TOSHIBA Transistor Silicon PNP Triple Diffused Type

TTA0002

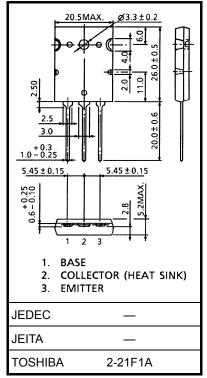
O Power Amplifier Applications

Unit: mm

- High collector voltage: V_{CEO} = −160 V (min)
- Complementary to TTC0002
- Recommended for 100-W high-fidelity audio frequency amplifier output stage.

Absolute Maximum Ratings (Tc = 25°C)

| Characteristics | | Symbol | Rating | Unit | |
|-----------------------------|-------|------------------|------------|------|--|
| Collector-base voltage | | V_{CBO} | -160 | V | |
| Collector-emitter voltage | | V _{CEO} | -160 | V | |
| Emitter-base voltage | | V _{EBO} | -5 | V | |
| Collector current | DC | IC | -18 | Α | |
| | Pulse | I _{CP} | -35 | Α | |
| Base current | | ΙΒ | -9 | Α | |
| Collector power dissipation | | PC | 180 | W | |
| Junction temperature | | Tj | 150 | °C | |
| Storage temperature range | | T _{stg} | −55 to 150 | °C | |



Weight: 9.75 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

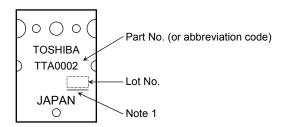
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



Electrical Characteristics (Tc = 25°C)

| Characteristics | Symbol | Test Condition | Min | Тур. | Max | Unit |
|--------------------------------------|-----------------------|--|------|------|------|------|
| Collector cut-off current | I _{CBO} | V _{CB} = -160 V, I _E = 0 | _ | _ | -1.0 | μΑ |
| Emitter cut-off current | I _{EBO} | $V_{EB} = -5 \text{ V}, I_{C} = 0$ | _ | _ | -1.0 | μΑ |
| Collector-emitter breakdown voltage | V (BR) CEO | $I_C = -50 \text{ mA}, I_B = 0$ | -160 | _ | | V |
| DC current gain | h _{FE (1)} | V _{CE} = -5 V, I _C = -1 A | 80 | _ | 160 | |
| | h _{FE (2)} | V _{CE} = -5 V, I _C = -9 A | 35 | _ | _ | |
| Collector-emitter saturation voltage | V _{CE} (sat) | I _C = -9 A, I _B = -0.9 A | _ | _ | -2.0 | V |
| Base-emitter voltage | V _{BE} | V _{CE} = -5 V, I _C = -9 A | _ | _ | -1.5 | V |
| Transition frequency | f _T | V _{CE} = -5 V, I _C = -1 A | _ | 30 | _ | MHz |
| Collector output capacitance | C _{ob} | V _{CB} = -10 V, I _E = 0, f = 1 MHz | _ | 410 | _ | pF |

Marking

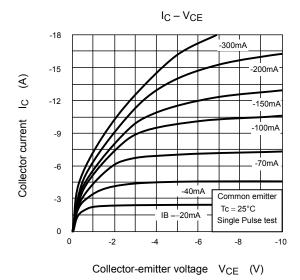


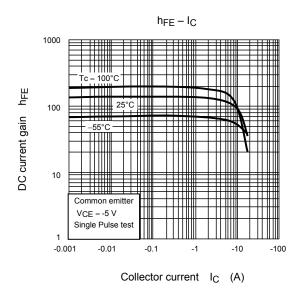
Note 1: Marking for identifying the indication of product Labels [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

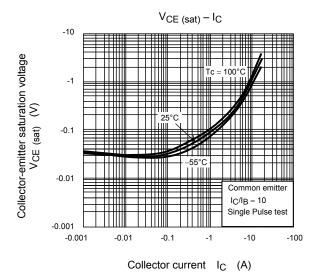
Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product.

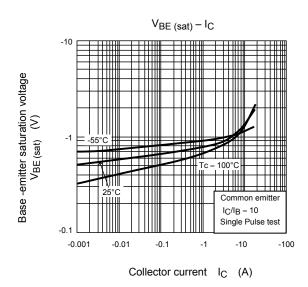
The RoHS is the Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

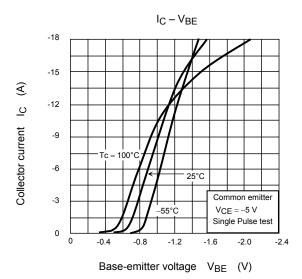
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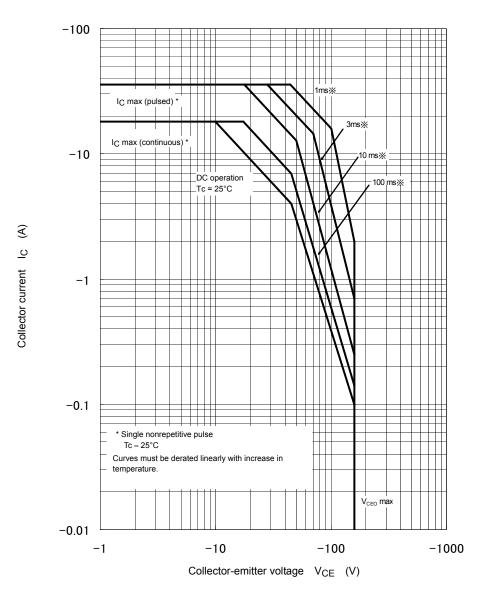






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Safe Operating Area



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