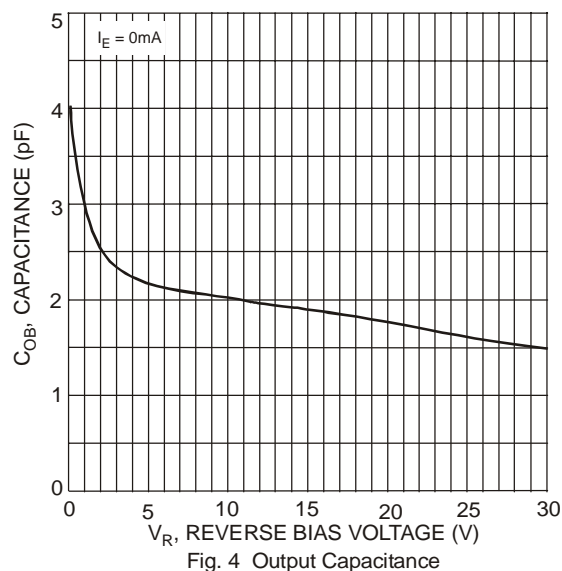
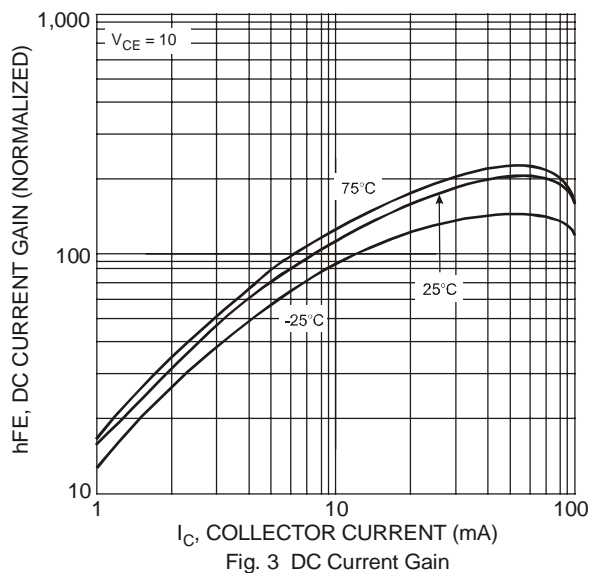
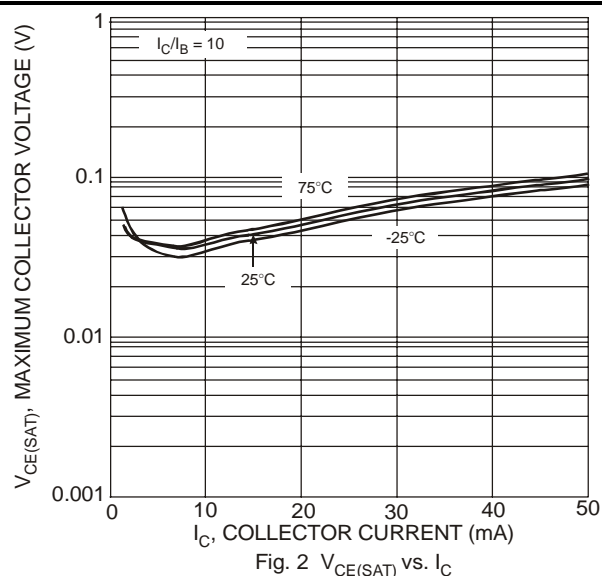
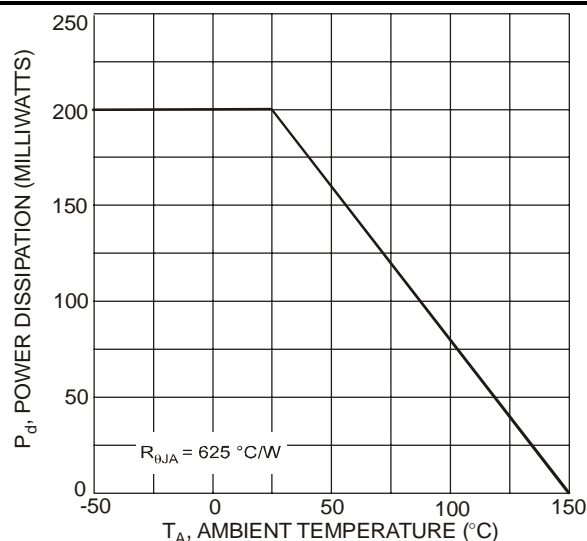


## Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic                               | Symbol               | Min                    | Typ | Max                     | Unit | Test Condition  |
|--|----------------------|------------------------|-----|-------------------------|------|---|
| Collector-Base Breakdown Voltage             | BV <sub>CBO</sub>    | 50                     | —   | —                       | V    | I <sub>C</sub> = 50μA   |
| Collector-Emitter Breakdown Voltage          | BV <sub>CEO</sub>    | 50                     | —   | —                       | V    | I <sub>C</sub> = 1mA  |
| Emitter-Base Breakdown Voltage               | BV <sub>EBO</sub>    | 5                      | —   | —                       | V    | I <sub>E</sub> = 720μA, DDTC114GUA<br>I <sub>E</sub> = 330μA, DDTC124GUA<br>I <sub>E</sub> = 160μA, DDTC144GUA<br>I <sub>E</sub> = 72μA, DDTC115GUA |
| Collector Cutoff Current                     | I <sub>CBO</sub>     | —                      | —   | 0.5                     | μA   | V <sub>CB</sub> = 50V   |
| Emitter Cutoff Current                       | I <sub>EBO</sub>     | 300<br>140<br>65<br>30 | —   | 580<br>260<br>130<br>58 | μA   | V <sub>EB</sub> = 4V<br>DDTC114GUA<br>DDTC124GUA<br>DDTC144GUA<br>DDTC115GUA  |
| Collector-Emitter Saturation Voltage         | V <sub>CE(sat)</sub> | —                      | —   | 0.3                     | V    | I <sub>C</sub> = 10mA, I <sub>B</sub> = 0.5mA   |
| DC Current Transfer Ratio                    | h <sub>FE</sub>      | 30<br>56<br>68<br>82   | —   | —                       | —    | I <sub>C</sub> = 5mA, V <sub>CE</sub> = 5V<br>DDTC114GUA<br>DDTC124GUA<br>DDTC144GUA<br>DDTC115GUA  |
| Bleeder Resistor (R <sub>2</sub> ) Tolerance | ΔR <sub>2</sub>      | -30                    | —   | +30                     | %    | —   |
| Gain-Bandwidth Product*                      | f <sub>T</sub>       | —                      | 250 | —                       | MHz  | V <sub>CE</sub> = 10V, I <sub>E</sub> = -5mA,<br>f = 100MHz   |

\* Transistor - For Reference Only

## Typical Characteristics – DDTC114GUA



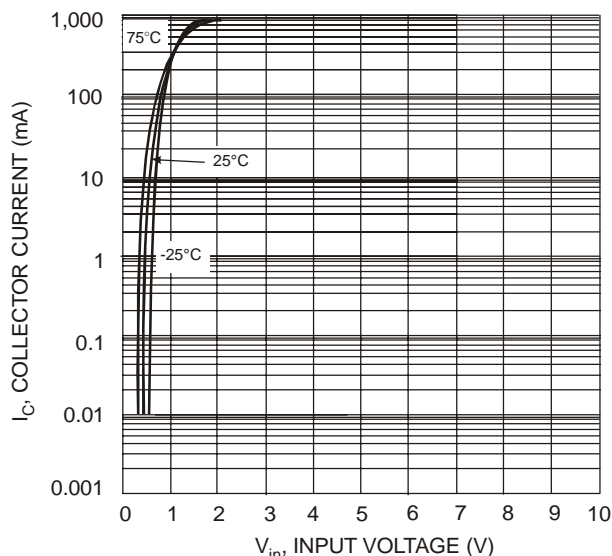


Fig. 5 Collector Current vs. Input Voltage

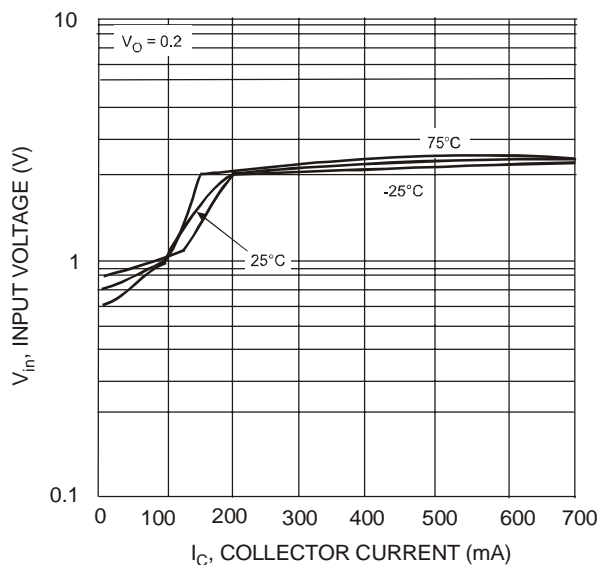


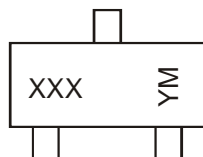
Fig. 6 Input Voltage vs. Collector Current

## Ordering Information (Note 4 & 5)

| Device         | Packaging | Shipping         |
|----------------|-----------|------------------|
| DDTC114GUA-7-F | SOT-323   | 3000/Tape & Reel |
| DDTC124GUA-7-F | SOT-323   | 3000/Tape & Reel |
| DDTC144GUA-7-F | SOT-323   | 3000/Tape & Reel |
| DDTC115GUA-7-F | SOT-323   | 3000/Tape & Reel |

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

## Marking Information



XXX = Product Type Marking Code, See Table on Page 1

YM = Date Code Marking

Y = Year ex: T = 2006

M = Month ex: 9 = September

### Date Code Key

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|------|
| Code | T    | U    | V    | W    | X    | Y    | Z    |

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code  | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | O   | N   | D   |

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