

Product Replacement for the UDN2987x 8-Channel Source Driver with Overcurrent Protection

Introduction

The UDN2987x 8-Channel Source Driver with Overcurrent Protection has been a very successful product for over 15 years. However, technological advancements in the fabrication process have led to the design of a more efficient and more cost effective solution with added

benefits, the UDN2987x-6. Although the UDN2987x-6 is advertised as a pin-for-pin replacement for the UDN2987x, there are some important differences between them that could affect some applications. These considerations are detailed in the following table.

Comparison of Benefits and Notable Differences	
UDN2987x	UDN2987x-6
Driver Supply Voltage: $V_{BB} = 7$ to 35 V	Driver Supply Voltage: $V_{BB} = 4.75$ to 35 V (Can now be driven directly from a 5 V logic supply.)
Driver Supply Current: At $V_{IN} = 2.4$ V, Typical = 13 mA At $V_{IN} = 0.4$ V, Typical = 8.0 mA	Driver Supply Current: At $V_{IN} = 2.4$ V, Typical = 7.0 mA At $V_{IN} = 0.4$ V, Typical = 6.0 mA
Input Voltage: Max = 15 V	Input Voltage: Min = -0.3 V, Max = 14 V
Input Current: At $V_{IN} = 2.4$ V, Max = 170 μ A At $V_{IN} = 5.0$ V, Max = 1020 μ A At $V_{IN} = 12.0$ V, Max = 1800 μ A	Input Current: At $V_{IN} = 2.4$ V, Max = 100 μ A At $V_{IN} = 5.0$ V, Max = 600 μ A At $V_{IN} = 12.0$ V, Max = 1000 μ A
Overcurrent Protection: To $V_{BB} = 35$ V	Overcurrent Protection: To $V_{BB} = 30$ V (Can no longer guarantee short circuit protection at $V_{BB} > 30$ V.)
Propagation Delay Time: $t_{PLH} = 300$ ns (Typical), = 600 ns (Max) $t_{PHL} = 2000$ ns (Typical), = 4000 ns (Max)	Propagation Delay Time: $t_{PLH} = 100$ ns (Typical), = 600 ns (Max) $t_{PHL} = 200$ ns (Typical), = 1000 ns (Max) (Provides significantly faster turn-off.)

Note:

- Typical UDN2987x-6 parameter values were taken from one random lot.
- Typical parameter values were derived using the same conditions for both device types.
- Max = maximum specified value found in the datasheet.
- Min = minimum specified value found in the datasheet.

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