

## Product Overview

### FOD8342: 3.0 A Output Current, High Speed Gate Drive Optocoupler in Stretched Body SOP 6-Pin

For complete documentation, see the data sheet.

The FOD8342 series is a 3.0 A output current gate drive optocoupler, capable of driving medium-power IGBT/MOSFETs. It is ideally suited for fast-switching driving of power IGBT and MOSFET used in motor-control inverter applications, and high-performance power systems. The FOD8342 series utilizes stretched body package to achieve 8 mm creepage and clearance distances (FOD8342T), and optimized IC design to achieve reliably high-insulation voltage and high-noise immunity. The FOD8342 series consists of an Aluminum Gallium Arsenide (AlGaAs) Light-Emitting Diode (LED) optically coupled to an integrated circuit with a high-speed driver for push-pull MOSFET output stage. The device is housed in a stretched body, 6-pin, small outline, plastic package.

### Features

- FOD8342T - 8 mm Creepage and Clearance Distance, and 0.4 mm Insulation Distance to Achieve Reliable and High-Voltage Insulation
- 3.0 A Peak Output Current Driving Capability for Medium-Power IGBT/MOSFET– Use of P-Channel MOSFETs at Output Stage Enables Output Voltage Swing Close to Supply Rail
- 20 kV/μs Minimum Common Mode Rejection
- Wide Supply Voltage Range: 10 V to 30 V
- Fast Switching Speed Over Full Operating Temperature Range– 210 ns Maximum Propagation Delay– 65 ns Maximum Pulse Width Distortion
- Under-Voltage Lockout (UVLO) with Hysteresis
- Extended Industrial Temperature Range: -40°C to 100°C
- Safety and Regulatory Approvals:– UL1577, 5,000 VACRMS for 1 Minute– DIN EN/IEC60747-5-5, 1,140V Peak Working Insulation Voltage

### Applications

- AC and Brushless DC Motor Drives
- Industrial Inverter
- Uninterruptible Power Supply
- Induction Heating
- Isolated IGBT/Power MOSFET Gate Drive

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	$I_{FLH}$ (Max) (mA)	$I_{DDL}, I_{DDH}$ (Max) (mA)	$I_{OL}, I_{OH}$ (Min) (A)	$t_{PHL}, t_{PLH}$ (Max) (ns)	PWD (Max) (ns)	$V_{UVLO}$ (Typ) (V)	$V_{UVLO-}$ (Typ) (V)	CMR (Min) (kV/ $\mu$ s)	$V_{ISO}$ (Min) (V)	$T_{OPR}$ (Min) ( $^{\circ}$ C)	$T_{OPR}$ (Max) ( $^{\circ}$ C)	Package Type
FOD8342	0.98	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC-6
FOD8342R2	0.9933	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC-6
FOD8342R2V	1.0066	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC-6
FOD8342T	1	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC6W
FOD8342TR2	1.0133	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC6W
FOD8342TR2V	1.02	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC6W
FOD8342TV	1.0066	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC6W
FOD8342V	0.9866	Pb-free non AEC-Q and PPAP	Active	7.5	4	2.5	210	65	8.3	7.7	20	5000	-40	100	SOIC-6

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

Created on: 10/29/2020