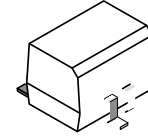


High Speed Transistor Optocouplers

Single Channel:
 HCPL0453, HCPL0500, HCPL0501
 Dual Channel:
 HCPL0531, HCPL0534

HCPL0453, HCPL0500, HCPL0501, HCPL0531, HCPL0534



SOIC8
 CASE 751DZ

MARKING DIAGRAM

onsemi

Description

The HCPL05XX, and HCPL04XX optocouplers consist of an AlGaAs LED optically coupled to a high speed photo detector transistor housed in a compact 8 pin small outline package.

A separate connection for the bias of the photodiode improves the speed by several orders of magnitude over conventional phototransistor optocouplers by reducing the base collector capacitance of the input transistor. The HCPL04XX devices do not have the base bonded out to a lead for additional noise margin. The HCPL053X devices have two channels per package for optimum mounting density.

Features

- High Speed 1 MBit/s
- 15 kV/μs Minimum Common Mode Transient Immunity at $V_{CM} = 1500\text{ V}$ (HCPL0453/0534)
- Open Collector Output
- Guaranteed Performance Over Temperature: 0°C to 70°C
- U.L. Recognized (File # E90700)
- VDE0884 Recognized (File # 136616)
 - ◆ Approval Pending for HCPL0531/0453
 - ◆ Ordering Option V, e.g., HCPL0500V
- BSI Recognized (File # 8661, 8662)
 - ◆ HCPL0500/0501 only

Applications

- Line Receivers
- Pulse Transformer Replacement
- Output Interface to CMOS LSTTL TTL
- Wide Bandwidth Analog Coupling

TRUTH TABLE

LED	V_o

ORDERING INFORMATION

HCPL0453, HCPL0500, HCPL0501, HCPL0531, HCPL0534

SAFETY AND INSULATION RATINGS

Parameter	Characteristics

SCHEMATICS

Figure 1. Single

ELECTRICAL CHARACTERISTICS ° °

HCPL0453, HCPL0500, HCPL0501, HCPL0531, HCPL0534

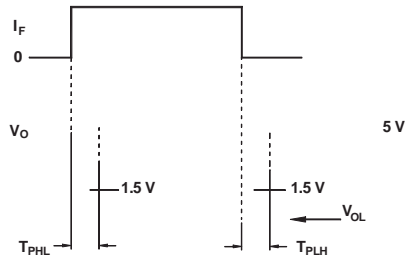
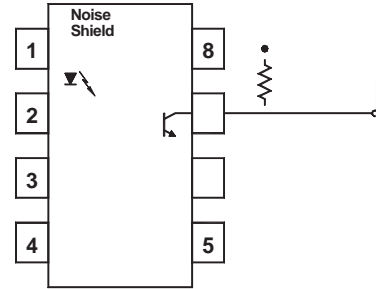
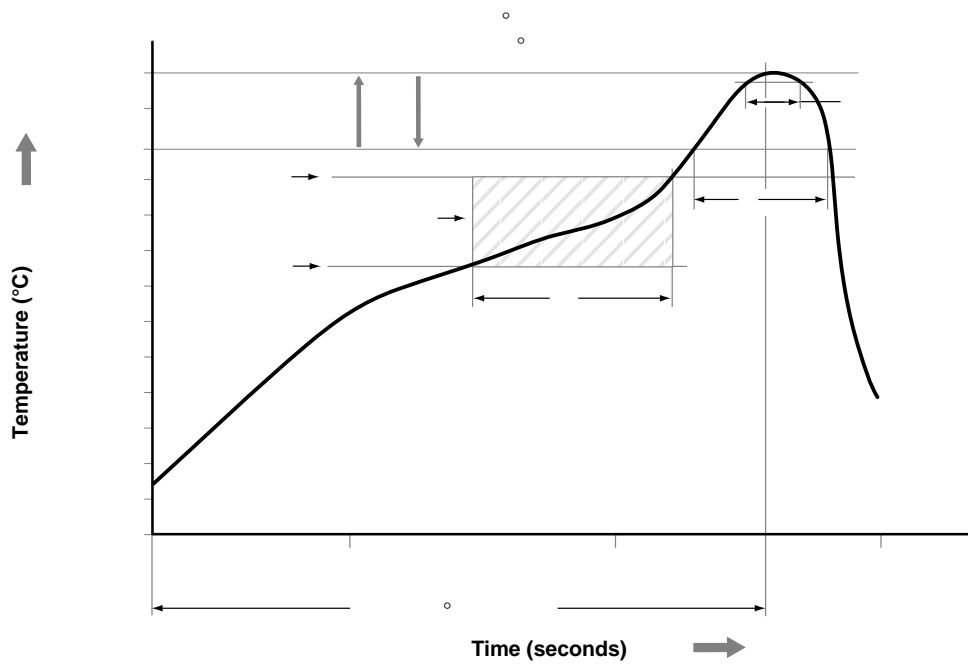


Figure 9. Switching Time Test Circuit

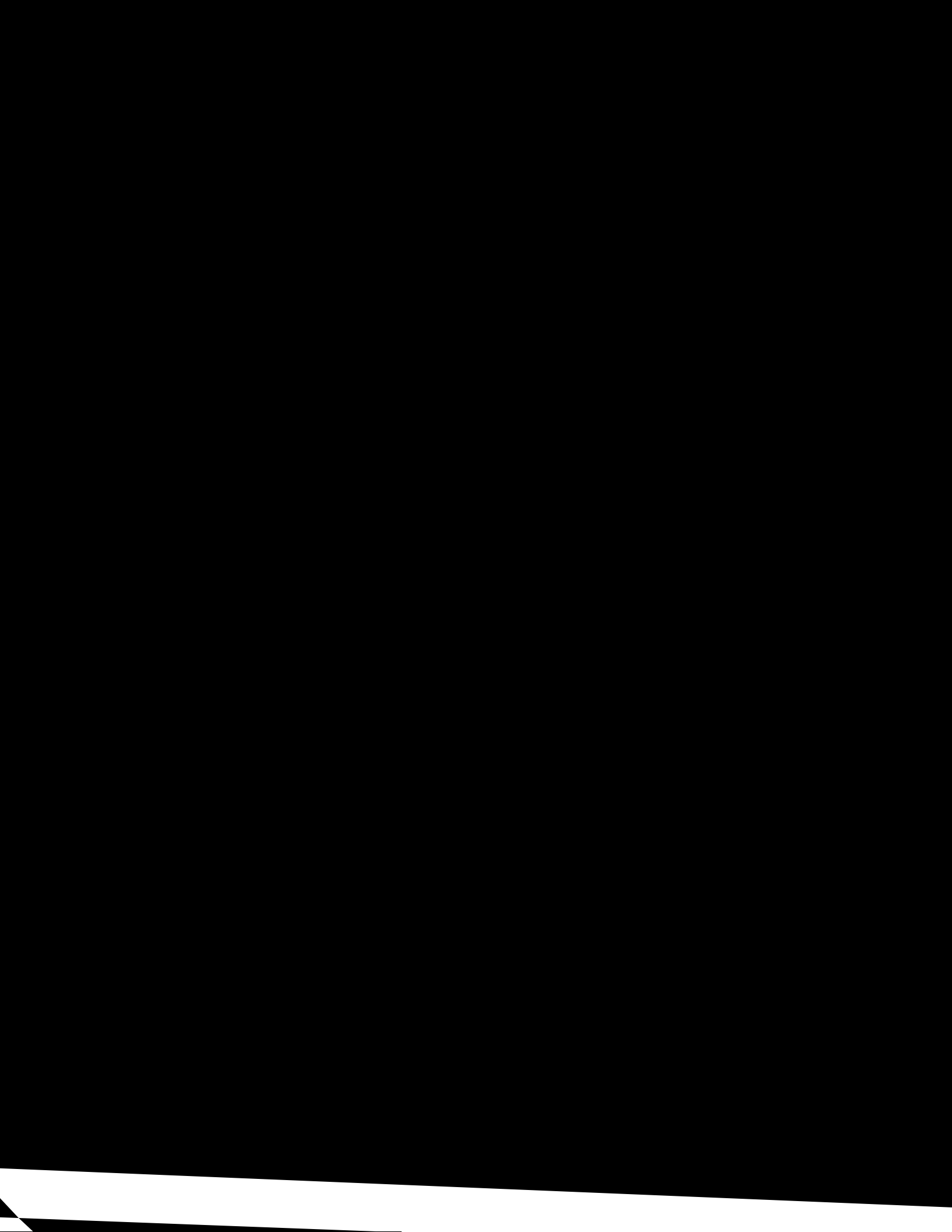
ORDERING INFORMATION

Part Nr./ Option	Order Entry Identifier	Package	Description	Packing Method
V				
R2				
R2V				

REFLOW PROFILE



Profile Feature	Pb Free Assembly Profile
	○
	○
	○
	○
	○ ○ ○
○ ○	
	○
○	



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