



# CHENMKO ENTERPRISE CO.,LTD

Lead free devices

## GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

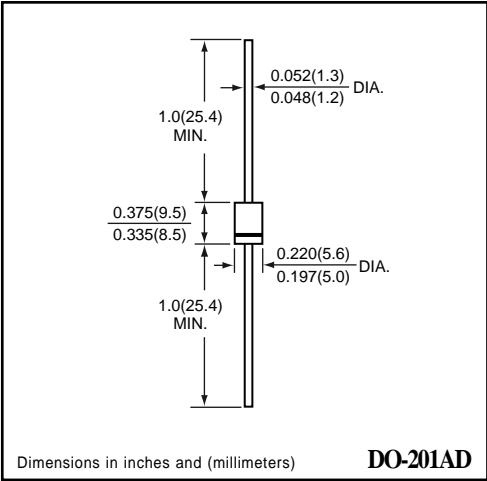
**SF31PT  
THRU  
SF38PT**

**FEATURES**

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High reliability
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* Super fast switching speed
- \* High surge capability
- \* Good for switching mode circuit

**MECHANICAL DATA**

**Case:** JEDEC DO-201AD molded plastic  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 1.18 grams



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

**MAXIMUM RATINGS** ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	SF31PT	SF32PT	SF33PT	SF34PT	SF35PT	SF36PT	SF37PT	SF38PT	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	Vdc	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Current at TA = 55°C	Io	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	125								Amps
Typical Junction Capacitance (Note 1)	CJ	50				30				pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150								°C

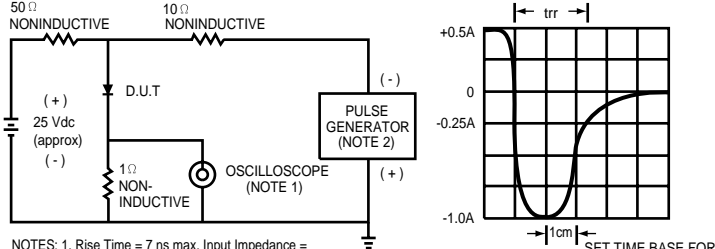
**ELECTRICAL CHARACTERISTICS** ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	SF31PT	SF32PT	SF33PT	SF34PT	SF35PT	SF36PT	SF37PT	SF38PT	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	VF	0.95			1.27		1.75			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	TA = 25°C	5.0								uAmps
	TA = 125°C	50								uAmps
Maximum Reverse Recovery Time (Note 2)	trr	35						45		nSec

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
 2. Test Conditions : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A

# RATING CHARACTERISTIC CURVES ( SF31PT THRU SF38PT )

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



NOTES: 1. Rise Time = 7 ns max. Input Impedance = 1 megohm. 22 pF.  
2. Rise Time = 10 ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

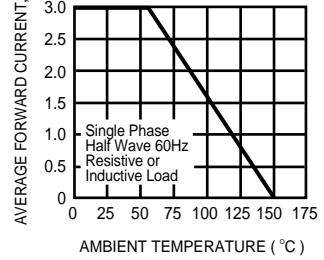


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

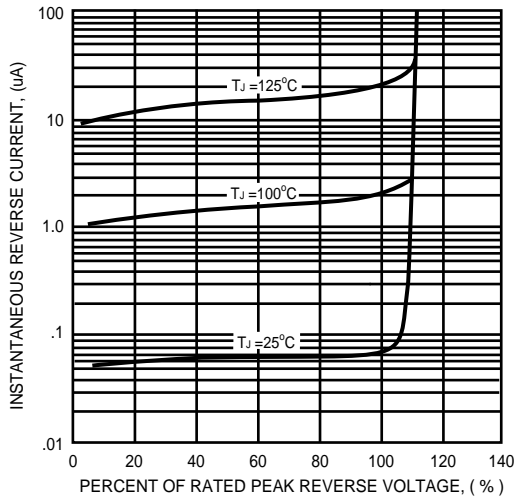


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

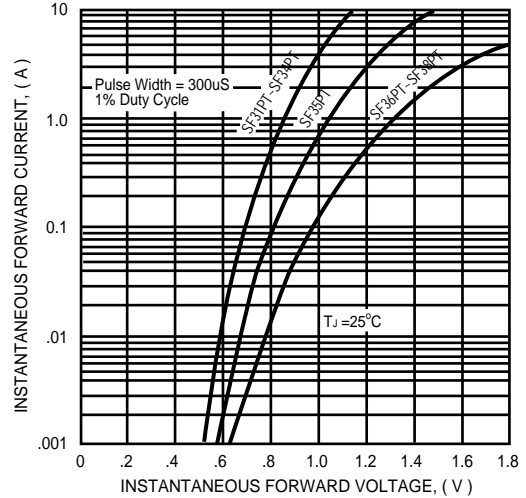


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

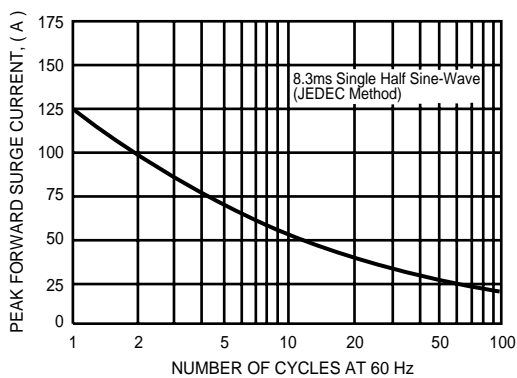


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

