SF1020F

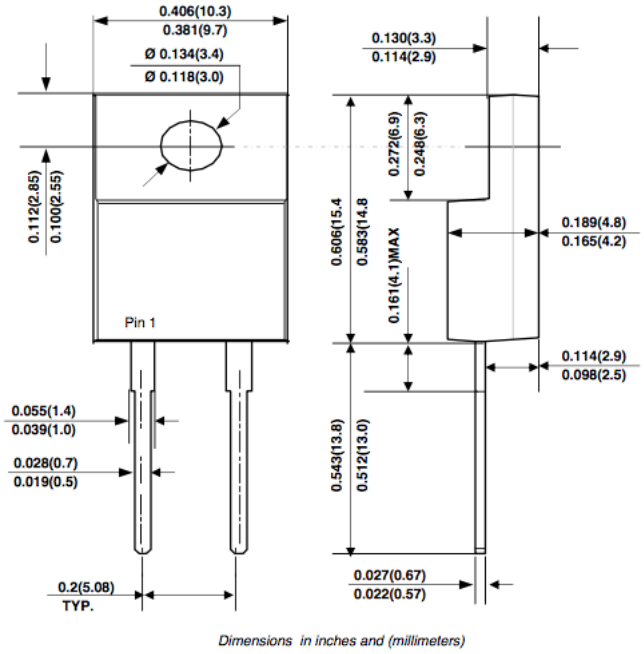
Super Fast Rectifiers

Features

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

Mechanical Data

- Case: ITO-220AC
- 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



Dimensions in inches and (millimeters)

Packing & Order Information

50/Tube ; 1,000/Box

Graphic symbol

RoHS
COMPLIANT

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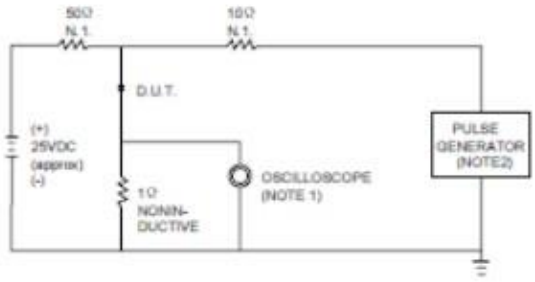
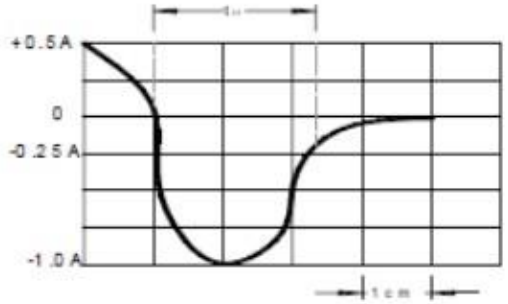
■TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified





NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 15 ns/cm

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

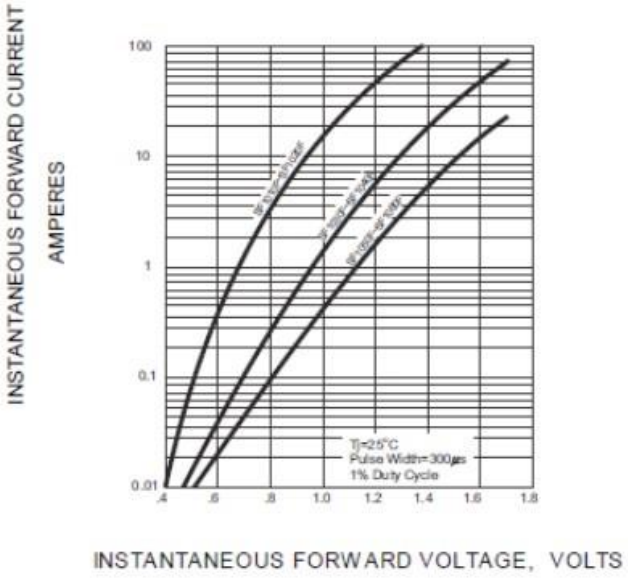


FIG.2- TYPICAL FORWARD CHARACTERISTIC

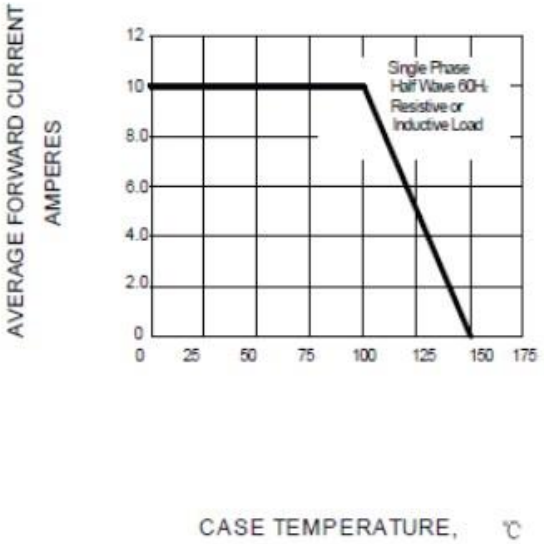


FIG.3- FORWARD DERATING CURVE

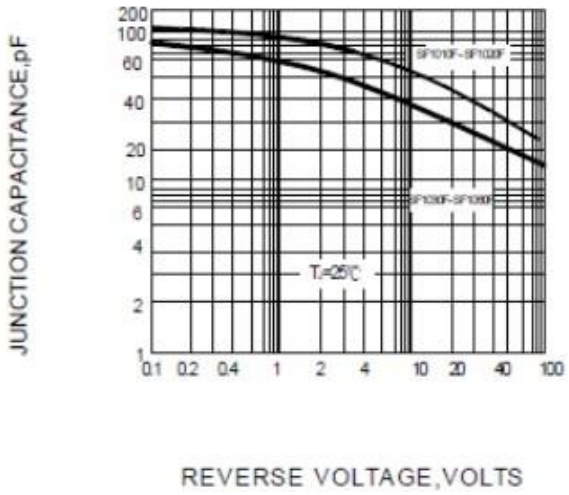


FIG.5- TYPICAL JUNCTION CAPACITANCE

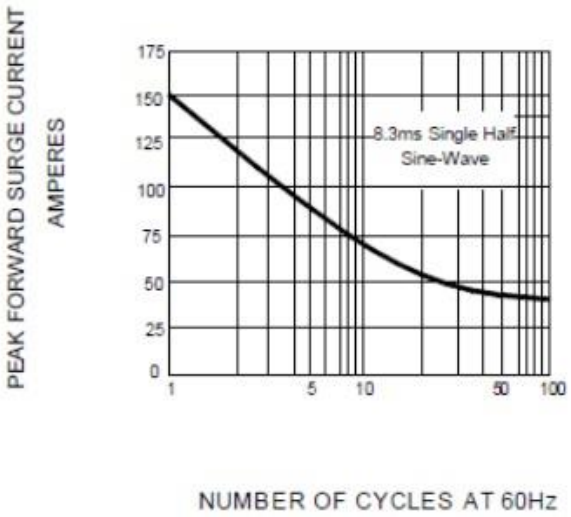


FIG.5- PEAK FORWARD SURGE CURRENT

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