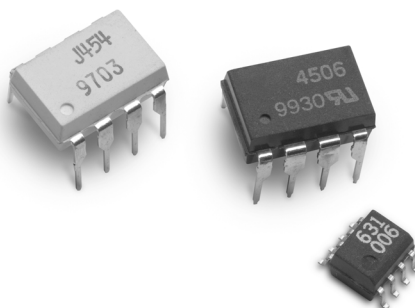
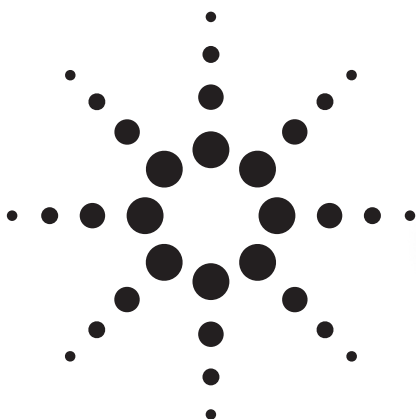
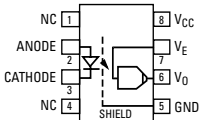
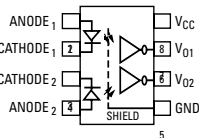


# 3.3 V Digital Optocoupler Family

## Product Selection



### 3.3V Family (15 MBd Logic Gate Optocoupler)

| Device                                                                                      | Part No.  | Package        |     |                |     | If | Prop Delay      | CMR-V/1Is @ (Vcm) |                 |                 | VDE 0884                       |   | Insulation                      |   |
|---------------------------------------------------------------------------------------------|-----------|----------------|-----|----------------|-----|----|-----------------|-------------------|-----------------|-----------------|--------------------------------|---|---------------------------------|---|
|                                                                                             |           | 300 mil<br>DIP | S08 | 400 mil<br>DIP | S05 | mA | PWD<br>ns (max) | 1000<br>(50 V)    | 10000<br>(1 kV) | 15000<br>(1 kV) | Peak Voltage<br>560 V    630 V |   | UL = 1 min.<br>2500 V    5000 V |   |
| Single<br> | HCPL-060L |                | •   |                |     | 5  | 25              |                   |                 | •               | A                              |   | •                               |   |
|                                                                                             | HCPL-260L | •              |     |                |     | 5  | 25              |                   |                 | •               |                                | A | •                               | B |
| Dual<br> | HCPL-063L |                | •   |                |     | 5  | 25              |                   |                 | •               |                                |   | •                               |   |
|                                                                                             | HCPL-263L | •              |     |                |     | 5  | 25              |                   |                 | •               |                                |   | •                               | B |

NOTES: A. VDE 0884 approved part with option 060 (pending). B. Option 020 on request.

### 3.3V Family (1 MBd Transistor Output Optocoupler)

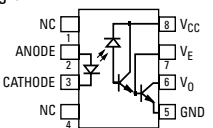
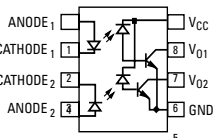
| Device     | Part No.  | Package        |     |                | If<br>mA | Prop Delay |      | CTR   |       | CMR-V/ms @ (Vcm) |                   |                   | VDE 0884                           |   |  | Insulation                   |   |
|------------|-----------|----------------|-----|----------------|----------|------------|------|-------|-------|------------------|-------------------|-------------------|------------------------------------|---|--|------------------------------|---|
|            |           | 300 mil<br>DIP | S08 | 400 mil<br>DIP | S05      | tPHL       | tPLH | Min % | Max % | 1000<br>(10 V)   | 10000<br>(1.5 kV) | 15000<br>(1.5 kV) | Peak Voltage<br>560 V 630 V 1414 V |   |  | UL = 1 min.<br>2500 V 5000 V |   |
| Single<br> | HCPL-050L |                | •   |                |          | 16         | 1.0  | 1.0   | 19    | 50               | •                 |                   | A                                  |   |  | •                            |   |
|            | HCPL-250L | •              |     |                |          | 16         | 1.0  | 1.0   | 19    | 50               | •                 |                   |                                    | A |  | •                            | B |
| Dual<br>   | HCPL-053L |                | •   |                |          | 16         | 1.0  | 1.0   | 19    | 50               | •                 |                   |                                    |   |  | •                            |   |
|            | HCPL-253L | •              |     |                |          | 16         | 1.0  | 1.0   | 19    | 50               | •                 |                   |                                    |   |  | •                            | B |

NOTES: A. VDE 0884 approved part with option 060 (pending). B. Option 020 on request.



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### 3.3V Family (100 KBd Darlington Transistor Output Optocoupler)

| Device                                                                            | Part No.  | Package     |     |             |     | If   |        |        | CTR   | VDE 0884     |       | Insulation  |        |
|-----------------------------------------------------------------------------------|-----------|-------------|-----|-------------|-----|------|--------|--------|-------|--------------|-------|-------------|--------|
|                                                                                   |           | 300 mil DIP | S08 | 400 mil DIP | S05 | 40mA | 0.5 mA | 1.6 mA | Min % | Peak Voltage |       | UL = 1 min. |        |
|                                                                                   |           |             |     |             |     |      |        |        |       | 560 V        | 630 V | 2500 V      | 5000 V |
| Single                                                                            | HCPL-070L |             | •   |             |     |      | •      |        | 400   | A            |       | •           |        |
|                                                                                   | HCPL-270L | •           |     |             |     |      | •      |        | 400   |              | A     | •           | B      |
|  |           |             |     |             |     |      |        |        |       |              |       |             |        |
| Dual                                                                              | HCPL-073L |             | •   |             |     |      | •      |        | 400   |              |       | •           |        |
|                                                                                   | HCPL-273L | •           |     |             |     |      | •      |        | 400   |              |       | •           | B      |
|  |           |             |     |             |     |      |        |        |       |              |       |             |        |

**NOTES:** A. VDE 0884 approved part with option 060 (pending). B. Option 020 on request. Please refer to data sheet for detailed electrical/switching specifications.

Agilent Technologies is proud to introduce a family of 3.3V optocouplers that will ensure superior isolation performance for your low voltage designs.

Using our optocouplers for your design eliminates the need of using additional level shifting circuitry, and sacrificing board space and power consumption. All these factors contribute to a seamless integration of your design that is cost effective and in line with industry trends of moving away from the 5V standard to lower voltage standards.

Our new range of 3.3V optocouplers are the first commercially available optocouplers designed to meet the JEDEC specification for 3.3V LVTTTL/LVCMOS logic, thereby simplifying the implementation of isolation in systems utilizing 3.3V logic circuits.

Agilent Technologies' new 3.3V optocouplers will provide not just a cost-effective solution meeting all the requirements of isolation and insulation in 3.3V systems, it will also provide the additional benefits of higher data rates and lower power supply requirements.

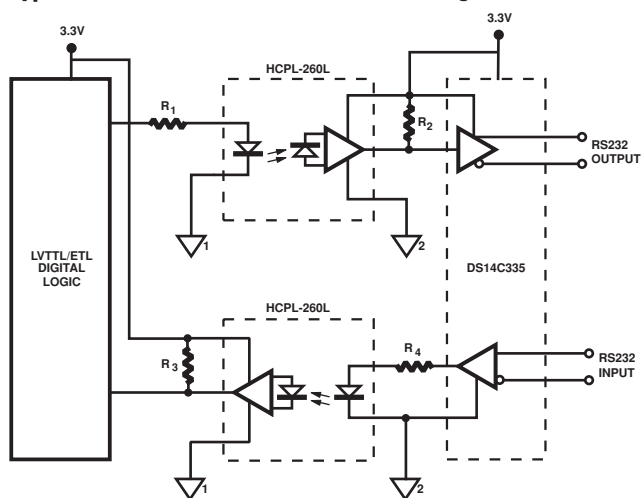
In order to meet your extensive design needs, Agilent Technologies' 3.3V technology is available in the widest range of package platform offerings including dual channel as well as single channel versions in both standard DIP and SMT(S08) packages.

The block diagram illustrates an RS232-E driver/receiver interface that uses HCPL-260L. DS14C335 is an RS232-E driver/receiver that operates on 3.3V. The low power requirements and high CMR capability of HCPL-260L make it an ideal choice in data transmission and microprocessor interface applications.

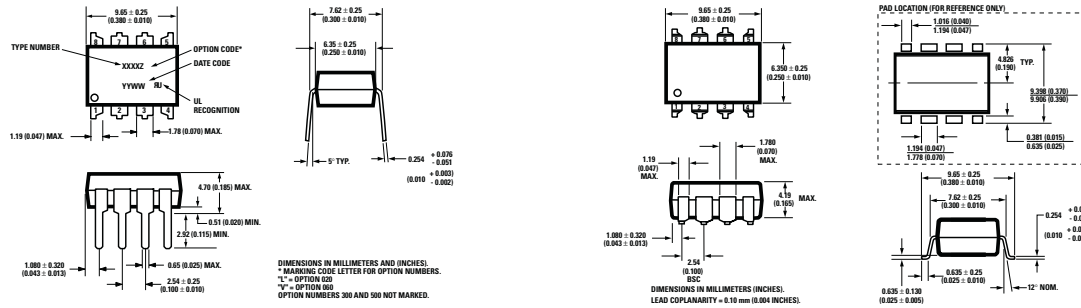
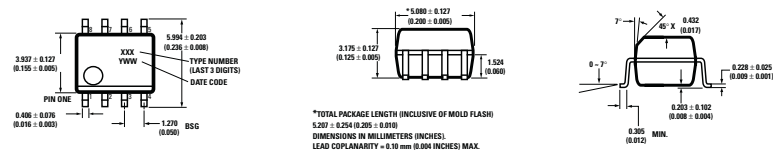
Typical applications include

- LVTTTL/LVCMOS Interface
- Computer Peripheral Interface
- Line Receivers
- Digital Logic Ground Isolation
- Pulse Transformer Replacement
- Digital Isolation for A/D, D/A Conversion

#### Typical TIA/EIA-232-E Interface Block Diagram



**300 mil 8-pin DIP**

**S0-8 SMD**

### Options Available

### #020 - UL 5000 V rms/1 Minute Option

### #060 - VDE 0884 Approved Part Option

### #300 - Gull Wing Surface Mount Option

### #500 - Tape & Reel Packaging Option

Remarks: The notation '#' is used for existing products, while (new) products launched since 15th July 01 will use '-'.

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