

**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 | 1.5 | V             | $I_F = 10\text{mA}$                     |
|           | Reverse Current ( $I_R$ )                                |                    |     | 10  | $\mu\text{A}$ | $V_R = 6\text{V}$                       |
| Output    | Collector-emitter Breakdown ( $BV_{CEO}$ )<br>( note 2 ) | 30                 |     |     | V             | $I_C = 1\text{mA}$                      |
|           | Collector-base Breakdown ( $BV_{CBO}$ )                  | 70                 |     |     | V             | $I_C = 100\mu\text{A}$                  |
|           | Emitter-collector Breakdown ( $BV_{ECO}$ )               | 6                  |     |     | V             | $I_E = 100\mu\text{A}$                  |
|           | Collector-emitter Dark Current ( $I_{CEO}$ )             |                    |     | 50  | nA            | $V_{CE} = 10\text{V}$                   |
| Coupled   | Current Transfer Ratio (CTR)                             |                    |     |     |               |                                         |
|           | H11A1                                                    | 50                 |     |     | %             | $10\text{mA } I_F, 10\text{V } V_{CE}$  |
|           | H11A2                                                    | 20                 |     |     | %             | $10\text{mA } I_F, 10\text{V } V_{CE}$  |
|           | H11A3                                                    | 20                 |     |     | %             | $10\text{mA } I_F, 10\text{V } V_{CE}$  |
|           | H11A4                                                    | 10                 |     |     | %             | $10\text{mA } I_F, 10\text{V } V_{CE}$  |
|           | H11A5                                                    | 30                 |     |     | %             | $10\text{mA } I_F, 10\text{V } V_{CE}$  |
|           | Collector-emitter Saturation Voltage $V_{CE(SAT)}$       |                    |     | 0.4 | V             | $10\text{mA } I_F, 0.5\text{mA } I_C$   |
|           | Input to Output Isolation Voltage $V_{ISO}$              | 5300               |     |     | $V_{RMS}$     | See note 1                              |
|           |                                                          | 7500               |     |     | $V_{PK}$      | See note 1                              |
|           | Input-output Isolation Resistance $R_{ISO}$              | $5 \times 10^{10}$ |     |     | $\Omega$      | $V_{IO} = 500\text{V}$ (note 1)         |
|           | Output Rise Time $t_r$                                   |                    | 2   |     | $\mu\text{s}$ | $V_{CC} = 5\text{V}, I_F = 10\text{mA}$ |
|           | Output Fall Time $t_f$                                   |                    | 2   |     | $\mu\text{s}$ | $R_L = 75\Omega$ fig 1                  |

Note 1

Measured with input leads shorted together and output leads shorted together.

Note 2

Special Selections are available on request. Please consult the factory.

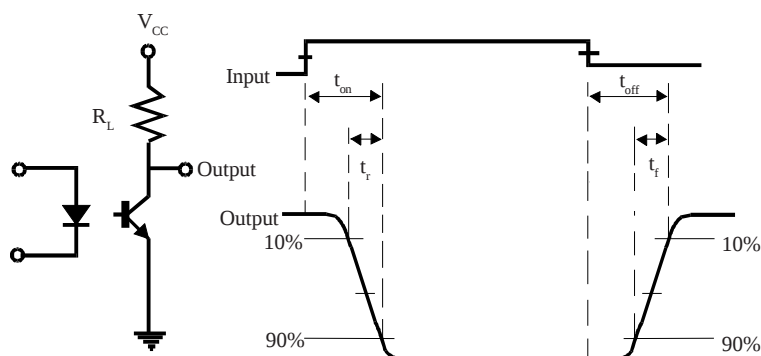
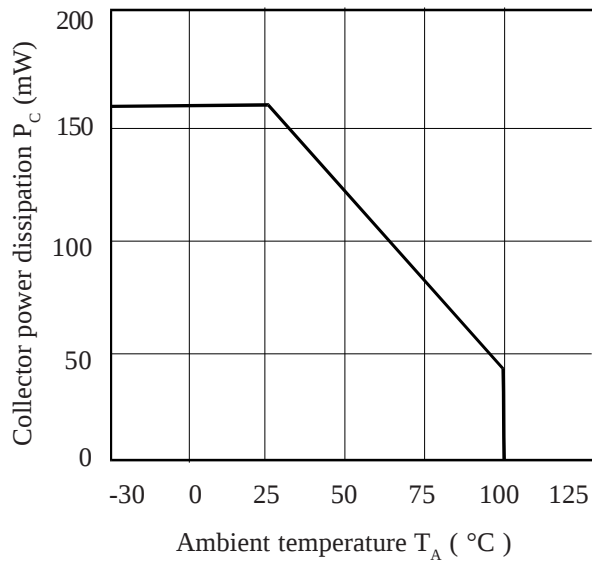
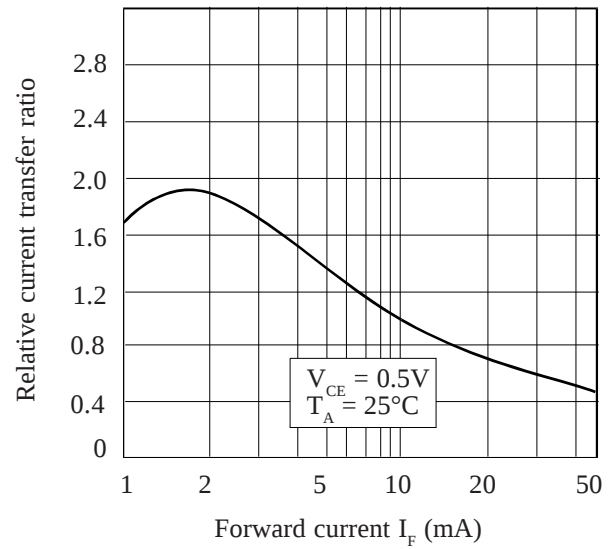


FIG 1

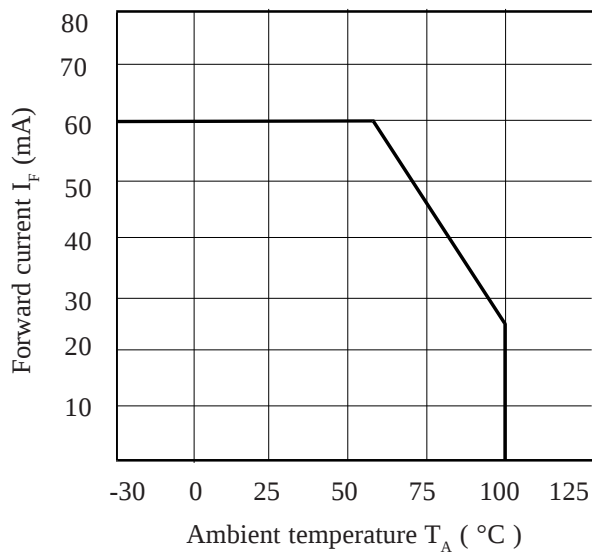
**Collector Power Dissipation vs. Ambient Temperature**



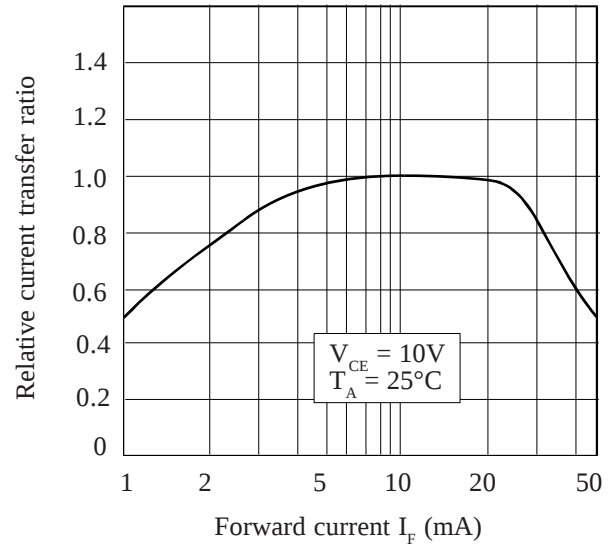
**Relative Current Transfer Ratio vs. Forward Current**



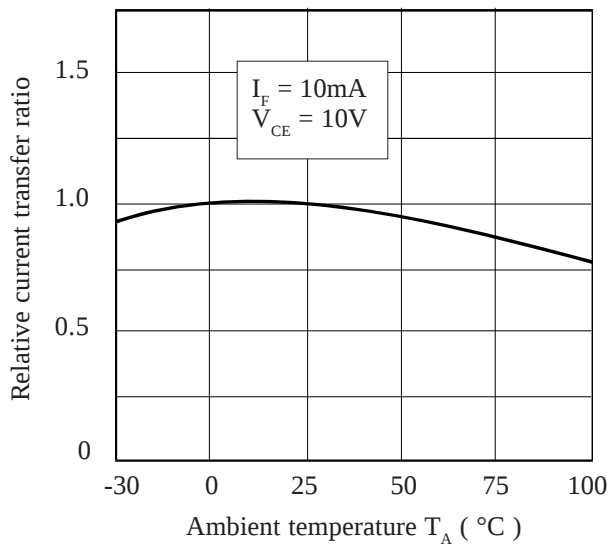
**Forward Current vs. Ambient Temperature**



**Relative Current Transfer Ratio vs. Forward Current**



**Relative Current Transfer Ratio vs. Ambient Temperature**



**Collector-emitter Saturation Voltage vs. Ambient Temperature**

