

STPF1020CT

**SUPER FAST
GLASS PASSIVATED RECTIFIERS**

**REVERSE VOLTAGE – 200 Volts
FORWARD CURRENT – 10 Amperes**

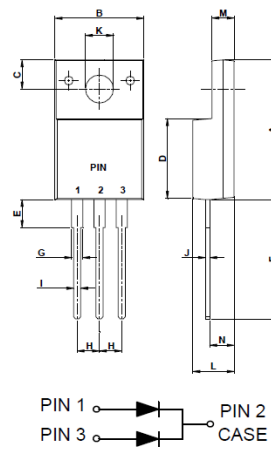
FEATURES

- Glass passivated chip
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

MECHANICAL DATA

- Package: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.06 ounces, 1.70 grams
- Mounting position: Any
- Max. mounting torque = 0.5N.m (5.1Kgf.cm)

ITO-220AB



ITO-220AB		
DIM.	MIN.	MAX.
A	15.50	16.50
B	10.0	10.40
C	3.00	3.50
D	9.00	9.30
E	2.90	3.60
F	13.46	14.22
G	1.15	1.70
H	2.40	2.70
I	0.75	1.00
J	0.45	0.70
K	3.00 \varnothing	3.30 \varnothing
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	V
Maximum RMS Voltage	V_{RMS}	140	V
Maximum DC Blocking Voltage	V_{DC}	200	V
Maximum Average Forward Rectified Current @ $T_C=110^\circ\text{C}$	$I_{(AV)}$	10	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave @ $T_J=25^\circ\text{C}$	I_{FSM}	55	A
Maximum Forward Voltage Pulse Width=300us Duty Cycle	V_F	$I_F=5A @ T_J=25^\circ\text{C}$ 1.1 $I_F=5A @ T_J=125^\circ\text{C}$ 1.0 $I_F=10A @ T_J=25^\circ\text{C}$ 1.25 $I_F=10A @ T_J=125^\circ\text{C}$ 1.20	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	@ $T_J=25^\circ\text{C}$ 10 @ $T_J=100^\circ\text{C}$ 250	μA
Typical Junction Capacitance per Element (Note 3)	C_J	60	pF
Maximum Reverse Recovery Time (Note 4)	t_{RR}	30	ns
Typical Thermal Resistance (Note 5)	$R_{\theta JC}$	4.0	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Dielectric Strength from Terminals to Case, AC with $t=1$ minute, $RH<30\%$	V_{dis}	2000	V

- 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. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 4. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{RR} 0.25A$.
 5. Device mounted on 100mm x 100mm x 1.6mm Cu Plate.

RATING AND CHARACTERISTIC CURVES
STPF1020CT

FIG.1 - FORWARD CURRENT DERATING CURVE

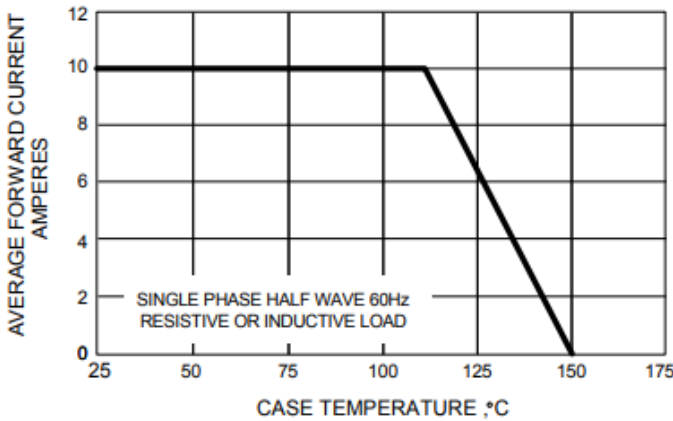


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

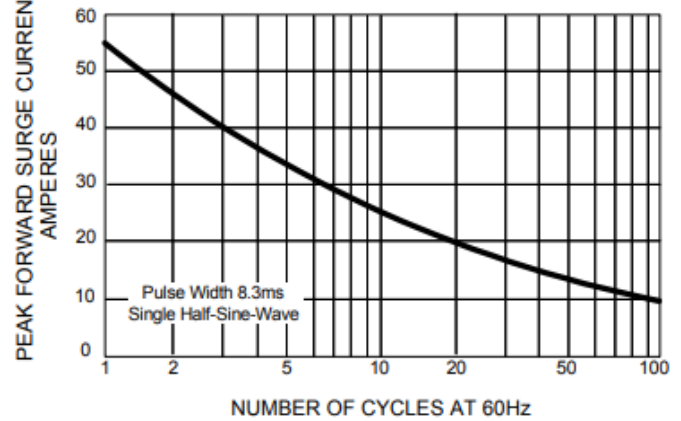


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

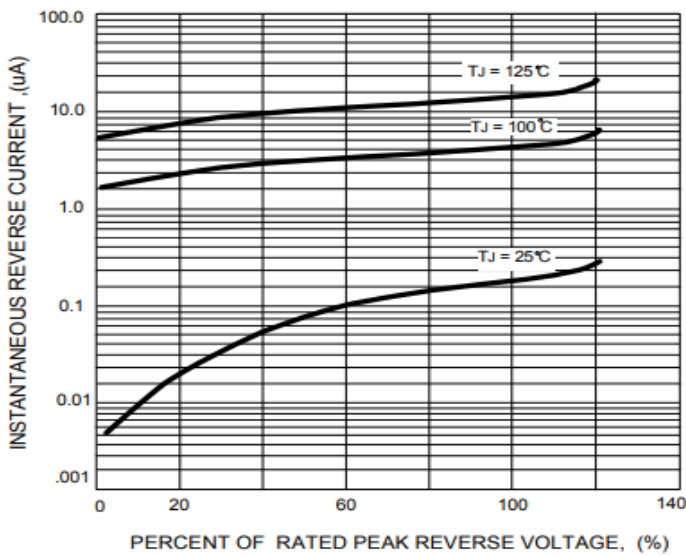


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

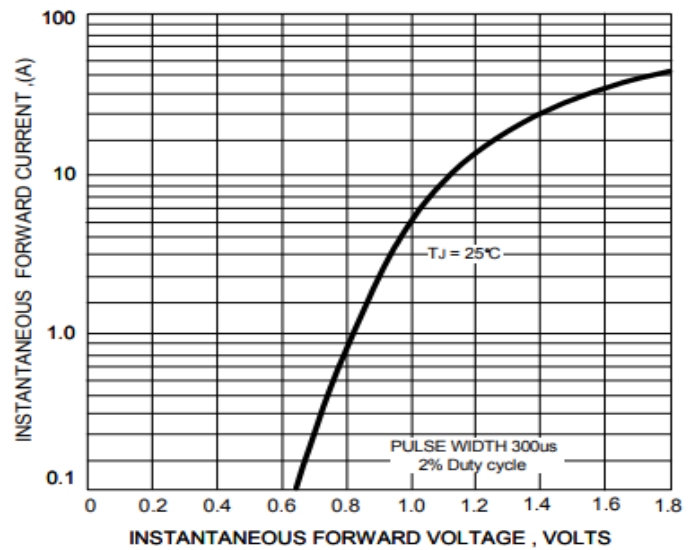
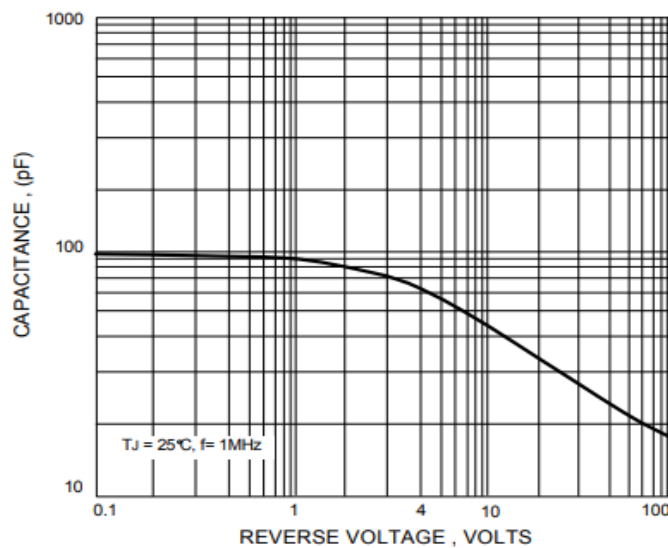


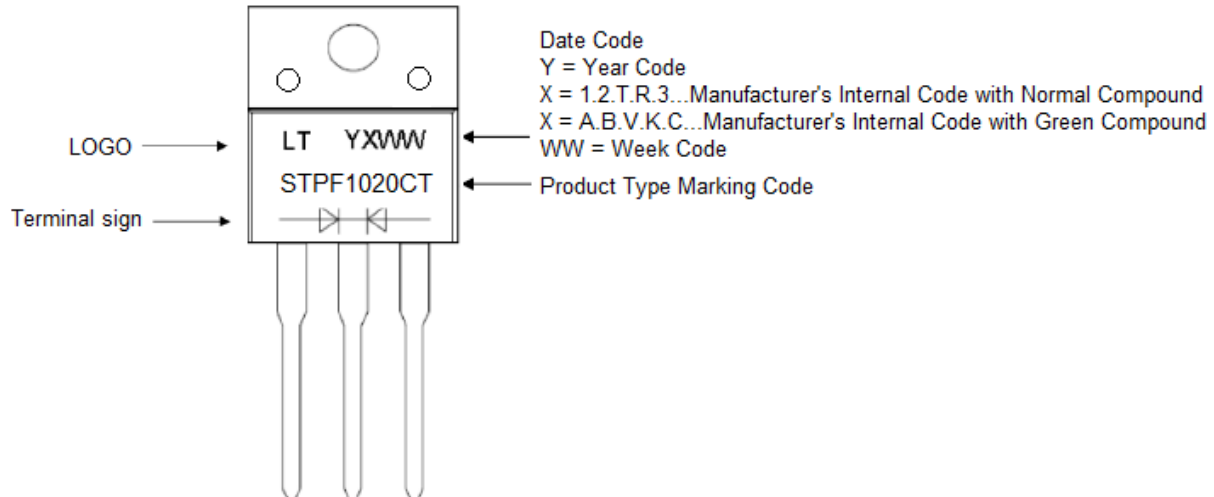
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
STPF1020CT	ITO-220AB	50	Tube

Marking Information:



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