

Product Overview

FOD8316: 2.5A Output Current, IGBT Drive Optocoupler with Desaturation Detection and Isolated Fault Sensing

For complete documentation, see the data sheet.

The FOD8316 is an advanced 2.5A Output Current IGBT Drive Optocoupler, capable of driving most 1200V/ 150A IGBTs. It is ideally suited for fast switching driving of power IGBTs and MOSFETs used in motor control inverter applications and high performance power systems. It offers critical protection features necessary for preventing fault conditions that lead to destructive thermal runaway of IGBTs. It utilizes ON Semiconductor's patented coplanar packaging technology, Optoplanar®, and optimized IC design to achieve high noise immunity, characterized by high common mode rejection and power supply rejection specifications. It consists of an integrated gate drive optocoupler featuring low RDS(ON) CMOS transistors to drive the IGBT from rail to rail and an integrated high speed isolated feedback for fault sensing. The device is housed in a compact 16-pin small outline plastic package which meets the 8mm creepage and clearance requirements.

Features

- High Noise Immunity characterized by common mode rejection
- 35kV/μs Minimum Common Mode Rejection ($V_{cm} = 1500V_{pk}$)
- 2.5A peak output current driving capability for most 1200V/150A IGBT
- Optically isolated fault sensing feedback
- "Soft" IGBT turn-off
- Built-in IGBT protection
- Desaturation detection
- Under voltage lockout protection
- 1,414V (peak) working voltage rating
- 8,000V (peak) transient isolation voltage rating

For more features, see the data sheet

Applications

- Automation
- Consumer Appliances
- Energy Generation & Distribution
- Industrial Motor
- Motion Control - Industrial Motor

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/μs)	V_{ISO} (Min) (V)	T_{OPR} (Min) (°C)	T_{OPR} (Max) (°C)	Package Type
FOD8316	2.1333	Pb-free non AEC-Q and PPAP	Active	-	3	2.5	500	300	11.5	10	35	4243	-40	100	SOIC16 W
FOD8316R2	2.1333	Pb-free non AEC-Q and PPAP	Active	-	3	2.5	500	300	11.5	10	35	4243	-40	100	SOIC16 W
FOD8316R2V	2.1333	Pb-free non AEC-Q and PPAP	Active	-	3	2.5	500	300	11.5	10	35	4243	-40	100	SOIC16 W
FOD8316V	2.3466	Pb-free non AEC-Q and PPAP	Active	-	3	2.5	500	300	11.5	10	35	4243	-40	100	SOIC16 W

For more information please contact your local sales support at www.onsemi.com.

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