

Product Summary (Per Leg, @ T_A = +25°C)

| V _{RRM} (V) | I _O (A) | V _F (V) | I _R (μA) |
|----------------------|--------------------|--------------------|---------------------|
| 600 | 5 | 1.5 | 10 |

Description and Applications

- Switched mode power supplies
- High frequency DC to DC converters

Features and Benefits

- Super-Fast Switching Capability
- Glass Passivated Die Construction
- Rating to 600V Peak Reverse Voltage
- High Surge Capacity
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- 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](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

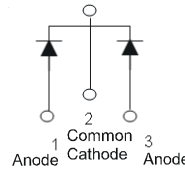
- Package: ITO220AB
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Terminals: Finish – Matte Tin Plated Leads Solderable per MIL-STD-202, Method 208 ^③
- Polarity: See Diagram
- Weight: 1.558 grams (Approximate)

ITO220AB (Type WX2)



Top View

Bottom View



Package Pin Out Configuration

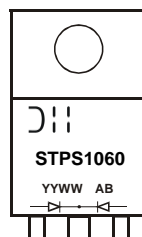
Ordering Information (Note 4)

| Part Number | Package | Packing | |
|-------------|---------------------|-----------|---------|
| | | Qty. | Carrier |
| STPS1060 | ITO220AB (Type WX2) | 50 Pieces | Tube |

- Notes:
- EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 - 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.
 - Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 - For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information

ITO220AB (Type WX2)



STPS1060 = Product Type Marking Code
 Ⓜ = Manufacturers' Marking
 YYWW = Date Code Marking
 YY = Last Two Digits of Year (ex: 22 for 2022)
 WW = Week Code (01 to 53)
 AB = Foundry and Assembly Code

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

| Characteristic | Symbol | Value | Unit |
|---|------------------------------------|---------|------|
| Peak Repetitive Reverse Voltage DC Blocking Voltage | V _{RRM} V _R | 600 | V |
| Average Rectified Output Current, @ T _C = +100°C (Per Leg) (Total) | I _O | 5 10 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 55 | A |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|-----------------------------------|-------------|------|
| Typical Thermal Resistance Junction to Case (Notes 5 & 6) | R _{θJC} | 4 | °C/W |
| Typical Thermal Resistance Junction to Lead (Notes 5 & 6) | R _{θJL} | 4 | °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 7) | V _{(BR)R} | 600 | — | — | V | I _R = 10μA |
| Forward Voltage (Note 8) | V _F | — | — | 1.50 | V | I _F = 5A, T _J = +25°C |
| | | — | 1.08 | 1.40 | V | I _F = 5A, T _J = +125°C |
| Reverse Leakage Current (Note 7) | I _R | — | — | 10 | μA | V _R = 600V, T _J = +25°C |
| | | — | 2.79 | 250 | μA | V _R = 600V, T _J = +100°C |
| Typical Total Capacitance | C _T | — | 35 | — | pF | V _R = 4V, f = 1.0MHz |
| Reverse Recovery Time | t _{RR} | — | — | 50 | 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. The unit mounted on Aluminum plate 29.6mm x 23.9mm x 1.87mm with aluminum plate 100mm x 100mm x 1.9mm.
 7. Short duration pulse test used to minimize self-heating effect.
 8. 300μs pulse width, 2% duty cycle.

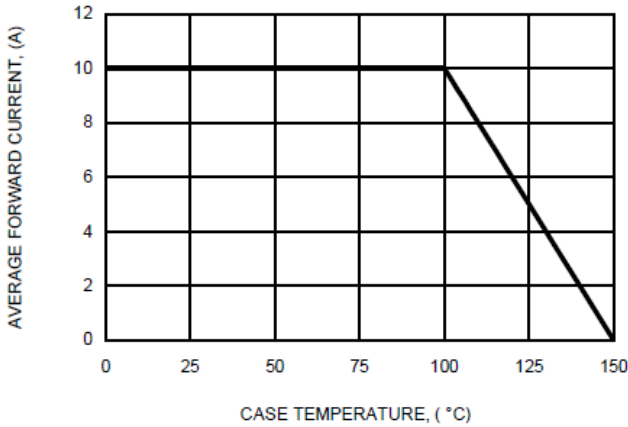


Fig. 1 FORWARD CURRENT DERATING CURVE

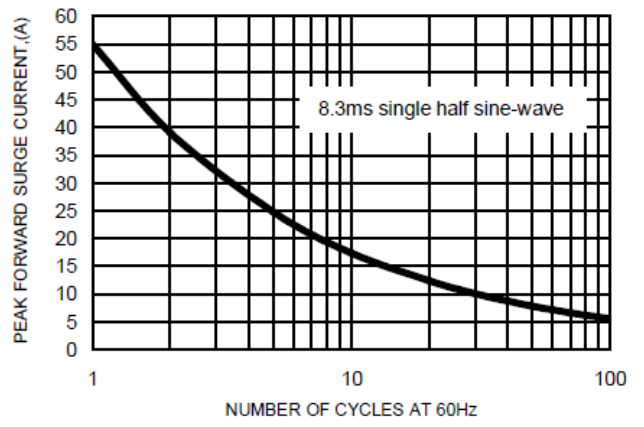


Fig. 2 MAXIMUM NON-REPETITIVE SURGE CURRENT

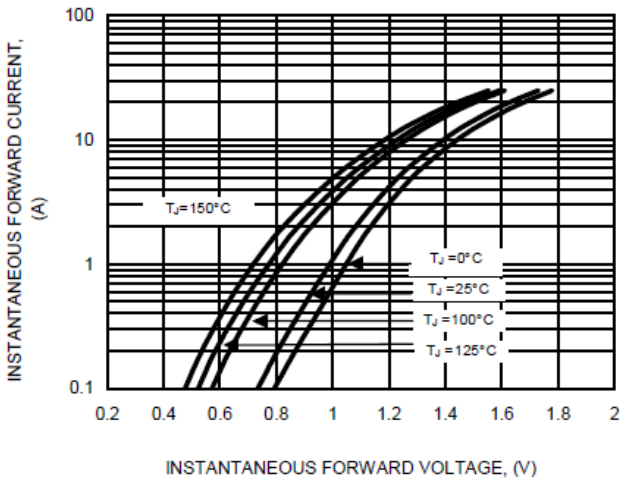


Fig. 3 TYPICAL FORWARD CHARACTERISTICS

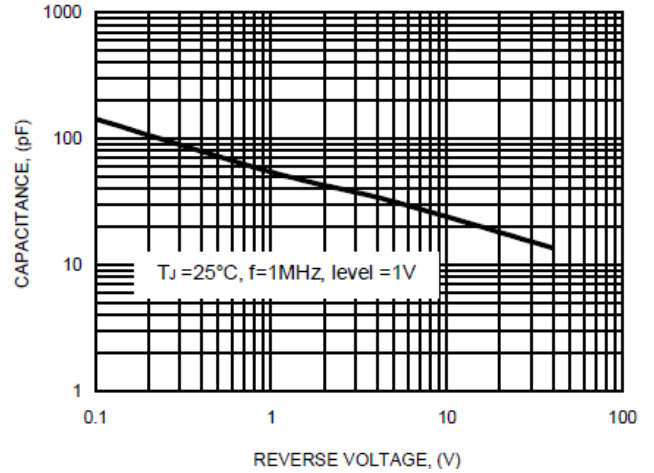


Fig. 4 TYPICAL TOTAL CAPACITANCE

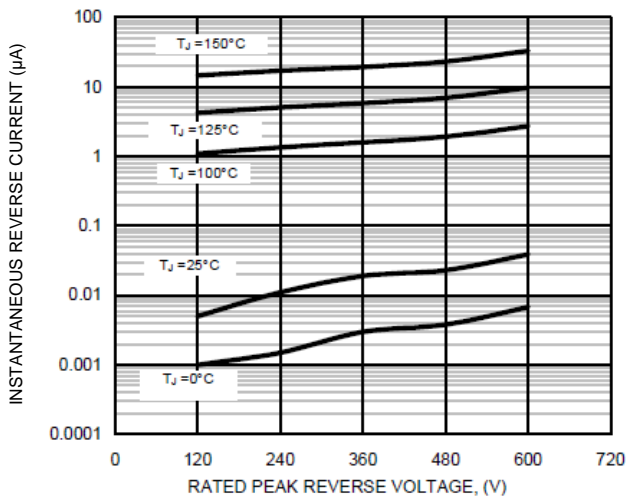
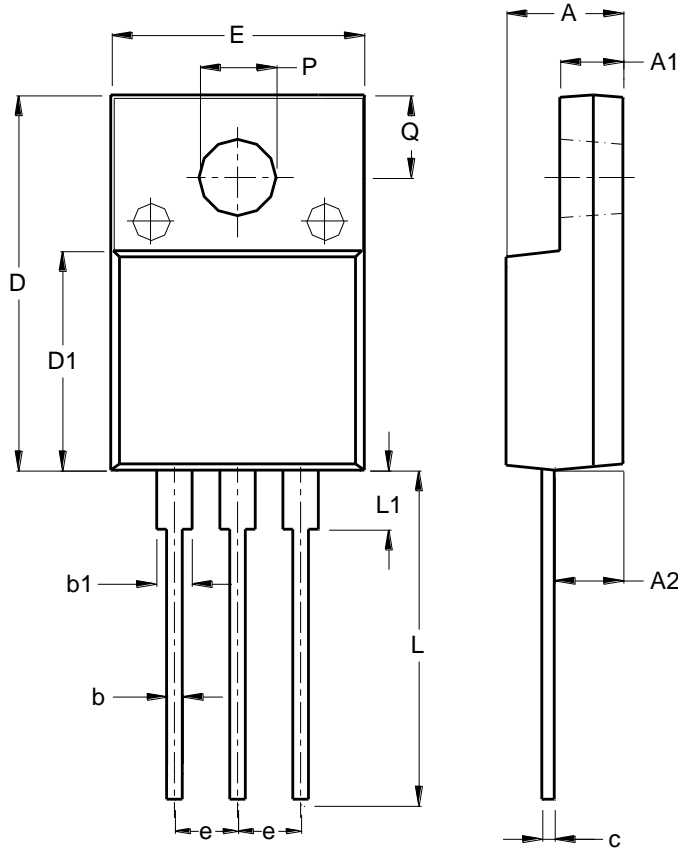


Fig. 5 TYPICAL REVERSE CHARACTERISTICS

Package Outline Dimensions

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

ITO220AB (Type WX2)



| ITO220AB (Type WX2) | | |
|-----------------------------|-------|-------|
| 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 | 2.40 | 2.70 |
| L | 13.00 | 13.70 |
| L1 | 2.10 | 2.50 |
| Q | 2.76 | 3.36 |
| P | 3.00 | 3.30 |
| All Dimensions in mm | | |

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