

**60V N-CHANNEL SELF PROTECTED ENHANCEMENT MODE INTELLIFET MOSFET**
**Product Summary**

$V_{DS}$	$R_{DS(ON)}$	$E_{AS}$	$I_D$ $T_A = +25^\circ C$
60V	500m $\Omega$	120mJ	1.3A

**Description**

The ZXMS6004DN8Q is a dual self-protected low-side IntelliFET<sup>®</sup> MOSFET with logic level input. It integrates overtemperature, overcurrent, overvoltage (active clamp) and ESD protected logic level functionality. The ZXMS6004DN8Q is ideal as a general purpose switch driven from 3.3V or 5V microcontrollers in harsh environments where standard MOSFETs are not rugged enough.

**Applications**

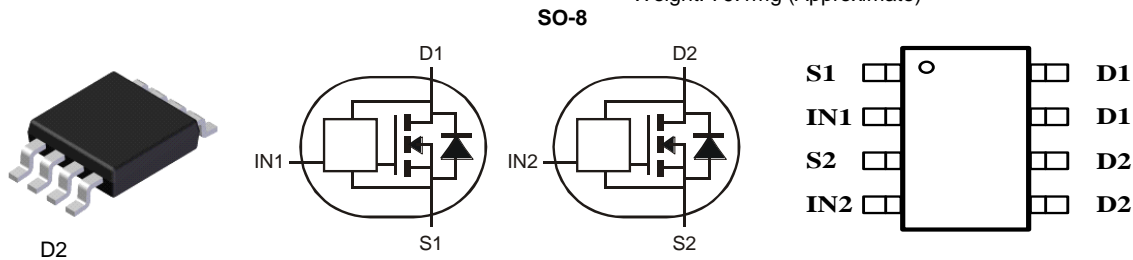
- Lamp Driver
- Motor Driver
- Relay Driver
- Solenoid Driver

**Features and Benefits**

- Low Input Current
- Logic Level Input (3.3V and 5V)
- Short Circuit Protection with Auto Restart
- Overvoltage Protection (Active Clamp)
- Thermal Shutdown with Auto Restart
- Overcurrent Protection
- Input Protection (ESD)
- High Continuous Current Rating
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Characterized to AEC-Q101-006 Grade F for Short-Circuit Reliability**
- **PPAP Capable (Note 4)**

**Mechanical Data**

- Case: SO-8
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish (63)
- Weight: 79.1mg (Approximate)


**Ordering Information (Note 5)**

Product	Marking	Reel Size (inches)	Tape Width (mm)	Quantity per Reel
ZXMS6004DN8Q-13	6004DN8	13	12	2,500 Units

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  4. Automotive products are AEC-Q10x qualified and are PPAP capable. Refer to [http://www.diodes.com/quality/product\\_compliance\\_definitions/](http://www.diodes.com/quality/product_compliance_definitions/).
  5. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

**Marking Information**
