

Product Summary (@ $T_A = +25^\circ\text{C}$)

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/>

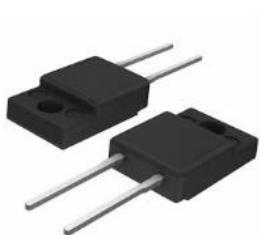
Description and Applications

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)

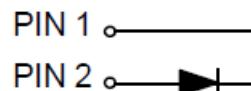
ITO220AC (Type WX-NC)



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

DII = 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 (@ $T_A = +25^\circ\text{C}$, 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}		
Working Peak Reverse Voltage	V_{RWM}	600	V
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^2t Rating for Fusing (3ms $\leq t \leq$ 8.3ms)	I^2t	60	A^2s
Maximum Mounting Torque	Tor	0.5	N·m

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 5)	$R_{\theta JC}$	9	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Lead (Note 5)	$R_{\theta JL}$	10	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	600	—	—	V	$I_R = 8\mu\text{A}$
Forward Voltage (Note 7)	V_F	—	1.15 0.94	1.30 1.05	V	$I_F = 8\text{A}, T_J = +25^\circ\text{C}$ $I_F = 8\text{A}, T_J = +125^\circ\text{C}$
Reverse Leakage Current (Note 6)	I_R	—	0.1 50	8 —	μA	$V_R = 600\text{V}, T_J = +25^\circ\text{C}$ $V_R = 600\text{V}, T_J = +150^\circ\text{C}$
Reverse Recovery Time	t_{RR}	—	—	70	ns	$I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{RR} = 0.25\text{A}$

Notes: 5. Thermal resistance test performed in accordance with JESD-51.

6. Short duration pulse test used to minimize self-heating effect.

7. 300 μs pulse width, 2% duty cycle.

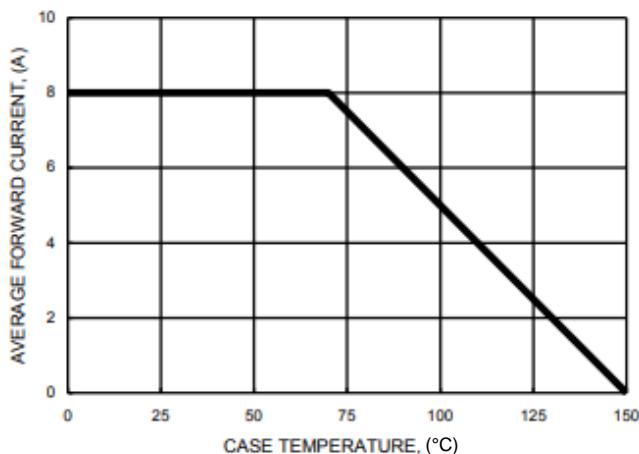


Figure 1. Forward Current Derating Curve

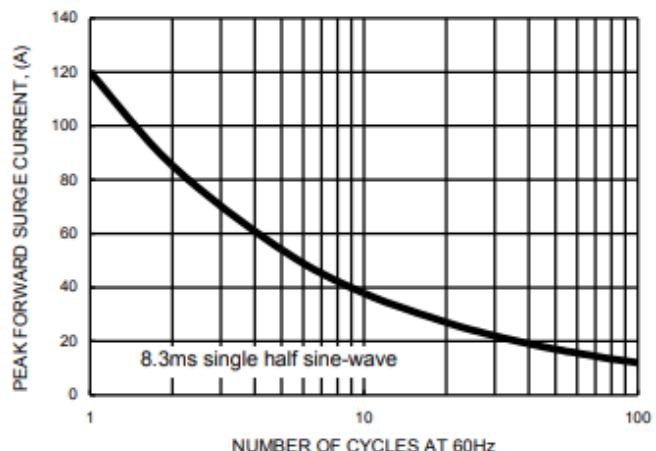


Figure 2. Maximum Non-Repetitive Surge Current

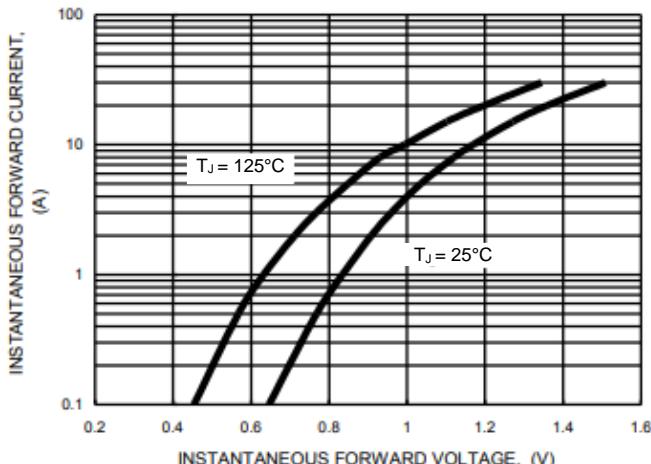


Figure 3. Typical Forward Characteristics

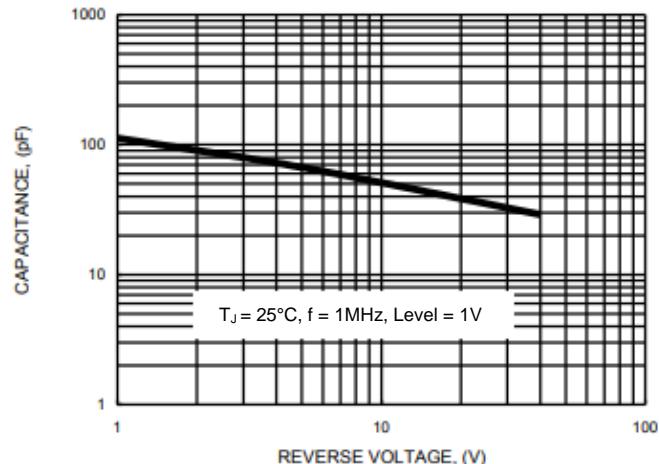


Figure 4. Typical Junction Capacitance

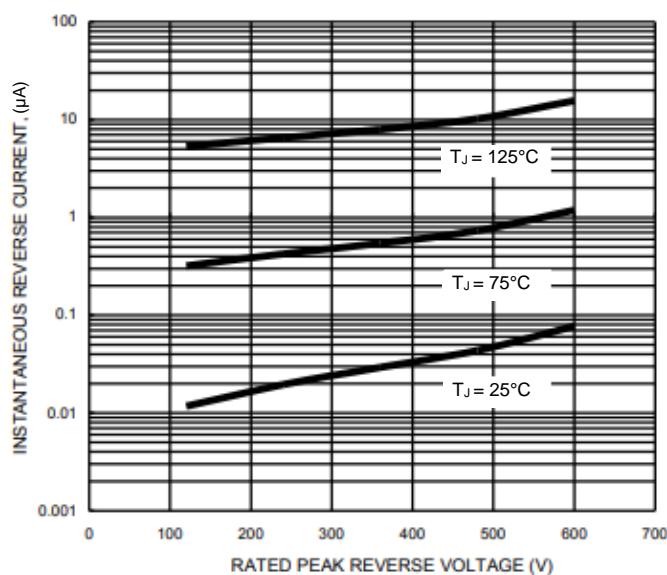
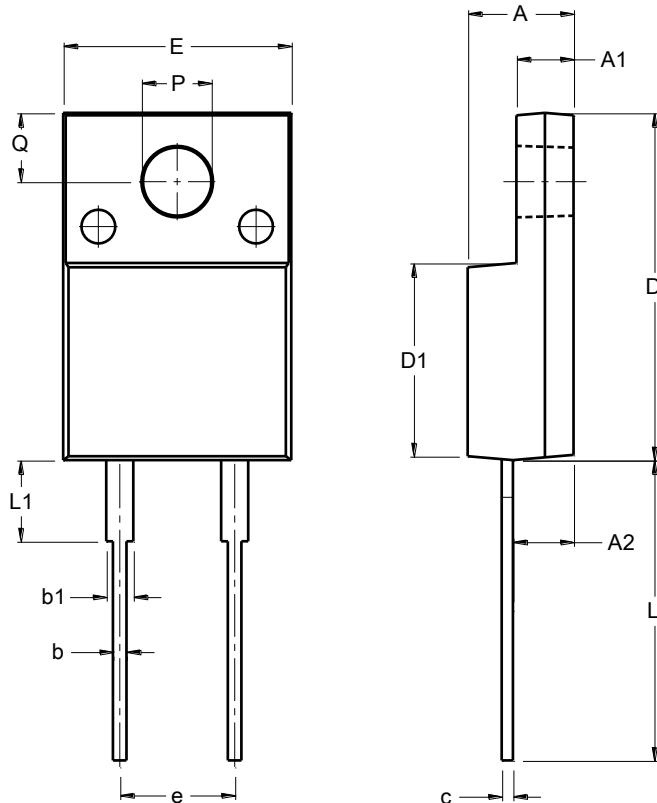


Figure 5. Typical Reverse Characteristics

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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