LITE ON SEMICONDUCTOR

STPF1010CT thru 1020CT

SUPER FAST GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE - **100** to **200** Volts FORWARD CURRENT - **10** Amperes

ITO-220AB

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

MECHANICAL DATA

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



ITO-220AB					
DIM.	MIN.	MAX.			
A	15.50	16.50			
В	10.0	10.40			
С	3.00	3.50			
D	9.00	9.30			
E	2.90	3.60			
F	13.46	14.22			
G	1.15	1.70			
Н	2.40	2.70			
I	0.75	1.00			
J	0.45	0.70			
К	3.00ø	3.30 ø			
L	4.36	4.77			
М	2.48	2.80			
Ν	2.50	2.80			
All Dimensions in millimeter					

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	STPF1010CT	STPF1020CT	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	100	200	V
Maximum RMS Voltage	VRMS	70 140		V
Maximum DC Blocking Voltage	VDC	100	200	V
Maximum Average Forward Rectified Current @Tc=110℃	I(AV)	10		Α
Peak Forward Surge Current 8.3ms single half sine-wave @TJ=25℃	IFSM	55		A
Maximum forward Voltage IF=5A@TJ =25℃ Pulse Width =300us IF=5A@TJ =125℃ Duty cycle IF=10A@TJ =125℃ IF=10A@TJ =125℃ IF=10A@TJ =125℃	VF	1.1 1.0 1.25 1.20		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $@T_J = 25^{\circ}C$ $@T_J = 100^{\circ}C$	IR	10 250		uA
Typical Junction Capacitance per element (Note 1)	CJ	6	0	pF
Maximum Reverse Recovery Time (Note 2)	TRR	3	0	ns
Typical Thermal Resistance (Note 3)	Rejc	4.	0	°C/W
Operating and Storage Temperature Range	TJ,TSTG	-55 to	+150	°C
Dielectric Strengh from terminals to case, AC with t=1 minute, RH<30%	Vdis	2000		V
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NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC. 2.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR 0.25A.

3. Device mounted on 100 mm x 100 mm x 1.6 mm Cu Plate

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RATING AND CHARACTERISTIC CURVES STPF1010CT thru STPF1020CT

FIG.1 - FORWARD CURRENT DERATING CURVE FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT PEAK FORWARD SURGE CURRENT, AMPERES 12 60 AVERAGE FORWARD CURRENT AMPERES 10 50 8 40 30 6 20 4 Pulse Width 8.3ms 10 2 SINGLE PHASE HALF WAVE 60Hz RESISTIVE OR INDUCTIVE LOAD Single Half-Sine-Wave 0 ∟ 25 0 75 100 10 50 100 50 125 150 175 5 20 CASE TEMPERATURE ,°C NUMBER OF CYCLES AT 60Hz FIG.3 - TYPICAL REVERSE CHARACTERISTICS FIG.4 - TYPICAL FORWARD CHARACTERISTICS 100.0 100 INSTANTANEOUS REVERSE CURRENT, (uA) INSTANTANEOUS FORWARD CURRENT, (A) TJ = 125 °C 10.0 TJ = 100 C 10 1.0 TJ = 25℃ -TJ = 25°C 0.1 1.0 0.01 PULSE WIDTH 300us 2% Duty cycle .001 0.1 20 60 100 140 0.2 0.6 0.8 1.0 1.2 1.6 0 0 0.4 1.4 1.8 INSTANTANEOUS FORWARD VOLTAGE, VOLTS PERCENT OF RATED PEAK REVERSE VOLTAGE, (%) FIG.5 - TYPICAL JUNCTION CAPACITANCE 1000 CAPACITANCE, (pF) 100 TJ = 25℃, f= 1MHz 10 0.1 100 4 10 **REVERSE VOLTAGE**, VOLTS

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