HFZT

SF1002 ------ SF1006

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 200--- 600 V
CURRENT:10.0 A

Features

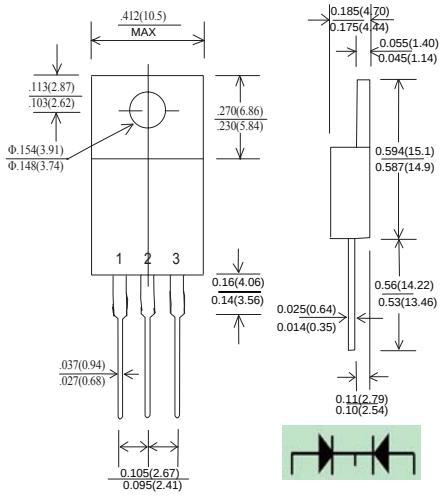
- Ultrafast 35 Nanosecond Recovery Time
- 175°C Operating Junction Temperature
- Popular TO-220AB Package
- Epoxy Meets UL94 ,V0 @ 1/8"
- High Temperature Glass Passivated Junction
- Low Forward Voltage
- Low Leakage Current
- Reverse Voltage to 600 Volts
- Pb−Free Packages are Available

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.9 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

Shipped 50 units per plastic tube

TO-220AB



Unit：inch（mm）

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase

Rating	Symbol	SF1002	SF1004	SF1006	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	200	400	600	V
Average Rectified Forward Current Total Device, (Rated VR), TC = 150℃	IF(AV)	5 10			A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20 kHz), TC = 150℃	IFM	16			A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave , single phase, 60 Hz)	IFSM	100			A
Operating Junction Temperature and Storage TemperatureTJ, Tstg		– 65 to +175			℃
Maximum Thermal Resistance, Junction to Case	RθJC	3.0	2.0		℃/W
Maximum Instantaneous Forward Voltage (1)(IF = 5.0 Amps, TC = 25°C)	VF	1.1	1.4	1.6	V
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, TJ = 150°C)(Rated dc Voltage, TJ = 25°C)	IR	800 10	800 10	800 10	μA
Maximum Reverse Recovery Time (IF = 0.5 A, = IR 1.0 A, IREC = 0.25 A)	Trr	35			ns

(1) Pulse Test: Pulse Width = 300μs, Duty Cycle≤2.0%.

HFZT

RATINGS AND CHARACTERISTIC CURVES

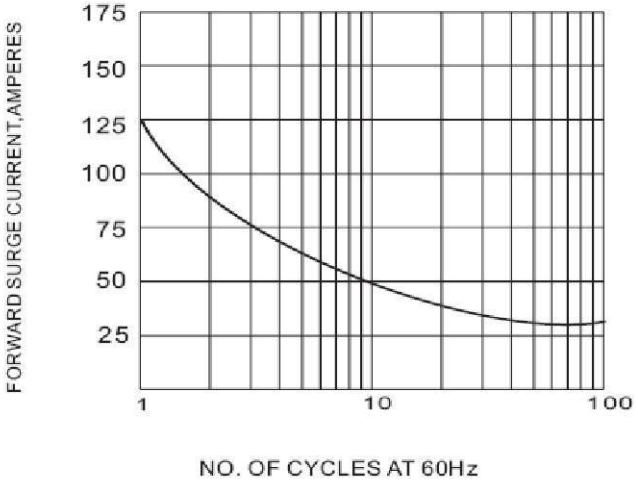


Fig.1PEAK FORWARD SURGE CURRRENT

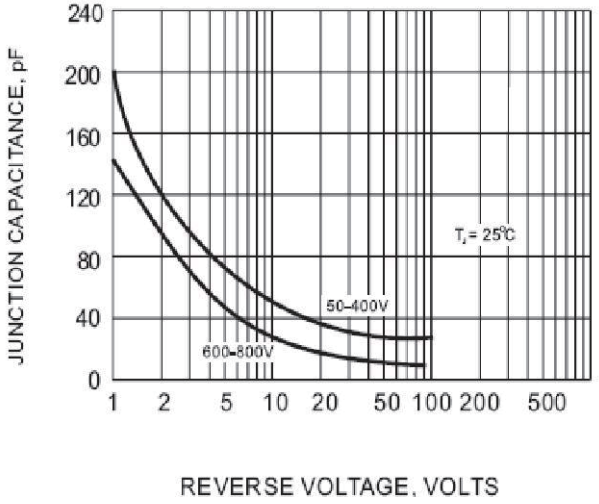


Fig.2TYPICAL JUNCTION CRPACITANCES

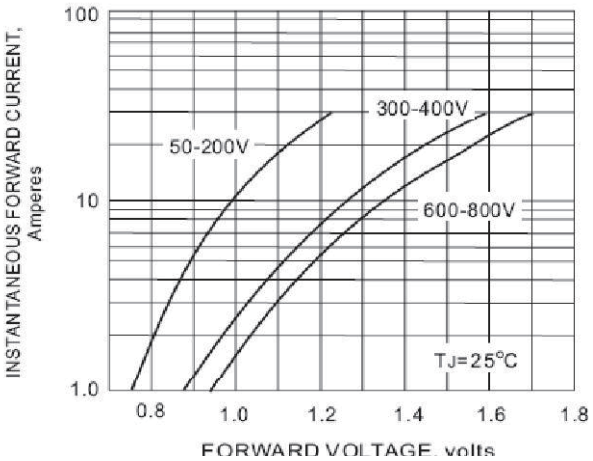


Fig.3FORWARD CHARACTERISTICS

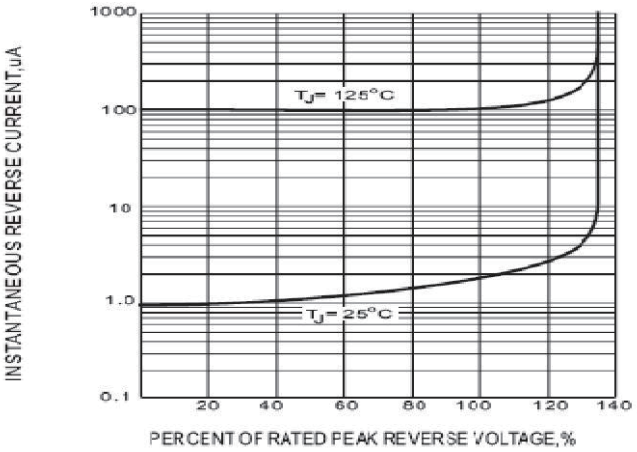


Fig.4TYPICAL REVERSE CHARACTERISTICS

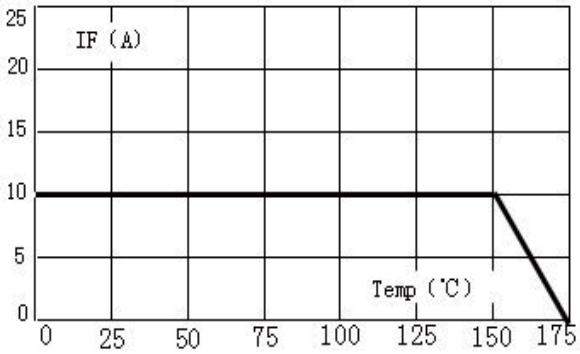


Fig.5FORWARD CURRENT DERATING CURVE