

TOSHIBA Transistor Silicon NPN Triple-Diffused Mesa Type

2SC6041

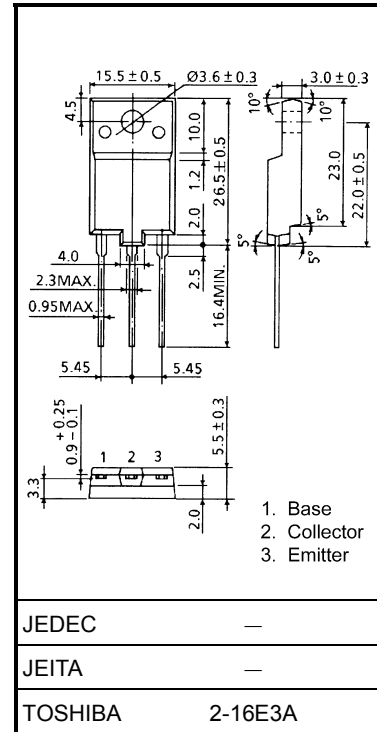
Horizontal Deflection Output for HDTV,
Digital TV, Projection TV.

- High voltage : $V_{CBO} = 1700\text{ V}$
- Low saturation voltage : $V_{CE(sat)} = 1.5\text{ V (max)}$
- High speed : $t_f = 0.15\text{ }\mu\text{s (typ.)}$
- Collector metal (fin) is fully covered with mold resin.

Maximum Ratings ($T_C = 25^\circ\text{C}$)

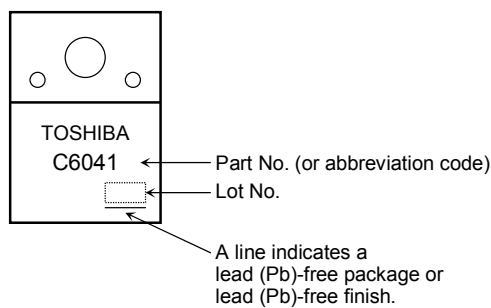
| Characteristic | | Symbol | Rating | Unit |
|-----------------------------|-------|-----------|------------|------------------|
| Collector-base voltage | | V_{CBO} | 1700 | V |
| Collector-emitter voltage | | V_{CEO} | 750 | V |
| Emitter-base voltage | | V_{EBO} | 5 | V |
| Collector current | DC | I_C | 15 | A |
| | Pulse | I_{CP} | 30 | |
| Base current | | I_B | 7.5 | A |
| Collector power dissipation | | P_C | 70 | W |
| Junction temperature | | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature range | | T_{stg} | -55 to 150 | $^\circ\text{C}$ |

Unit: mm



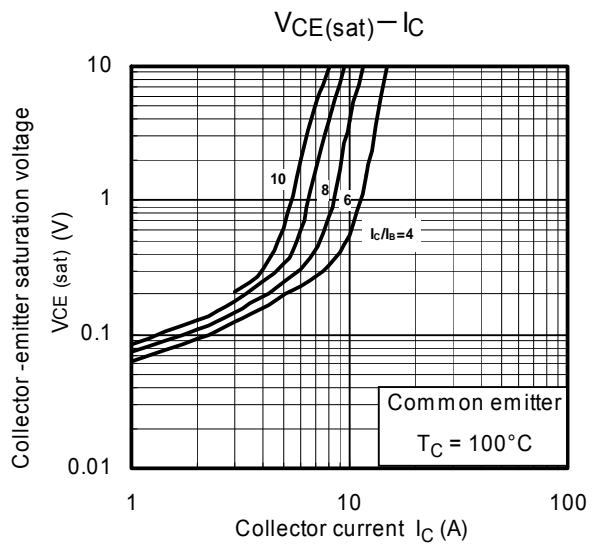
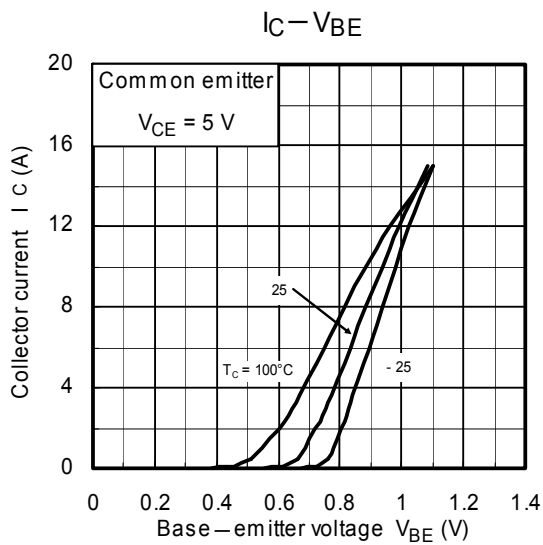
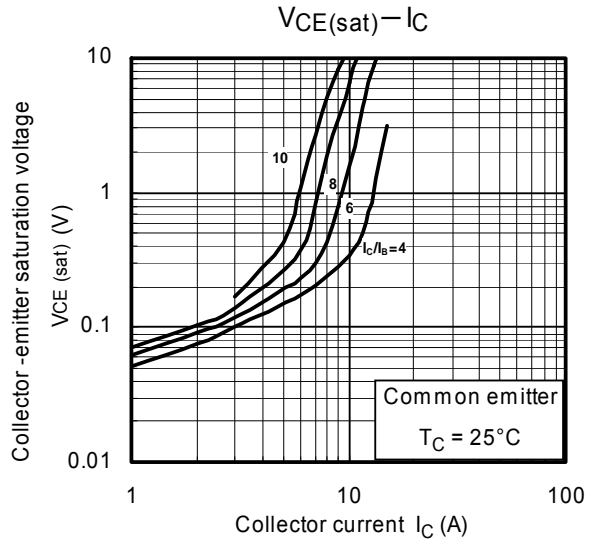
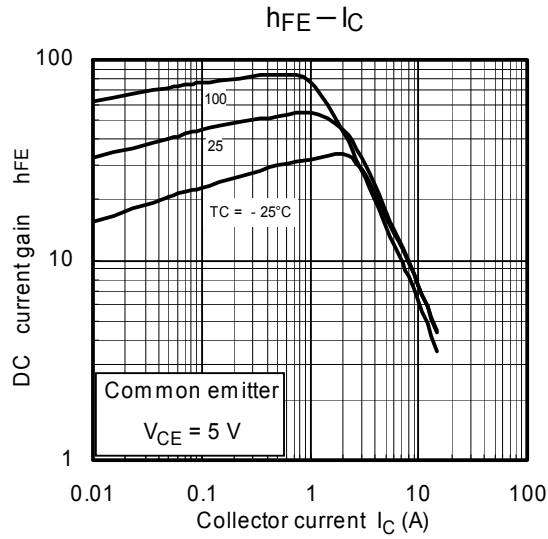
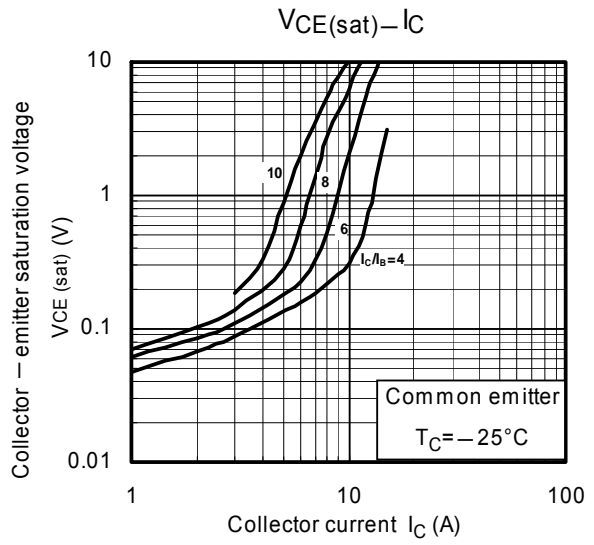
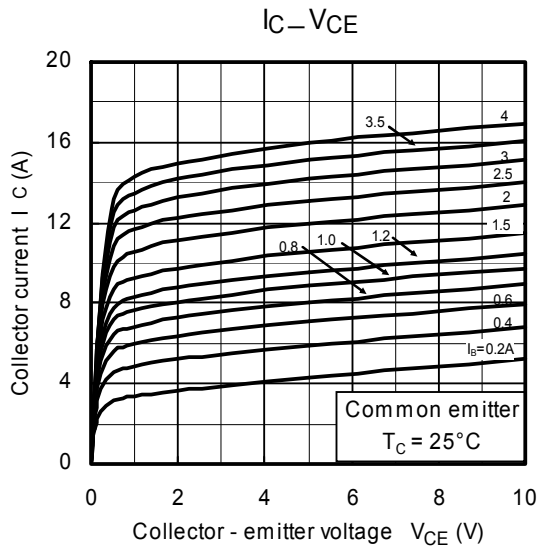
Weight: 5.5 g (typ.)

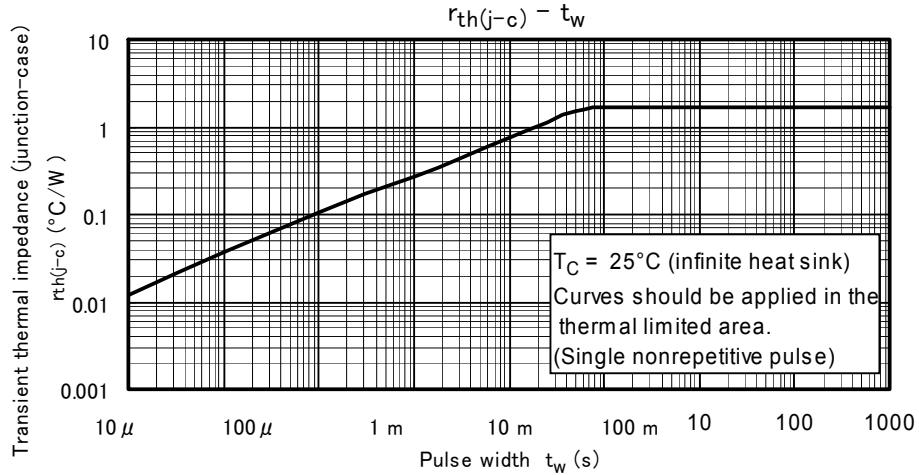
Marking



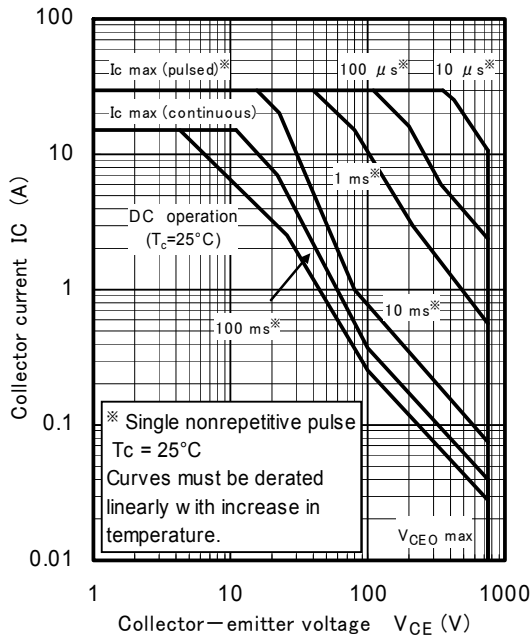
Electrical Characteristics (T_C = 25°C)

| Characteristic | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|-----------------------|---|-----|------|------|------|
| Collector cutoff current | I _{CBO} | V _{CB} = 1700 V, I _E = 0 | — | — | 1 | mA |
| Emitter cutoff current | I _{EBO} | V _{EB} = 5 V, I _C = 0 | — | — | 100 | μA |
| Emitter–base breakdown voltage | V _{(BR) EBO} | I _E = 1 mA, I _B = 0 | 5 | — | — | V |
| DC current gain | h _{FE} (1) | V _{CE} = 5 V, I _C = 2 A | 30 | — | 60 | — |
| | h _{FE} (2) | V _{CE} = 5 V, I _C = 8 A | 8 | — | 12 | |
| | h _{FE} (3) | V _{CE} = 5 V, I _C = 12 A | 5 | — | 7 | |
| Collector–emitter saturation voltage | V _{CE (sat)} | I _C = 12 A, I _B = 3 A | — | — | 1.5 | V |
| Base–emitter saturation voltage | V _{BE (sat)} | I _C = 12 A, I _B = 3 A | — | — | 1.25 | V |
| Transition frequency | f _T | V _{CE} = 10 V, I _C = 0.1 A | — | 2 | — | MHz |
| Collector output capacitance | C _{ob} | V _{CB} = 10 V, I _E = 0, f = 1 MHz | — | 260 | — | pF |
| Switching time | Storage time | I _{CP} = 6 A, I _{B1} (end) = 0.8 A f _H = 32 kHz | — | 4 | — | μs |
| | Fall time | | — | 0.15 | — | |

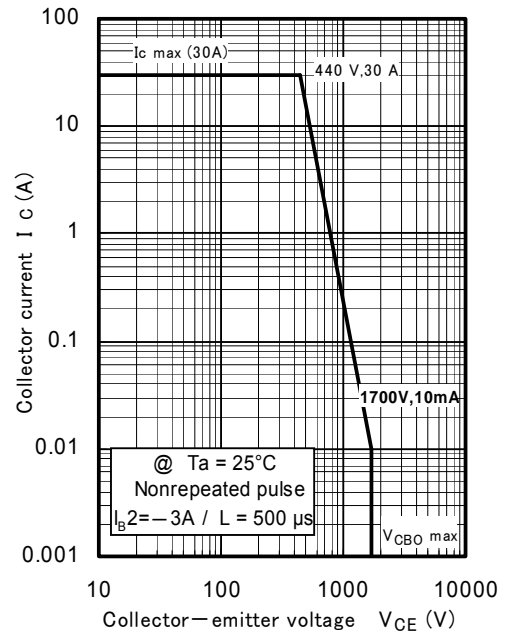




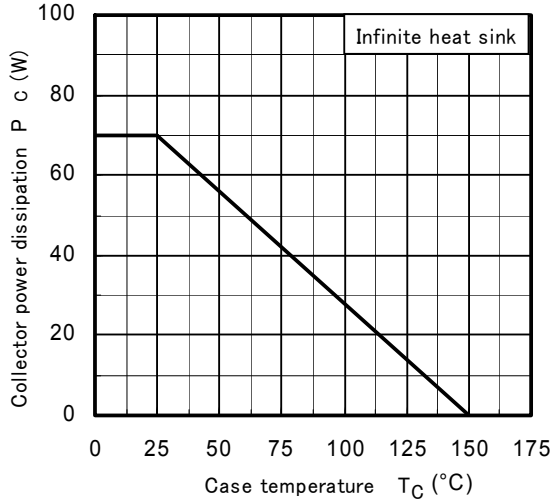
Safe Operating Area



Reverse Bias—Safe Operating Area



$P_C - T_C$



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