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A Product Line of Diodes Incorporated | LITE-ON SEMICONDUCTOR

STPF1040CTW

SUPER FAST GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE – 400 Volts
FORWARD CURRENT – 10 Amperes

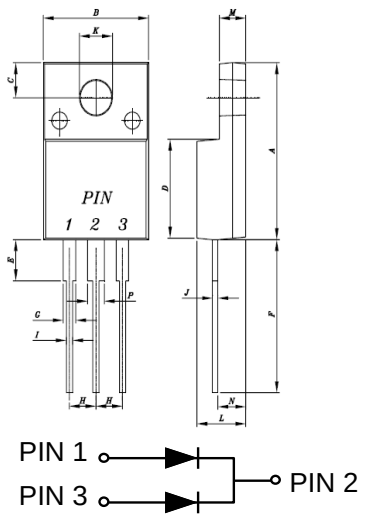
FEATURES

- Glass passivated chip
- Super fast switching time for high efficiency
- Low forward drop voltage and high current capability
- Low reverse leakage current
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: ITO-220AB molded plastic
- Package Material: "Green" Molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Maximum mounting torque = 0.5 N.m(5.1 Kgf.cm)
- Lead free finish, RoHS compliant
- Polarity : As marked on body
- Marking position: Any
- Weight: 0.05ounces, 1.558 grams **(**Approximate)
- Marking code:STPF1040CTW

ITO-220AB(W/B)



ITO-220AB(W/B)		
DIM	MIN	MAX
A	14.95	15.95
B	10.00	10.40
C	2.76	3.36
D	8.50	8.80
E	3.30	3.90
F	13.0	13.70
G	1.15	1.70
H	2.40	2.70
I	0.50	0.80
J	0.45	0.70
K	3.00	3.30
L	4.46	4.87
M	2.48	2.80
N	2.50	2.80
P	1.50	1.90
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	400	V
Maximum DC blocking voltage		V_{DC}	400	V
Maximum Average rectified forward current	@Tc = 90°C	I_{AV}	10	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	80	A
Operating and Storage temperature range		T_J, T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	I_F = 5A	T_J = 25°C	V_F	--	1.30	V
		T_J = 125°C		--	1.20	
	I_F = 10A	T_J = 25°C		--	1.50	
		T_J = 125°C		--	1.40	
Reverse leakage current	V_R = 400V	T_J = 25°C	I_R	--	10	uA
		T_J = 100°C		--	250	
Typical junction capacitance (Note 5)			C_J	30	50	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	$RthJ_C$	5	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse recovery time	I_F=0.5A,I_{rr}=0.25A,I_R=0.1A	T_{RR}	35	nS

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. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied reverse voltage of 4.0 VDC.
6. Thermal Resistance test performed in accordance with JESD-51.
7. The unit mounted on 100.64mm x 75.2mm x 26.83 mm Aluminum Plate Heatsink.

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RATING AND CHARACTERISTIC CURVES
STPF1040CTW

FIG.1- FORWARD CURRENT DERATING CURVE

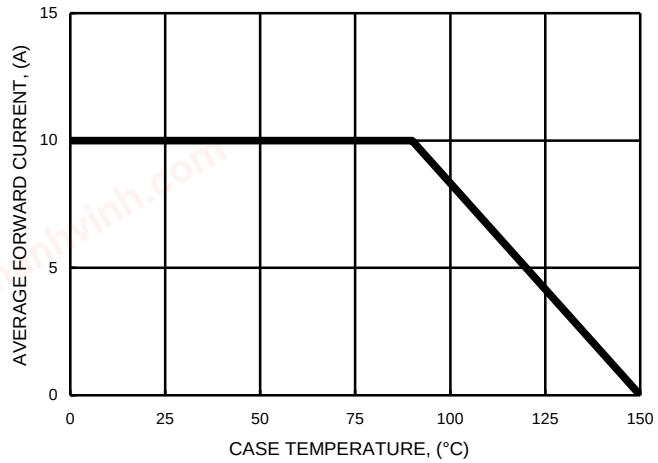


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

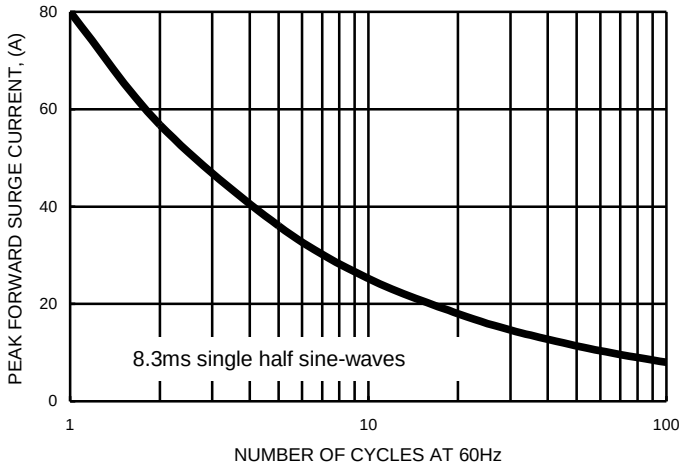


FIG.3- TYPICAL FORWARD CHARACTERISTICS

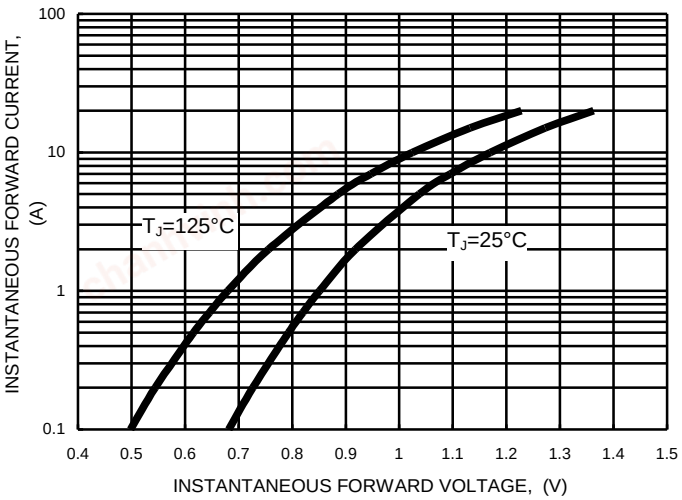


FIG.4- TYPICAL JUNCTION CAPACITANCE

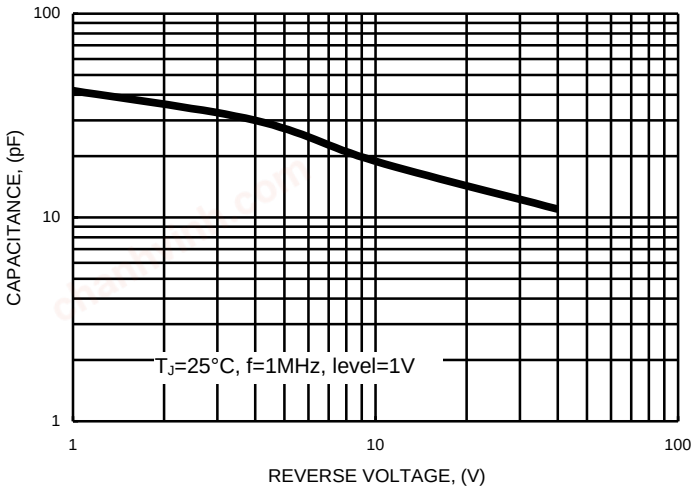
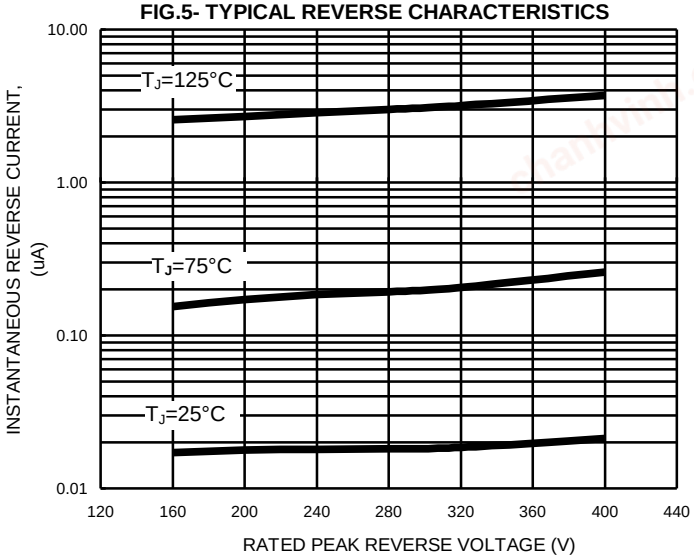


FIG.5- TYPICAL REVERSE CHARACTERISTICS



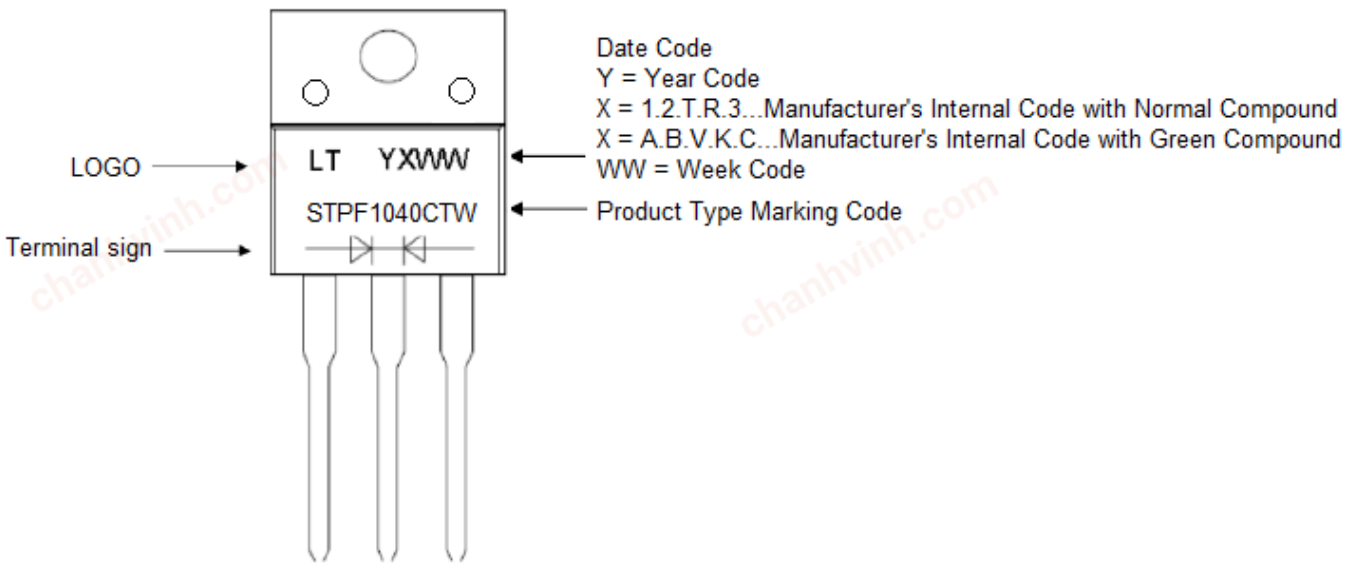
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Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
STPF1040CTW	ITO-220AB(W/B)	50 pcs	Tube

Marking Information:



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