

Product Summary (@T_A = +25°C)

| V _{RRM} (V) | I _O (A) | V _F (V) | I _R (μA) | t _{RR} (ns) |
|----------------------|--------------------|--------------------|---------------------|----------------------|
| 600 | 8 | 1.30 | 8 | 70 |

Features and Benefits

- Soft, Hyper-Fast Switching Capability
- Glass Passivated Die Construction
- Especially Suited for Discontinuous or Critical Conduction Mode Power Factor Corrections
- High-Reliability and Efficiency
- Low Forward Voltage Drop
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Description and Applications

Suitable for rectification and freewheeling for SMPS, LED lighting, adapters, battery chargers, home appliances, office equipment, and telecommunication applications.

Mechanical Data

- Package: ITO220AC
- Package Material: Molded Plastic, “Green” Molding Compound. UL Flammability Classification Rating 94V-0
- Terminals: Finish—Matte Tin Annealed over Copper Lead-Frame. Solderable per MIL-STD-202, Method 208 ^(e3)
- Polarity: See Diagram
- Weight: 1.522 grams (Approximate)

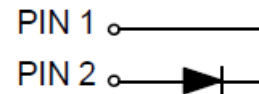
ITO220AC (Type WX-NC)



Top View



Top View Pin-Out


Ordering Information (Note 4)

| Part Number | Package | Packing | |
|-------------|-----------------------|-----------|---------|
| | | Qty. | Carrier |
| DTH8L06FP | ITO220AC (Type WX-NC) | 50 Pieces | Tube |

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> 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. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information

ITO220AC (Type WX-NC)



DTH8L06FP = Product Type Marking Code
 J11 = Manufacturers' Code Marking
 YYWW = Date Code Marking
 YY = Last Two Digits of Year (ex: 22 for 2022)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| Characteristic | Symbol | Value | Unit |
|-----------------------------------------------------------------------------------------------------|------------------|-------|------------------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 600 | V |
| Working Peak Reverse Voltage | V _{RWM} | | |
| DC Blocking Voltage | V _R | | |
| Average Rectified Output Current | I _O | 8 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 120 | A |
| I ² t Rating for Fusing (3ms ≤ t ≤ 8.3ms) | I ² t | 60 | A ² s |
| Maximum Mounting Torque | Tor | 0.5 | N·m |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|------------------------------------------------------|-----------------------------------|-------------|------|
| Typical Thermal Resistance Junction to Case (Note 5) | R _{θJC} | 9 | °C/W |
| Typical Thermal Resistance Junction to Lead (Note 5) | R _{θJL} | 10 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|--------------|--------------|------|-------------------------------------------------------------------------------------------------|
| Reverse Breakdown Voltage (Note 6) | V _{(BR)R} | 600 | — | — | V | I _R = 8μA |
| Forward Voltage (Note 7) | V _F | — | 1.15 0.94 | 1.30 1.05 | V | I _F = 8A, T _J = +25°C I _F = 8A, T _J = +125°C |
| Reverse Leakage Current (Note 6) | I _R | — | 0.1 50 | 8 — | μA | V _R = 600V, T _J = +25°C V _R = 600V, T _J = +150°C |
| Reverse Recovery Time | t _{RR} | — | — | 70 | ns | I _F = 0.5A, I _R = 1.0A, I _{RR} = 0.25A |

Notes: 5. Thermal resistance test performed in accordance with JESD-51.
 6. Short duration pulse test used to minimize self-heating effect.
 7. 300μs pulse width, 2% duty cycle.

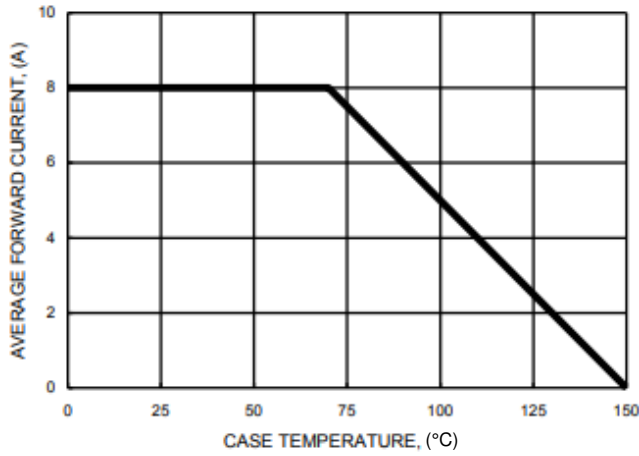


Figure 1. Forward Current Derating Curve

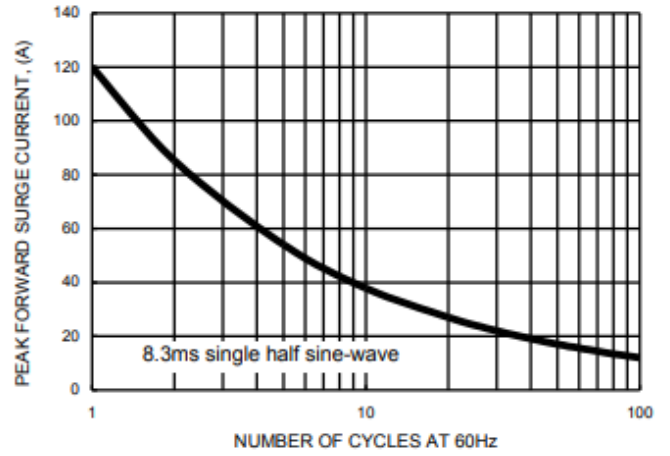


Figure 2. Maximum Non-Repetitive Surge Current

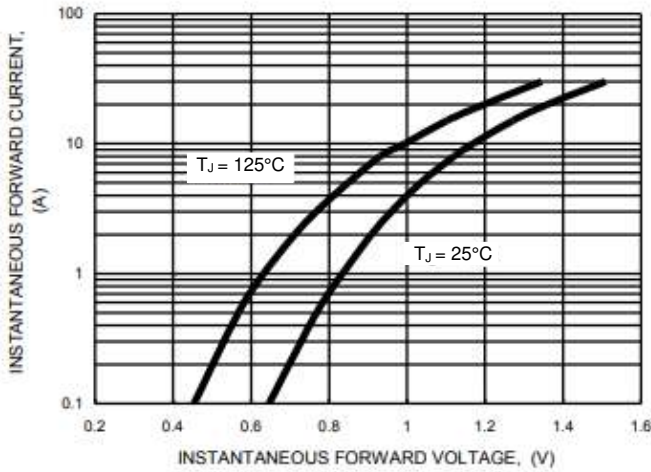


Figure 3. Typical Forward Characteristics

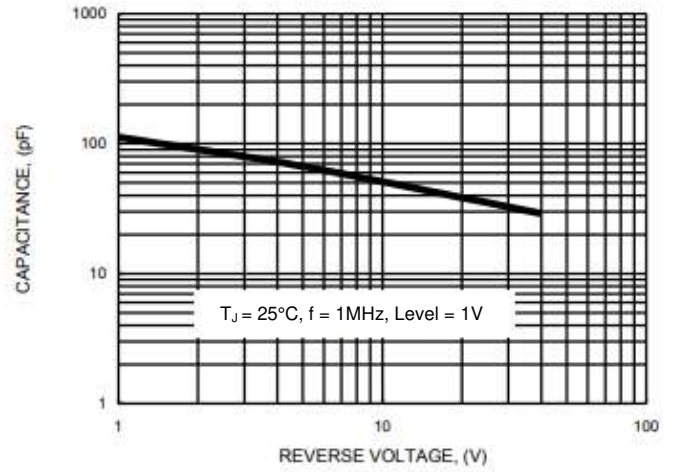


Figure 4. Typical Junction Capacitance

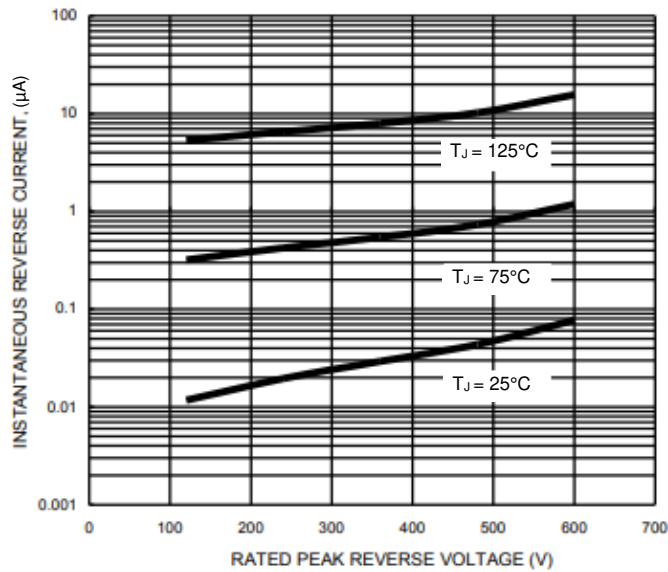
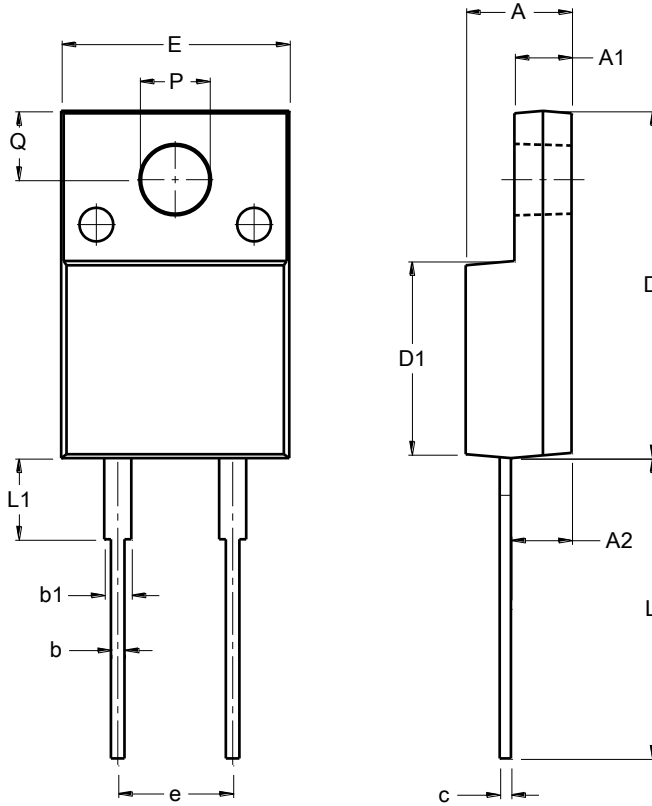


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

ITO220AC (Type WX-NC)



| ITO220AC (Type WX-NC) | | |
|--------------------------|-------|-------|
| Dim | Min | Max |
| A | 4.46 | 4.87 |
| A1 | 2.48 | 2.80 |
| A2 | 2.50 | 2.80 |
| b | 0.50 | 0.80 |
| b1 | 1.15 | 1.70 |
| c | 0.45 | 0.70 |
| D | 14.95 | 15.95 |
| D1 | 8.50 | 8.80 |
| E | 10.00 | 10.40 |
| e | 4.95 | 5.25 |
| L | 13.00 | 13.70 |
| L1 | 3.30 | 3.90 |
| Q | 2.76 | 3.36 |
| PØ | 3.00 | 3.30 |
| All Dimensions in mm | | |

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