

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             | $I_F = 20\text{mA}$<br>$I_R = 10\mu\text{A}$<br>$V_R = 3\text{V}$                                   |
|           | Reverse Voltage ( $V_R$ )                                | 3                  |     |     | V             |                                                                                                     |
|           | Reverse Current ( $I_R$ )                                |                    |     | 10  | $\mu\text{A}$ |                                                                                                     |
| Output    | Collector-emitter Breakdown ( $BV_{CEO}$ )<br>( note 2 ) | 30                 |     |     | V             | $I_C = 1\text{mA}$<br><br>$I_C = 100\mu\text{A}$<br>$I_E = 100\mu\text{A}$<br>$V_{CE} = 10\text{V}$ |
|           | Collector-base Breakdown ( $BV_{CBO}$ )                  | 70                 |     |     | V             |                                                                                                     |
|           | Emitter-base Breakdown ( $BV_{EBO}$ )                    | 5                  |     |     | V             |                                                                                                     |
|           | Collector-emitter Dark Current ( $I_{CEO}$ )             |                    |     | 50  | nA            |                                                                                                     |
|           |                                                          |                    |     |     |               |                                                                                                     |
| Coupled   | Current Transfer Ratio (CTR)                             |                    |     |     |               | $10\text{mA } I_F, 5\text{V } V_{CE}$                                                               |
|           | MCT2200                                                  | 20                 |     |     | %             |                                                                                                     |
|           | MCT2201                                                  | 100                |     |     | %             |                                                                                                     |
|           | MCT2202                                                  | 63                 |     | 125 | %             | $10\text{mA } I_F, 2.5\text{mA } I_C$                                                               |
|           | Collector-emitter Saturation Voltage $V_{CE(SAT)}$       |                    |     | 0.4 | V             |                                                                                                     |
|           | 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)                                                                     |
|           | Turn-on Time $t_{ON}$                                    |                    |     | 10  | $\mu\text{s}$ | $V_{CC} = 5\text{V}, R_L = 100\Omega,$<br>$I_C = 2\text{mA}$ , (fig 1)                              |
|           | Turn-off Time $t_{OFF}$                                  |                    |     | 10  | $\mu\text{s}$ |                                                                                                     |

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.

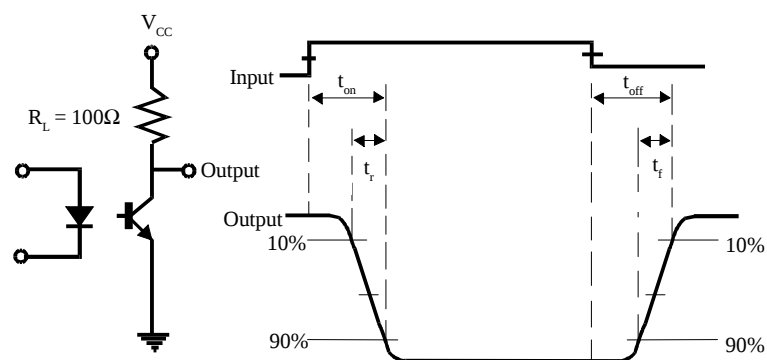
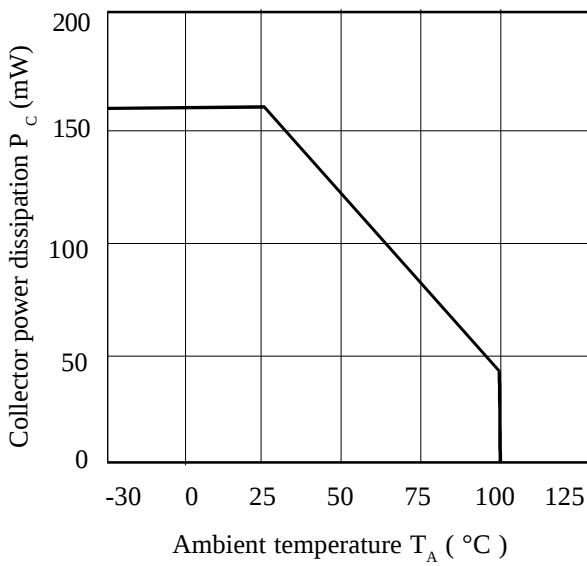
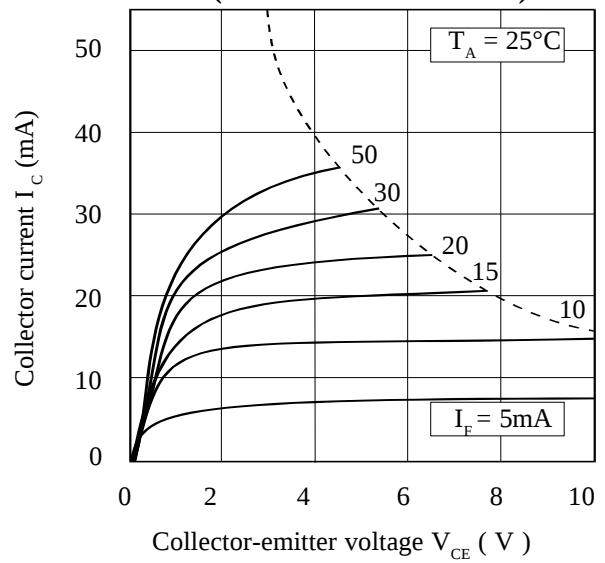


FIG 1

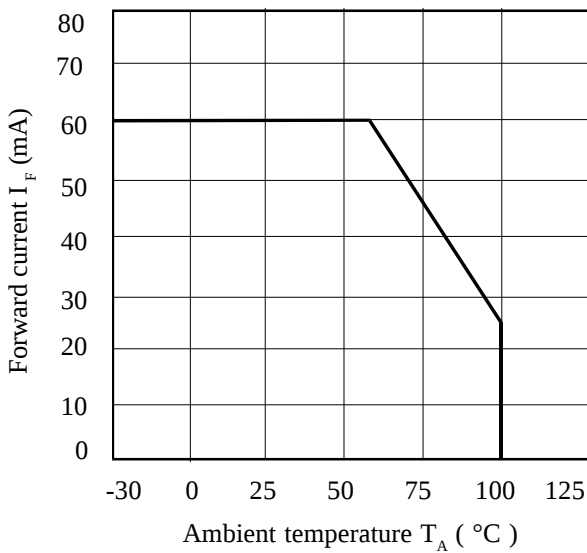
**Collector Power Dissipation vs. Ambient Temperature**



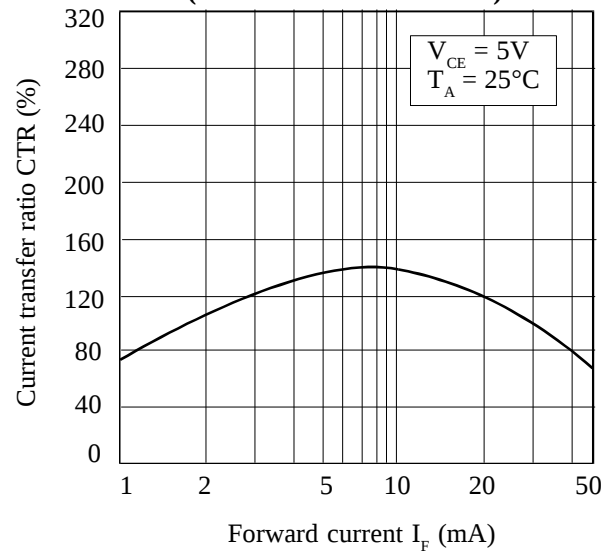
**Collector Current vs. Collector-emitter Voltage  
(normalised to MCT2201)**



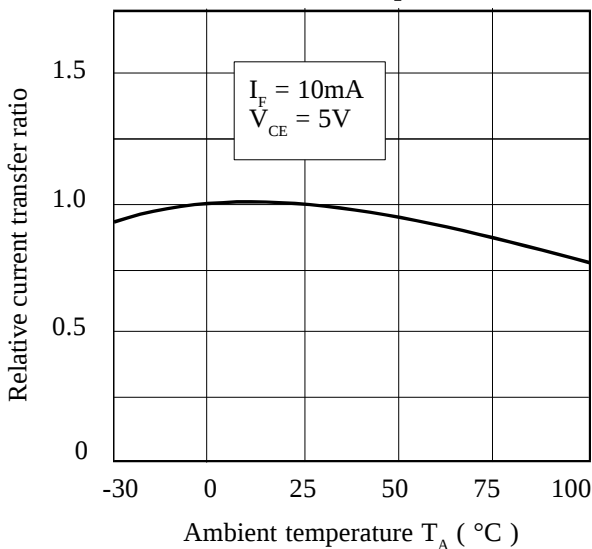
**Forward Current vs. Ambient Temperature**



**Current Transfer Ratio vs. Forward Current  
(normalised to MCT2201)**



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



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

