

ABSOLUTE MAXIMUM RATINGS
(25°C unless otherwise specified)

| | | |
|---|-------|------------------|
| Storage Temperature | _____ | -55°C to + 125°C |
| Operating Temperature | _____ | -55°C to + 100°C |
| Lead Soldering Temperature | | |
| (1/16 inch (1.6mm) from case for 10 secs) | | 260°C |

INPUT DIODE

| | | |
|-------------------|-------|------|
| Forward Current | _____ | 50mA |
| Reverse Voltage | _____ | 5V |
| Power Dissipation | _____ | 70mW |

OUTPUT TRANSISTOR

| | | |
|--------------------------------------|-------|-------|
| Collector-emitter Voltage BV_{CEO} | _____ | 35V |
| Emitter-collector Voltage BV_{ECO} | _____ | 6V |
| Power Dissipation | _____ | 150mW |

POWER DISSIPATION

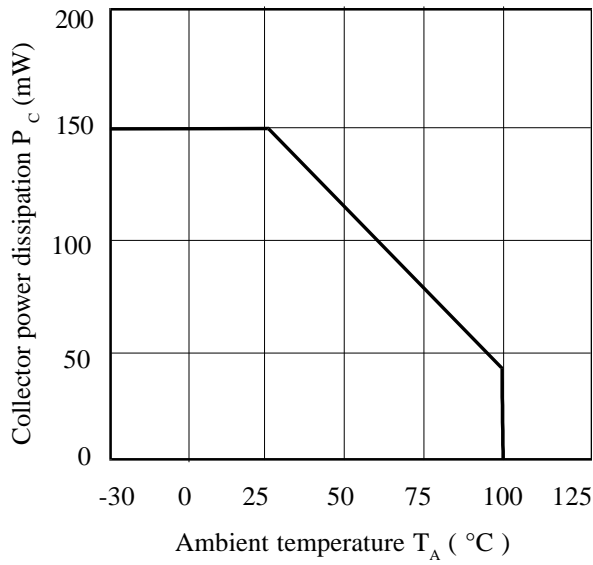
| | | |
|--|-------|-------|
| Total Power Dissipation | _____ | 200mW |
| (derate linearly 2.67mW/°C above 25°C) | | |

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

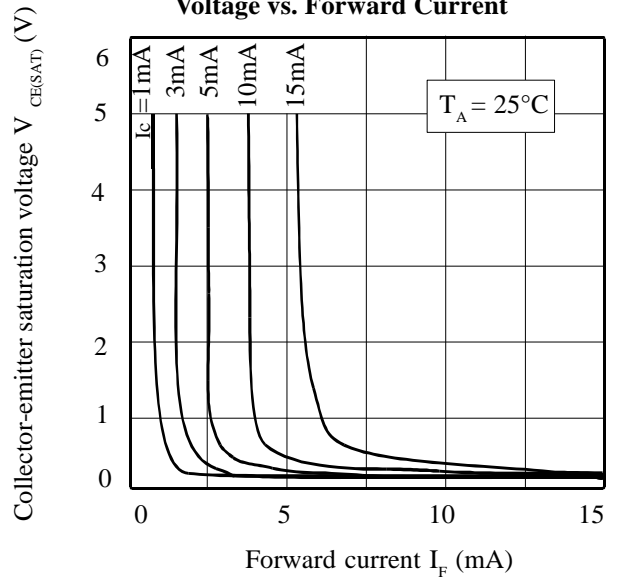
| PARAMETER | | MIN | TYP | MAX | UNITS | TEST CONDITION |
|---------------------|--|--------------------|-----|-----|---------------|---|
| Input | Forward Voltage (V_F) | | 1.2 | 1.4 | V | $I_F = 20\text{mA}$ $I_R = 10\mu\text{A}$ $V_R = 5\text{V}$ |
| | Reverse Voltage (V_R) | 5 | | | V | |
| | Reverse Current (I_R) | | | 10 | μA | |
| Output | Collector-emitter Breakdown (BV_{CEO}) (Note 2) | 35 | | | V | $I_C = 0.5\text{mA}$ $I_E = 100\mu\text{A}$ $V_{CE} = 24\text{V}$ |
| | Emitter-collector Breakdown (BV_{ECO}) | 6 | | | V | |
| | Collector-emitter Dark Current (I_{CEO}) | | | 100 | nA | |
| Coupled | Current Transfer Ratio (CTR) (Note 2) | | | | | $5\text{mA } I_F, 5\text{V } V_{CE}$ |
| | TIL191, TIL192, TIL193 | 20 | | | % | |
| | TIL191A, TIL192A, TIL193A | 50 | | | % | |
| | TIL191B, TIL192B, TIL193B | 100 | | | % | |
| | Collector-emitter Saturation Voltage $V_{CE(SAT)}$ | | | 0.4 | V | $5\text{mA } I_F, 1\text{mA } I_C$ |
| | Input to Output Isolation Voltage V_{ISO} | 5300 7500 | | | | V_{RMS} V_{PK} |
| | Input-output Isolation Resistance R_{ISO} | 5×10^{10} | | | | Ω |
| Output Rise Time tr | | 6 | | | μs | |
| Output Fall Time tf | | 6 | | | μs | |

Note 2 Measured with input leads shorted together and output leads shorted together.
Special Selections are available on request. Please consult the factory.

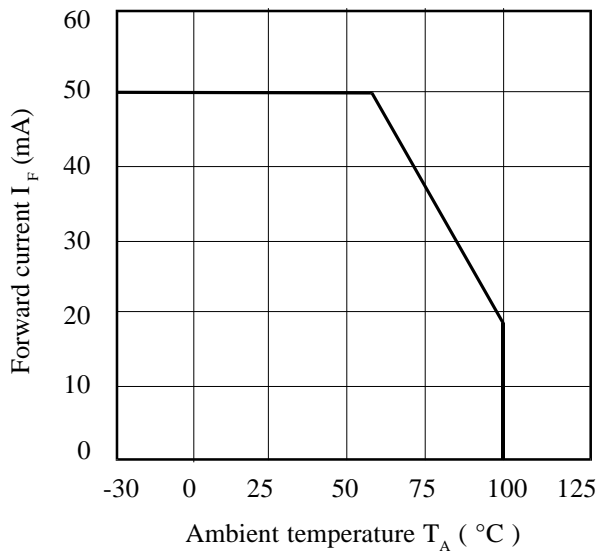
Collector Power Dissipation vs. Ambient Temperature



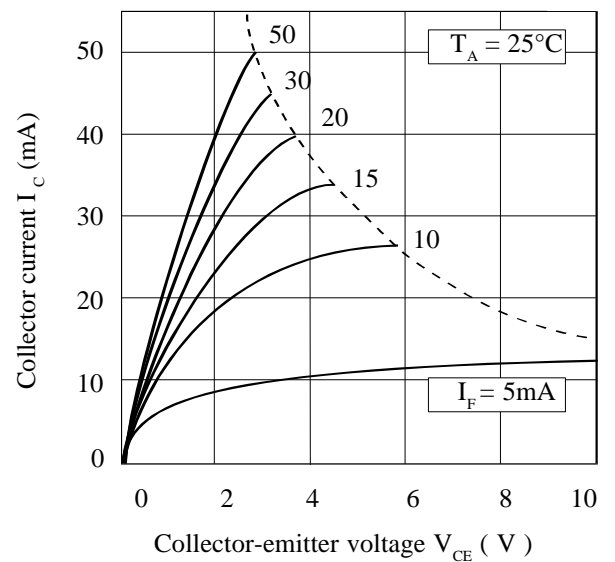
Collector-emitter Saturation Voltage vs. Forward Current



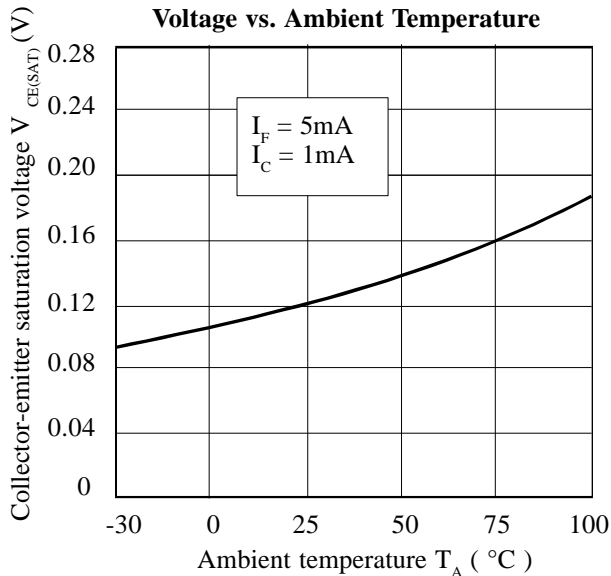
Forward Current vs. Ambient Temperature



Collector Current vs. Collector-emitter Voltage



Collector-emitter Saturation Voltage vs. Ambient Temperature



Current Transfer Ratio vs. Forward Current

