

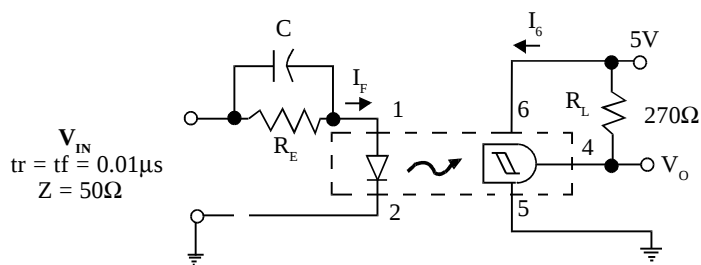
**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

| PARAMETER |                                             | MIN  | TYP | MAX  | UNITS         | TEST CONDITION                                                                          |
|-----------|---------------------------------------------|------|-----|------|---------------|-----------------------------------------------------------------------------------------|
| Input     | Forward Voltage ( $V_F$ )                   | 0.75 |     |      | V             | $I_F = 0.3\text{mA}$                                                                    |
|           | Forward Voltage ( $V_F$ )                   |      |     | 1.5  | V             | $I_F = 10\text{mA}$                                                                     |
|           | Reverse Current ( $I_R$ )                   |      |     | 10   | $\mu\text{A}$ | $V_R = 3\text{V}$                                                                       |
|           | Capacitance ( $C_j$ )                       |      |     | 100  | pF            | $V = 0, f = 1\text{MHz}$                                                                |
| Output    | Operating Voltage Range ( $V_{CC}$ )        | 3    | 1   | 15   | V             | $I_F = 0\text{mA}, V_{CC} = 5\text{V}$<br>$I_F = 0\text{mA}, V_{CC} = V_O = 15\text{V}$ |
|           | Supply Current $I_6$ (off )                 |      |     | 5    | mA            |                                                                                         |
|           | Output Current High ( $I_{OH}$ )            |      |     | 100  | $\mu\text{A}$ |                                                                                         |
| Coupled   | Supply Current $I_6$ (on )                  | 1.6  | 5   | 5    | mA            | $I_F = 10\text{mA}, V_{CC} = 5\text{V}$                                                 |
|           | Output Voltage, Low ( $V_{OL}$ )            |      |     | 0.4  | V             | $R_L = 270\Omega, V_{CC} = 5\text{V}$                                                   |
|           | Turn-on Threshold Current $I_F$ (on )       |      |     |      |               |                                                                                         |
|           | MOC5007                                     |      |     | 1.6  | mA            | $R_L = 270\Omega, V_{CC} = 5\text{V}$                                                   |
|           | MOC5008                                     |      |     | 4    | mA            | $R_L = 270\Omega, V_{CC} = 5\text{V}$                                                   |
|           | MOC5009                                     |      |     | 10   | mA            | $R_L = 270\Omega, V_{CC} = 5\text{V}$                                                   |
|           | Turn-off Threshold Current $I_F$ (off )     |      |     |      | mA            | $R_L = 270\Omega, V_{CC} = 5\text{V}$                                                   |
|           | Hysteresis Ratio $I_F$ (off ) / $I_F$ (on ) |      |     | 0.9  |               | $R_L = 270\Omega, V_{CC} = 5\text{V}$                                                   |
|           | Input to Output Isolation Voltage $V_{ISO}$ |      |     | 5300 | $V_{RMS}$     | See note 1                                                                              |
|           |                                             |      |     | 7500 | $V_{PK}$      | See note 1                                                                              |
|           | Turn-on Time $t_{on}$                       |      |     | 1.2  | $\mu\text{s}$ | $R_E = 270\Omega$                                                                       |
|           | Fall Time $t_f$                             |      |     | 0.1  | $\mu\text{s}$ | $V_{CC} = 5\text{V}$                                                                    |
|           | Turn-off Time $t_{off}$                     |      |     | 1.2  | $\mu\text{s}$ | $I_F = I_F$ (on)                                                                        |
|           | Rise Time $t_r$                             |      |     | 0.1  | $\mu\text{s}$ |                                                                                         |

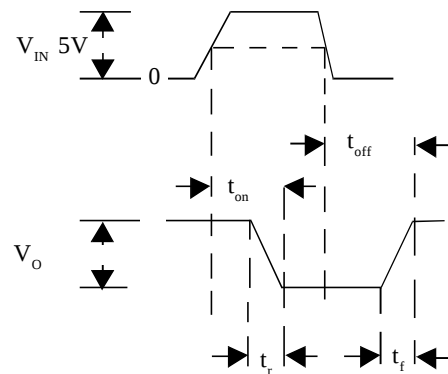
Note 1 Measured with input leads shorted together and output leads shorted together.

Note 2 Special Selections are available on request. Please consult the factory.

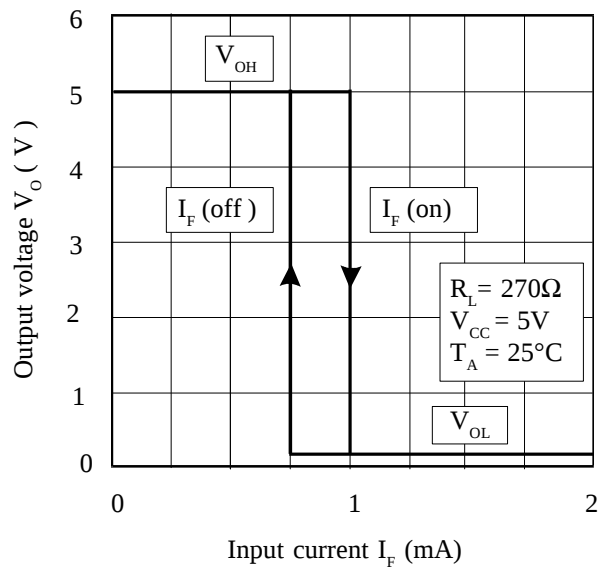
**SWITCHING CHARACTERISTICS**



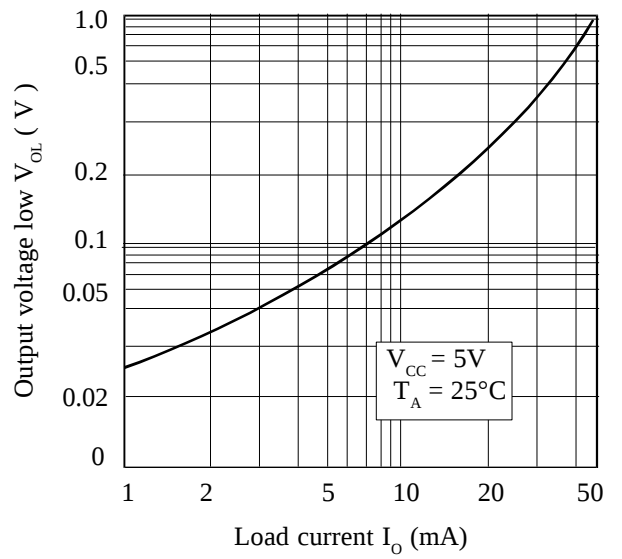
**SWITCHING TEST CIRCUIT**



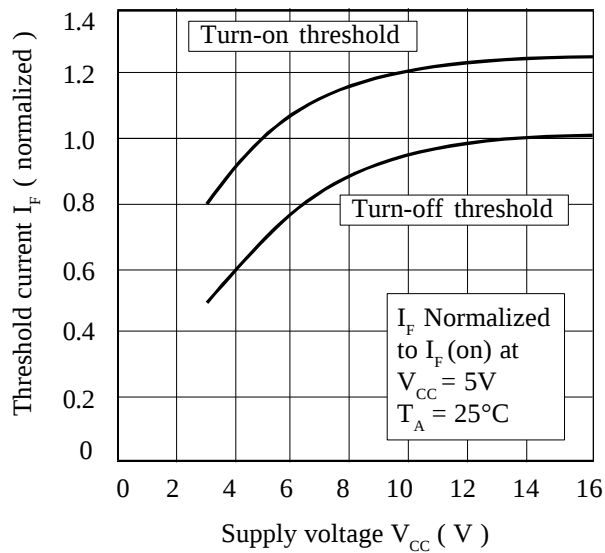
Transfer Characteristics



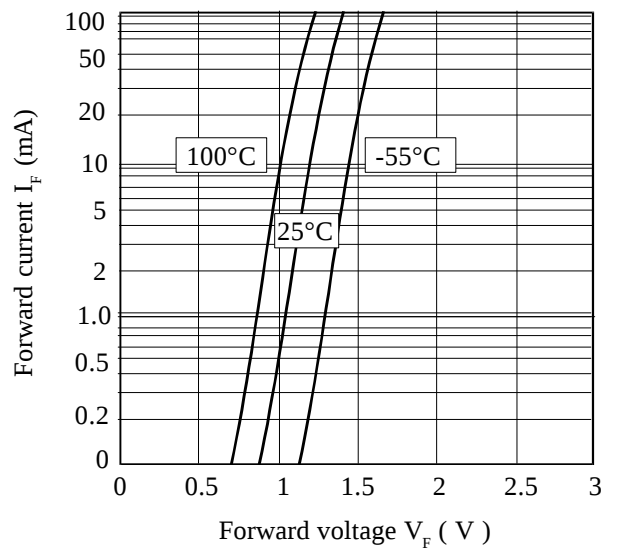
On Voltage vs. Load Current



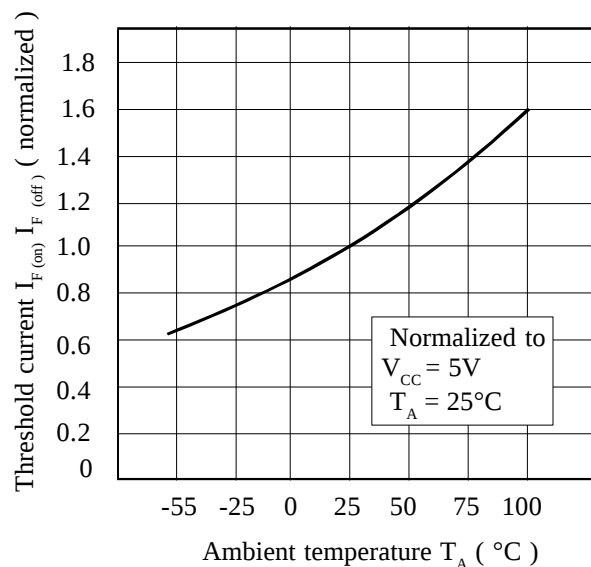
Threshold Current vs. Supply Voltage



Forward Voltage vs. Forward Current



Threshold Current vs. Ambient Temperature



Supply Current vs. Supply Voltage

