

BD233

Rev.E Mar.-2016

/ Descriptions

TO-126F NPN Silicon NPN transistor in a TO-126F Plastic Package.

/ Features

BD234
Complementary pair with BD234.

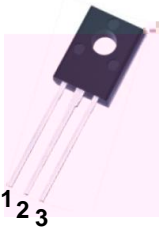
/ Applications

Medium power linear and switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Collector PIN 3 Base

/ h_{FE} Classifications & Marking

See Marking Instructions

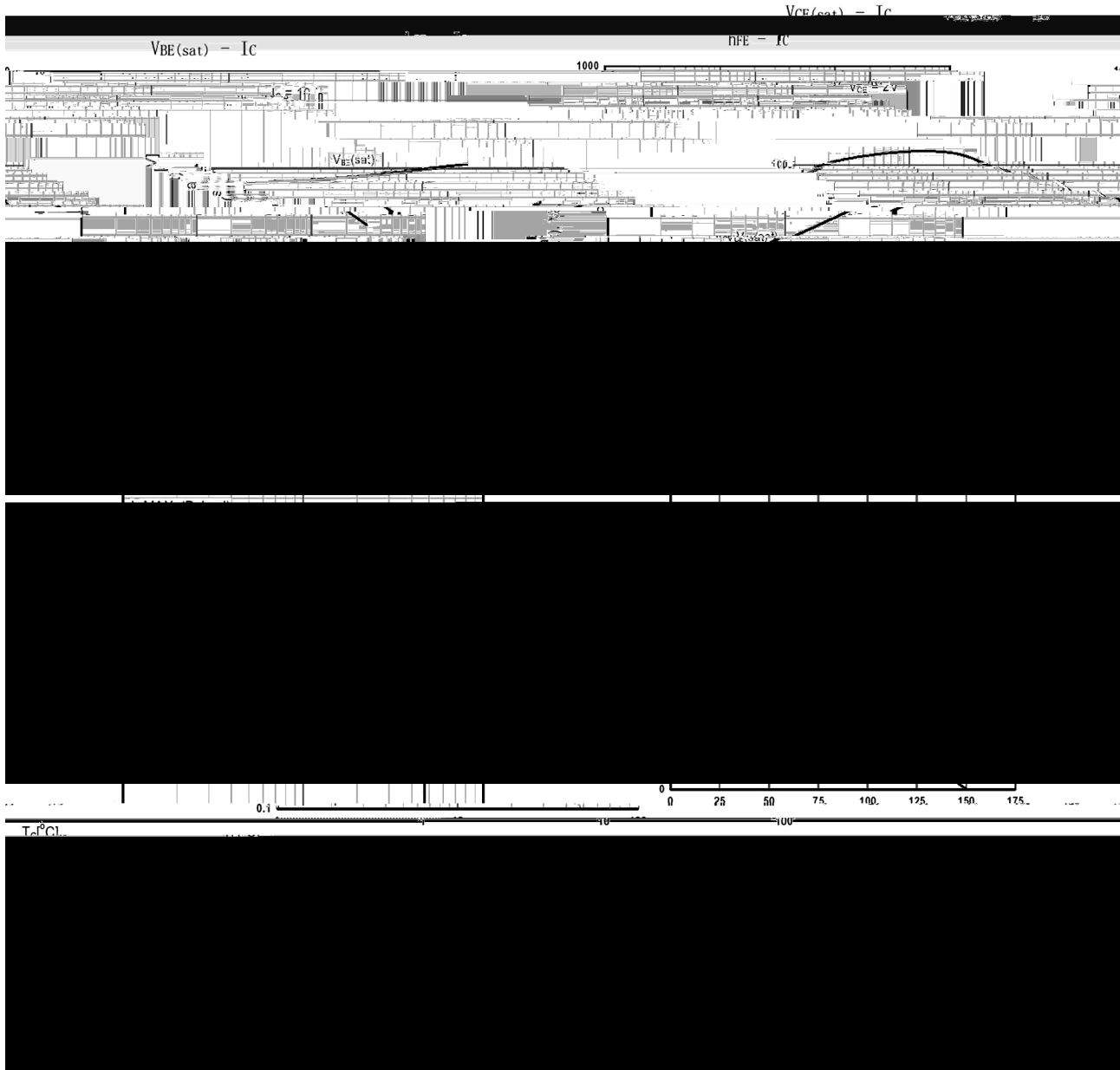
/ Absolute Maximum Ratings(Ta=25)

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|----------------|---------|------|
| Collector to Base Voltage | V_{CBO} | 45 | V |
| Collector to Emitter Voltage | V_{CEO} | 45 | V |
| Emitter to Base Voltage | V_{EBO} | 5.0 | V |
| Collector Current - Continuous | I_C | 2.0 | A |
| Collector Current – Continuous(Pulse) | I_{CP} | 6.0 | A |
| Collector Power Dissipation | P_C | 1.0 | W |
| Collector Power Dissipation | $P_C(T_c=25)$ | 25 | W |
| Junction Temperature | T_j | 150 | |
| Storage Temperature Range | T_{stg} | -55 150 | |

/ Electrical Characteristics(Ta=25)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---------------|---------------------------|-----|-----|-----|------|
| Collector to Emitter Breakdown Voltage | V_{CEO} | $I_C=100mA$ $I_B=0$ | 45 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=45V$ $I_E=0$ | | | 100 | A |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=5.0V$ $I_C=0$ | | | 1.0 | mA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=2.0V$ $I_C=150mA$ | 40 | | 400 | |
| | $h_{FE(2)}$ | $V_{CE}=2.0V$ $I_C=1.0A$ | 25 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=1.0A$ $I_B=0.1A$ | | | 0.6 | V |
| Base to Emitter Voltage | V_{BE} | $V_{CE}=2.0V$ $I_C=1.0A$ | | | 1.3 | V |
| Transition Frequency | f_T | $V_{CE}=10V$ $I_C=250mA$ | 3.0 | | | MHz |

/ Electrical Characteristic Curve

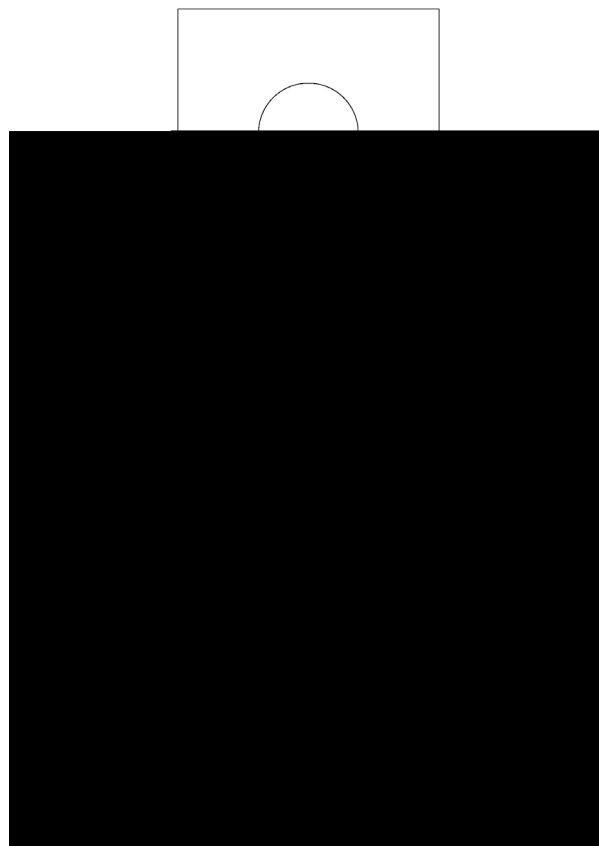


BD233

Rev.E Mar.-2016

DATA SHEET

/ Marking Instructions



BR

BD233

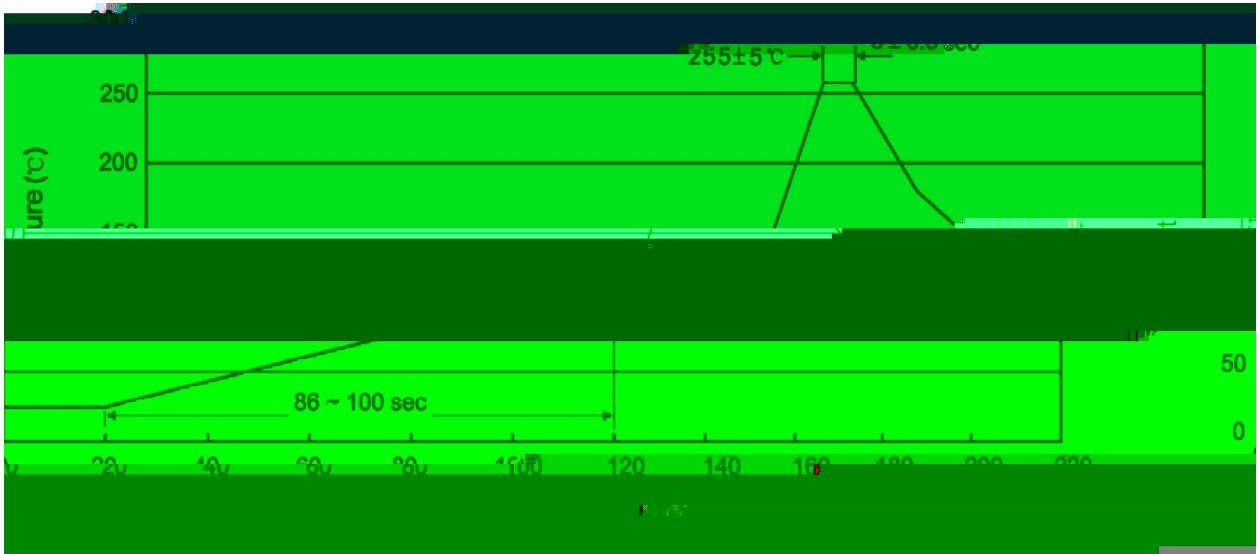
Note:

BR: Company Code

BD233: Product Type.

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- 1 25 150 60 90sec;
- 2 255

1.Preheating:25~150 , Time:60~90sec.