

**Electrical Specifications** ( $-40^{\circ}\text{C} \leq T_A \leq +85^{\circ}\text{C}$  unless otherwise specified)

| INPUT CHARACTERISTICS                                                          | Part Numbers |        | Units |
|--------------------------------------------------------------------------------|--------------|--------|-------|
|                                                                                | PVT312L      | PVT312 |       |
| Minimum Control Current (see figures 1 and 2)                                  | 2.0          |        | mA    |
| Maximum Control Current for Off-State Resistance @ $T_A = +25^{\circ}\text{C}$ | 0.4          |        | mA    |
| Control Current Range (Caution: current limit input LED, see figure 6)         | 2.0 to 25    |        | mA    |
| Maximum Reverse Voltage                                                        | 6.0          |        | V     |

| OUTPUT CHARACTERISTICS                                                                                               | PVT312L        | PVT312 |                              |
|----------------------------------------------------------------------------------------------------------------------|----------------|--------|------------------------------|
| Operating Voltage Range                                                                                              | 0 to $\pm 250$ |        | $V_{(\text{DC or AC peak})}$ |
| Maximum Load Current @ $T_A = +40^{\circ}\text{C}$ , 5mA Control (see figures 1 and 2)                               |                |        |                              |
| A Connection                                                                                                         | 170            | 190    | mA (AC or DC)                |
| B Connection                                                                                                         | 190            | 210    | mA (DC)                      |
| C Connection                                                                                                         | 300            | 320    | mA (DC)                      |
| Maximum On-State Resistance @ $T_A = +25^{\circ}\text{C}$ for 50mA pulsed load<br>5mA Control (see figure 4)         |                |        |                              |
| A Connection                                                                                                         | 15             | 10     | $\Omega$                     |
| B Connection                                                                                                         | 8              | 5.5    | $\Omega$                     |
| C Connection                                                                                                         | 4.25           | 3      | $\Omega$                     |
| Maximum Off-State Leakage @ $T_A = +25^{\circ}\text{C}$ , $\pm 250\text{V}$ (see figure 5)                           | 1.0            |        | $\mu\text{A}$                |
| Current Limit @ $T_A = +25^{\circ}\text{C}$ , 5mA Control                                                            |                |        |                              |
| Connection:                                                                                                          | A              | C      |                              |
| Minimum                                                                                                              | 190            | 330    | n/a                          |
| Maximum                                                                                                              | 300            | 560    | n/a                          |
| Maximum Turn-On Time @ $T_A = +25^{\circ}\text{C}$ (see figure 7)<br>for 50mA, 100 $V_{\text{DC}}$ load, 5mA Control | 3.0            |        | ms                           |
| Maximum Turn-Off Time @ $T_A = +25^{\circ}\text{C}$ (See Fig. 6)<br>For 50mA, 100 $V_{\text{DC}}$ load, 5mA Control  | 0.5            |        | ms                           |
| Maximum Output Capacitance @ 50VDC                                                                                   | 50             |        | pF                           |

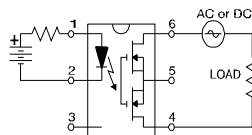
  

| GENERAL CHARACTERISTICS                                                                   | ALL MODELS |             |                    |
|-------------------------------------------------------------------------------------------|------------|-------------|--------------------|
| Minimum Dielectric Strength, Input-Output                                                 | 4000       |             | $V_{\text{RMS}}$   |
| Minimum Insulation Resistance, Input-Output @ $T_A = +25^{\circ}\text{C}$ , 50%RH, 100VDC | $10^{12}$  |             | $\Omega$           |
| Maximum Capacitance, Input-Output                                                         | 1.0        |             | pF                 |
| Maximum Pin Soldering Temperature (10 seconds maximum)                                    | +260       |             | $^{\circ}\text{C}$ |
| Ambient Temperature Range:                                                                | Operating  | -40 to +85  | $^{\circ}\text{C}$ |
|                                                                                           | Storage    | -40 to +100 |                    |

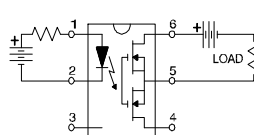
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## Connection Diagrams

"A" Connection



"B" Connection



"C" Connection

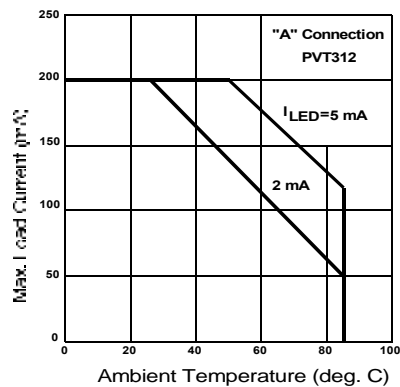
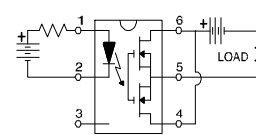


Figure 1. Typical Current Derating Curves

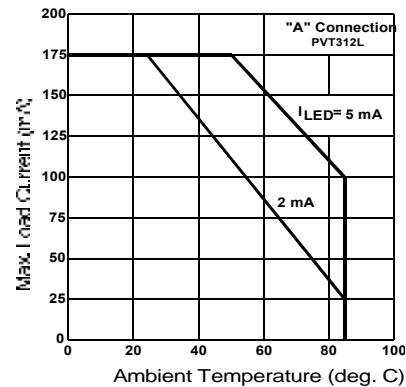


Figure 2. Typical Current Derating Curves

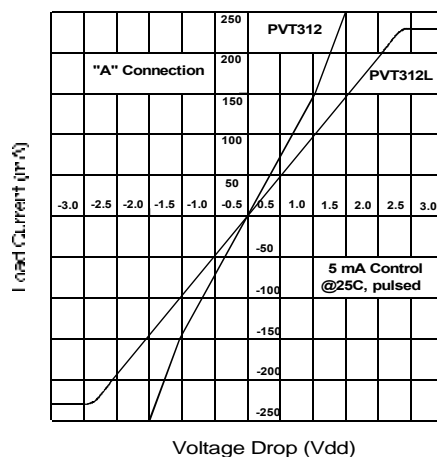


Figure 3. Linearity Characteristics

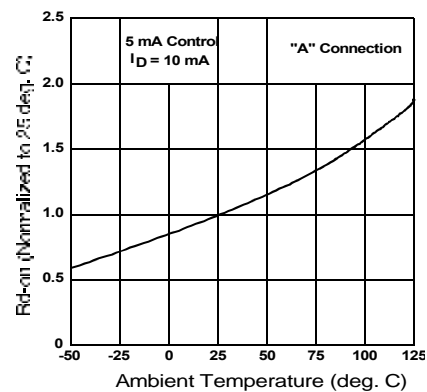


Figure 4. Typical Normalized On-Resistance

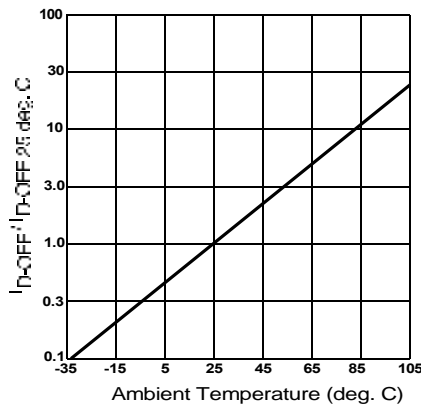


Figure 5. Typical Normalized Off-State Leakage

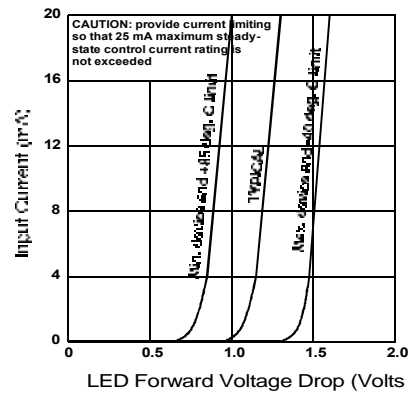


Figure 6. Input Characteristics (Current Controlled)

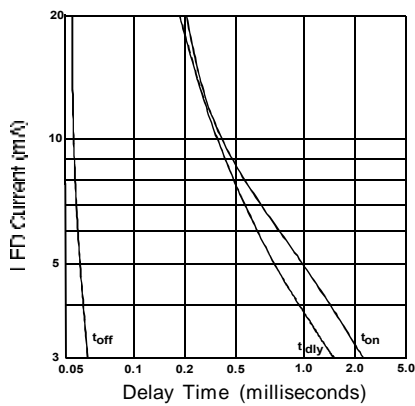


Figure 7. Typical Delay Times

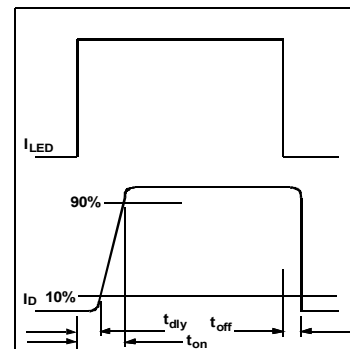


Figure 8. Delay Time Definitions

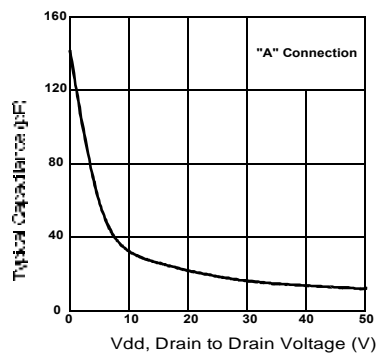


Figure 9. Typical Output Capacitance

## Case Outlines

