TOSHIBA Transistor Silicon PNP Triple Diffused Type

2SA1943

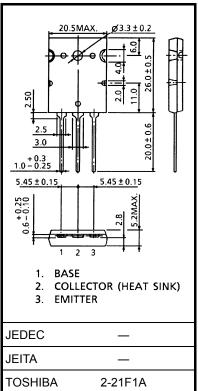
Power Amplifier Applications

• High collector voltage: VCEO = -230 V (min)

- Complementary to 2SC5200
- Recommended for 100-W high-fidelity audio frequency amplifier output stage.

Absolute Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit | |
|--|------------------|------------|------|--|
| Collector-base voltage | V _{CBO} | -230 | V | |
| Collector-emitter voltage | V _{CEO} | -230 | V | |
| Emitter-base voltage | V _{EBO} | -5 | V | |
| Collector current | Ι _C | -15 | А | |
| Base current | Ι _Β | -1.5 | А | |
| Collector power dissipation (Tc = 25°C) | Pc | 150 | W | |
| Junction temperature | Tj | 150 | °C | |
| Storage temperature range | T _{stg} | -55 to 150 | °C | |



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

Weight: 9.75 g (typ.)

reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

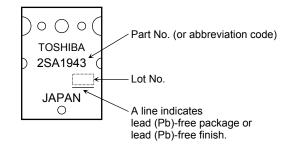
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Electrical Characteristics (Ta = 25°C)

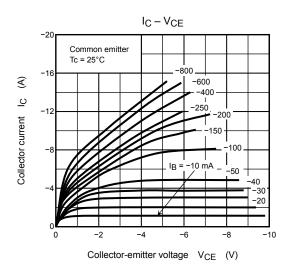
| Characteristics | Symbol | Test Condition | Min | Тур. | Max | Unit |
|--------------------------------------|-------------------------------|--|------|------|------|------|
| Collector cut-off current | I _{CBO} | $V_{CB} = -230 \text{ V}, I_E = 0$ | _ | _ | -5.0 | μA |
| Emitter cut-off current | I _{EBO} | V _{EB} = -5 V, I _C = 0 | _ | _ | -5.0 | μA |
| Collector-emitter breakdown voltage | V (BR) CEO | $I_{\rm C}$ = -50 mA, $I_{\rm B}$ = 0 | -230 | _ | _ | V |
| DC current gain | h _{FE (1)} (Note) | V _{CE} = -5 V, I _C = -1 A | 55 | | 160 | |
| | h _{FE (2)} | V _{CE} = -5 V, I _C = -7 A | 35 | 60 | _ | |
| Collector-emitter saturation voltage | V _{CE (sat)} | I _C = -8 A, I _B = -0.8 A | _ | -1.5 | -3.0 | V |
| Base-emitter voltage | V _{BE} | V _{CE} = -5 V, I _C = -7 A | _ | -1.0 | -1.5 | V |
| Transition frequency | fT | 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 | _ | 360 | _ | pF |

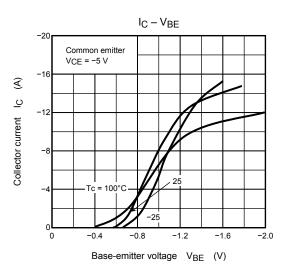
Note: h_{FE (1)} classification R: 55 to 110, O: 80 to 160

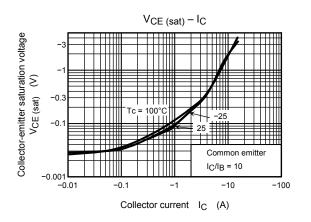
Marking

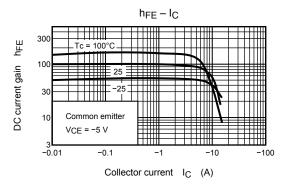


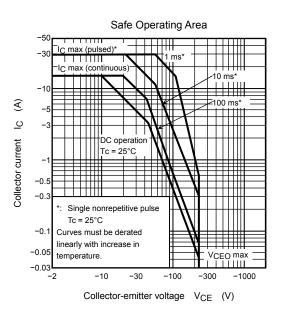
TOSHIBA

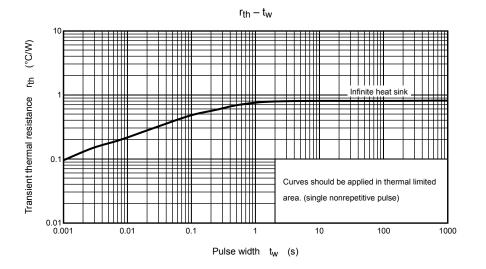












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