

HCPL-314J-500E

Dual-Channel 0.4 A IGBT Gate Drive Optocoupler — 16-pin SOIC



HCPL-314J-500E | Dual-Channel IGBT Gate Drive Optocoupler (SO-16)

The HCPL-314J-500E is a dual-channel gate drive optocoupler consisting of an AlGaAs LED optically coupled to an integrated circuit with a power output stage. It is designed to directly drive small and medium power IGBTs and MOSFETs, delivering the voltage and current required by gate-controlled devices. Its high operating voltage range and ultra-high common-mode rejection make it well suited to motor-control inverter applications.

General / Identification	
Manufacturer	Broadcom (Avago)
Part Number	HCPL-314J-500E
Device Type	IGBT / MOSFET gate drive optocoupler
Channels	2 (dual)
Package	16-pin SOIC (SO-16, surface mount)
Packing (-500E)	Tape and reel
Performance / Functional	
Peak Output Current	0.4 A minimum
Propagation Delay	0.7 us maximum over temperature range
Common Mode Rejection (CMR)	25 kV/us minimum at VCM = 1.5 kV
Bootstrappable Supply Current	3 mA maximum
Electrical	
Supply Voltage Range (VCC)	10 V to 30 V over temperature
Output Stage	Integrated power output stage
Input	AlGaAs LED
Isolation & Safety	
Isolation Voltage (VISO)	5000 Vrms for 1 minute (UL 1577)
Max Working Insulation Voltage (VIORM)	1230 Vpeak
Highest Allowable Overvoltage (VIOTM)	8000 Vpeak
Safety Standard	IEC/EN/DIN EN 60747-5-2 approved
Mechanical & Environmental	
Operating Temperature Range	-40 C to +100 C
Pollution Degree	2 (DIN VDE 0110/1.89)
Compliance / Standards	
UL	Recognized, UL 1577, 5000 Vrms, File E55361
CSA	Approved, Component Acceptance Notice #5, File CA 88324

RoHS	Compliant (lead-free)
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Typical Applications: isolated IGBT / power-MOSFET gate drive, AC and brushless DC motor drives, industrial inverters, switch-mode power supplies (SMPS) and uninterruptible power supplies (UPS).

Specifications are taken from the manufacturer's published data and are subject to change without notice. Confirm against the current manufacturer manual before rated or safety-critical use.