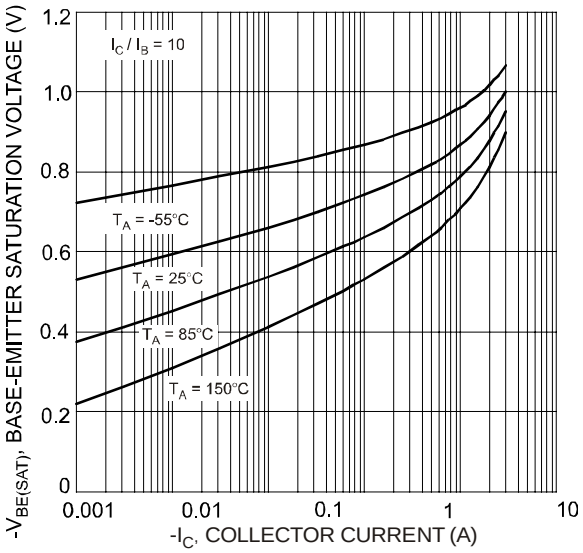



Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

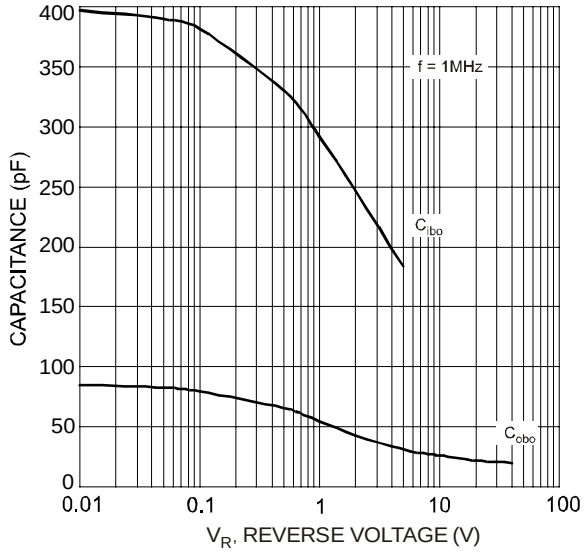



Fig. 7 Typical Capacitance Characteristics

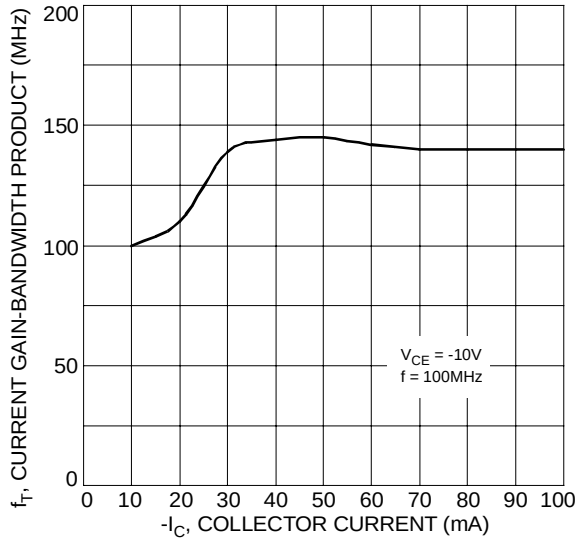



Fig. 8 Typical Gain-Bandwidth Product vs. Collector Current

NEW PRODUCT

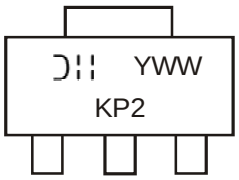
## Ordering Information (Note 5)

| Device | Packaging | Shipping |
|---|---|---|
| DXT751-13 | SOT89-3L | 2500/Tape & Reel |

Notes: 5. For packaging details, go to our website at http://www.diodes.com/ap02007.pdf.

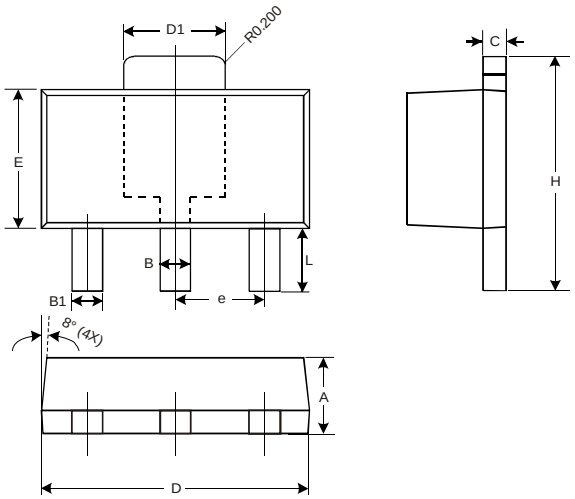
## Marking Information

(Top View)



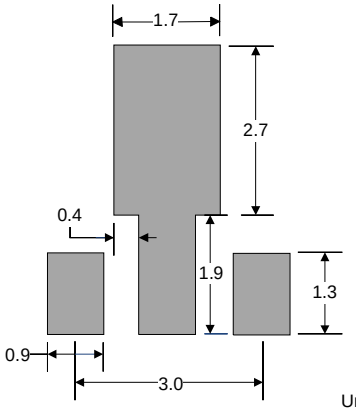

KP2 = Product Type Marking Code
YWW = Date Code Marking
Y = Last digit of year ex: 7 = 2007
WW = Week code 01 - 52

## Package Outline Dimensions




| SOT89-3L | | | |
|---|---|---|---|
| **Dim** | **Min** | **Max** | **Typ** |
| **A** | 1.40 | 1.60 | 1.50 |
| **B** | 0.45 | 0.55 | 0.50 |
| **B1** | 0.37 | 0.47 | 0.42 |
| **C** | 0.35 | 0.43 | 0.38 |
| **D** | 4.40 | 4.60 | 4.50 |
| **D1** | 1.50 | 1.70 | 1.60 |
| **E** | 2.40 | 2.60 | 2.50 |
| **e** | — | — | 1.50 |
| **H** | 3.95 | 4.25 | 4.10 |
| **L** | 0.90 | 1.20 | 1.05 |
| **All Dimensions in mm** | | | |

## Suggested Pad Layout




Unit: mm