

## SF1020F

### Super Fast Rectifiers

#### Features

- Low cost.
- Diffused junction.
- Low forward voltage drop.
- High current capability.
- Easily cleaned with Alcohol, Isopropanol and Similar solvents.
- RoHS compliant package

#### Mechanical Data

- Molding compound meets UL 94 V-0 flammability
- RoHS compliant, and commercial grade
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
  - Polarity: As marked

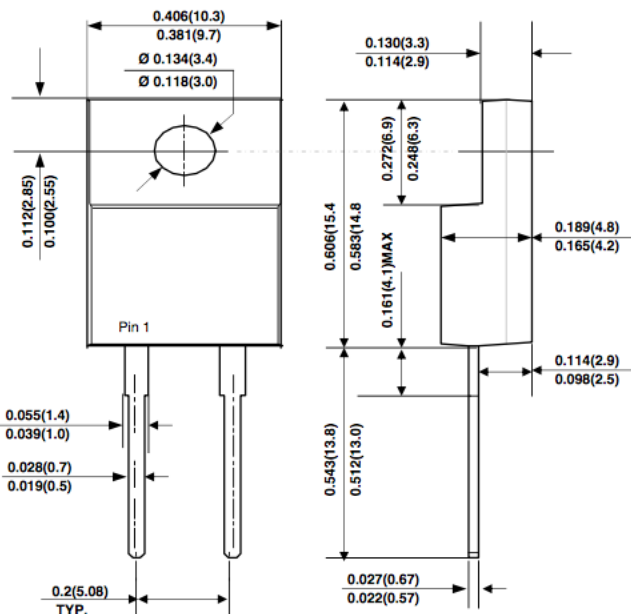
**Package type :** ITO-220AC

#### Packing & Order Information

50/Tube ; 1,000/Box



**RoHS  
COMPLIANT**



Dimensions in inches and (millimeters)

#### Graphic symbol



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	SF1020F	Unit
Maximum repetitive peak reverse voltage	VRRM	200	V
Working peak reverse voltage	VRWM	140	V
Maximum DC blocking voltage	VDC	200	V
Maximum average forward rectified current TA=100°C	IF(AV)	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	150	A
Junction Capacitance	Cj	70	pF
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

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#### Electrical characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage per diode at IF=10A, TA=25°C	VF	0.89	0.98	V
Maximum reverse current per leg Tj=25°C	IR	5		uA
at working peak reverse voltage Tj=125°C		250		uA
Reverse Recovery Time IF=0.5A, IR=1A, Irr=0.25A	Trr	35		ns

#### Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	Rthja	3.0	°C/W

Notes :

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms
- (3) Cj Measured at 1.0MHz and reverse voltage of 4.0V DC.

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■ TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

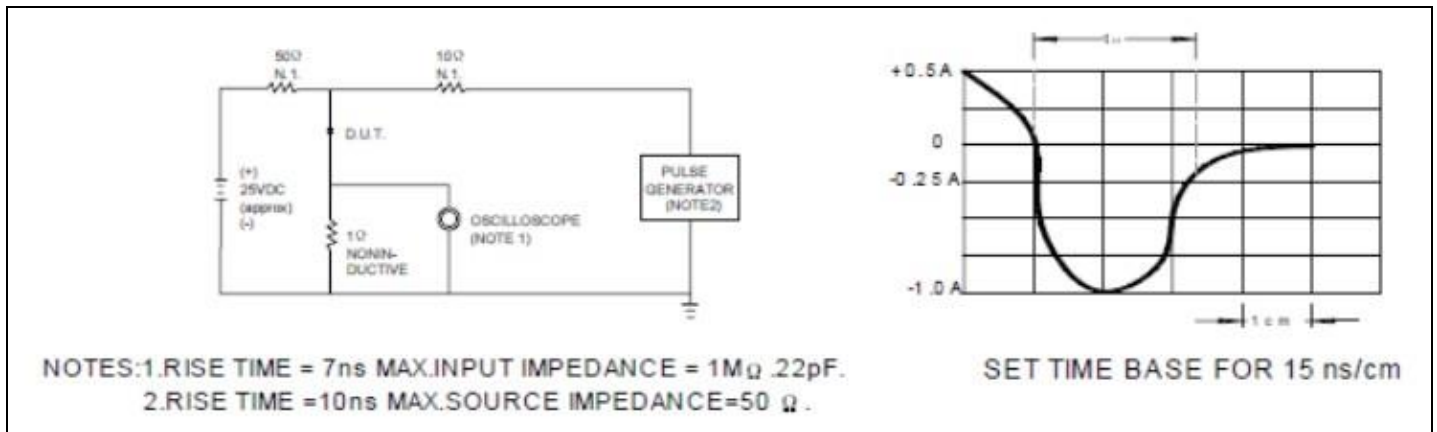


FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

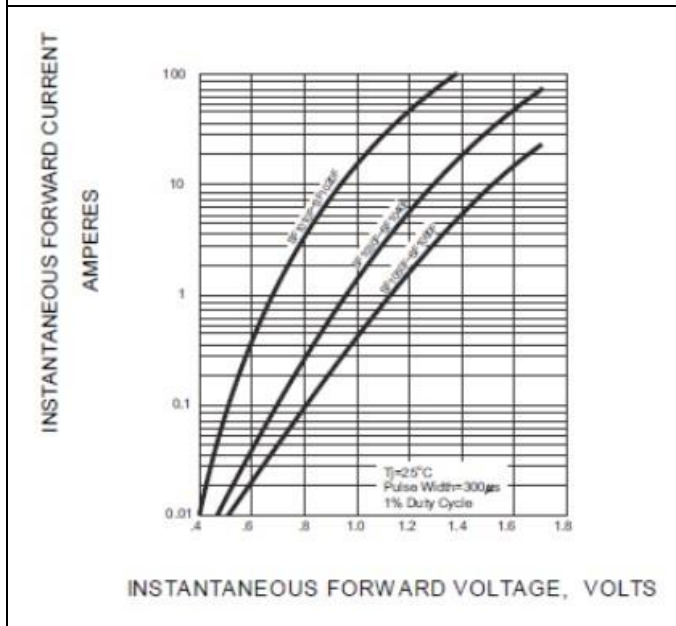


FIG.2- TYPICAL FORWARD CHARACTERISTIC

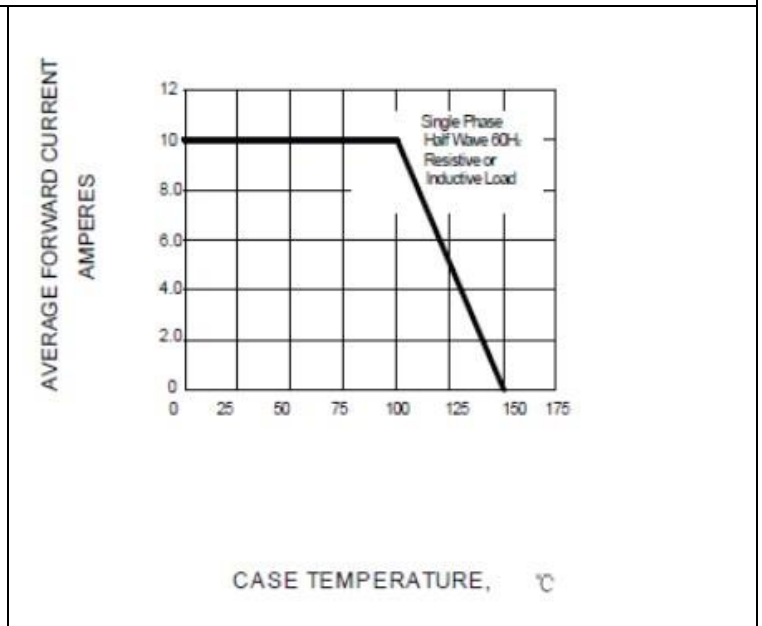


FIG.3- FORWARD DERATING CURVE

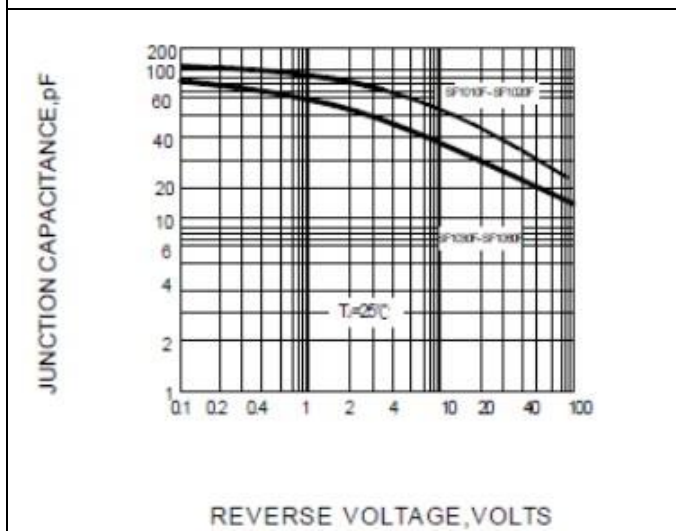


FIG.5- TYPICAL JUNCTION CAPACITANCE

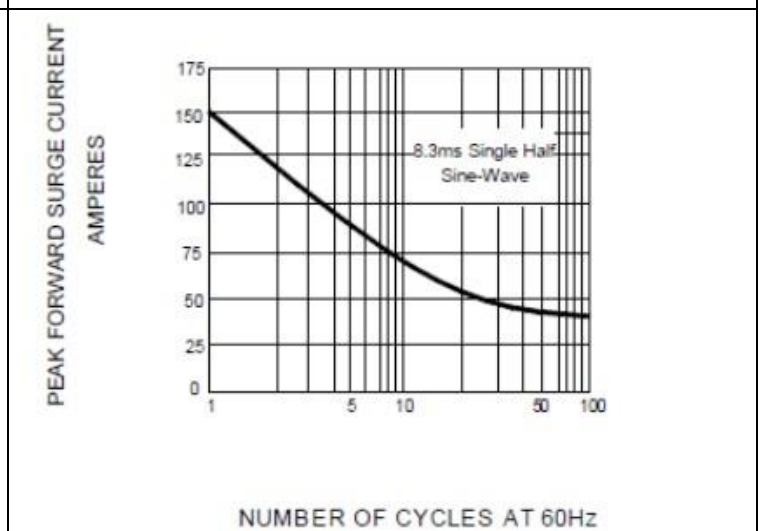


FIG.5- PEAK FORWARD SURGE CURRENT

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#### Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE

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