



New Product Announcement

DPC851 Series

350V Isolated Photocouplers Provide a Simple Solution for Isolated Signaling in Appliances and Air Conditioning

The DPC851 photocoupler series has 350V phototransistors, which enables it to be used in applications that require high operating voltages on the isolated side. The series is suited for use in BLDC or AC motor inverters for home appliances such as washing machines, air conditioners, air purifiers, refrigerators, and dehumidifiers.

Inside are two chips, an IR diode and a phototransistor with a high current transfer ratio (CTR), providing a 5,000V isolation rating between the two die. The series is available in four industry-standard package types: two through-hole (DIP and MDIP) and two surface mount (SL and SLM).

The DPC851 series is available in the DIP-4, SLM-4, SL-4, and MDIP-4 packages.

All DPC851 variants are validated with general safety certificates (UL/CQC), with some featuring VDE. Packages which feature VDE have “-V” package marking to indicate that it has passed a specific “charge/discharge” test.

Safety Approvals:

- UL1577 (No. E536221)
- CQC 4943.1-2022 (No. 24001448436)
- VDE EN IEC 60747-5-5 (No. 40059175)



The DIODES Advantages

The DPC851 series provides stable and robust operation under high-voltage temperatures.

- **Guaranteed Operating Voltage up to 350V**
Offers reliable operation for 110V/220V AC applications
- **Stable Current Transfer Rate Across Wide Ambient Temperature Range**
Reduces the decline of current transfer rate
- **Low 0.6 pF Transfer Coupling Capacitance at 1MHz**
Enables smooth signal transfer from primary to secondary side, improving the efficiency of the AC/DC motor drive

Applications

- Switching power systems
- Server power systems
- HV programmable controllers
- Air conditioners
- LED lighting
- EV charger stations

The Diodes logo is a registered trademark of Diodes Incorporated in the United States and other countries.

All other trademarks are the property of their respective owners.

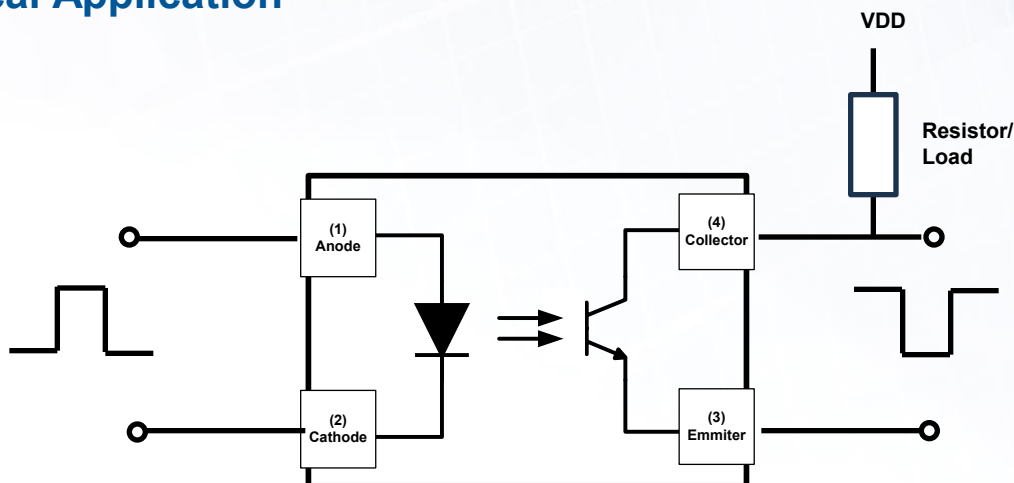
© 2025 Copyright Diodes Incorporated. All Rights Reserved.



New Product Announcement

DPC851 Series

Typical Application



350V Photocoupler Product Portfolio

Part Number	BV _{CEO}	CTR	Isolation Voltage	Operating Temperature	Package
	V	Min	V _{RMS}	°C	
DPC851D	350	50%	5,000	-55 to +110	DIP-4
DPC851L	350	50%	5,000	-55 to +110	SLM-4
DPC851S	350	50%	5,000	-55 to +110	SL-4
DPC851W	350	50%	5,000	-55 to +110	MDIP-4

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	VDE Certification	Moisture Sensitivity	Packing	
					Quantity	Carrier
DPC851D-TU	Standard	DIP-4	No	MSL-1	100	Tube
DPC851D-TU-V	Standard		Yes	MSL-1	100	Tube
DPC851L-TR	Standard	SLM-4	No	MSL-1	2,000	13" Reel
DPC851L-TR-V	Standard		Yes	MSL-1	2,000	13" Reel
DPC851S-TR	Standard	SL-4	No	MSL-1	2,000	13" Reel
DPC851S-TR-V	Standard		Yes	MSL-1	2,000	13" Reel
DPC851W-TU	Standard	MDIP-4	No	MSL-1	100	Tube
DPC851W-TU-V	Standard		Yes	MSL-1	100	Tube

Note: -V means VDE certificated and shown on package marking