



# CHENMKO ENTERPRISE CO.,LTD

## SOFT RECOVERY

### FAST SWITCHING RECTIFIER

VOLTAGE RANGE 50 - 800 Volts CURRENT 3.0 Amperes

**SFR301PT**

**THRU**

**SFR306PT**

Lead free devices

#### FEATURES

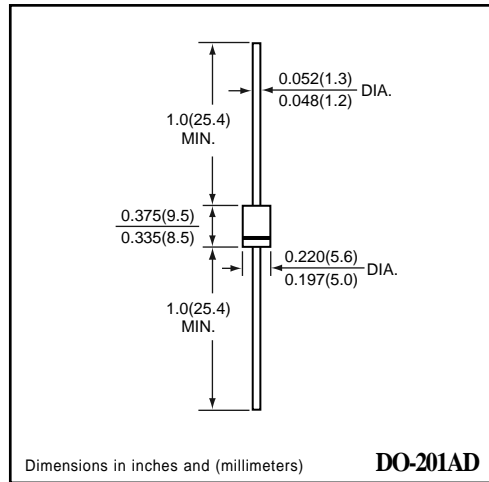
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High reliability
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* Fast switching

#### 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:** 1.80 grams



DO-201AD



DO-201AD

#### 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	SFR301PT	SFR302PT	SFR303PT	SFR304PT	SFR305PT	SFR306PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	Volts
Maximum Average Forward Current at TA = 55°C	I <sub>O</sub>	3.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150						Amps
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	65						pF
Operating Temperature Range	T <sub>J</sub>	-65 to +125						°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150						°C

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

CHARACTERISTICS	SYMBOL	SFR301PT	SFR302PT	SFR303PT	SFR304PT	SFR305PT	SFR306PT	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	V <sub>F</sub>	1.3						Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C	I <sub>R</sub>	10						uAmps
Maximum Full Load Reverse Current Average, Full Cycle 0.375" (9.5mm) lead length at TL = 55°C		150						uAmps
Maximum Reverse Recovery Time (Note 2)	t <sub>rr</sub>	100		150		200		nSec

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
 2. Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = -1.0 A, I<sub>RR</sub> = -0.25 A

# RATING CHARACTERISTIC CURVES ( SFR301PT THRU SFR306PT )

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

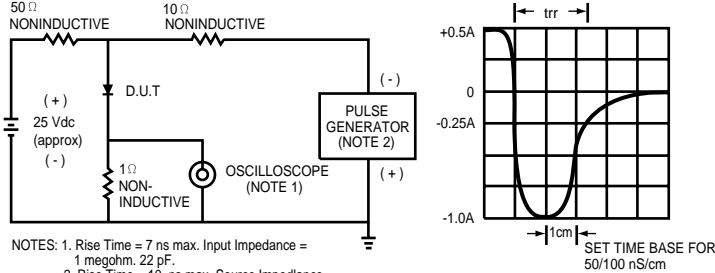


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

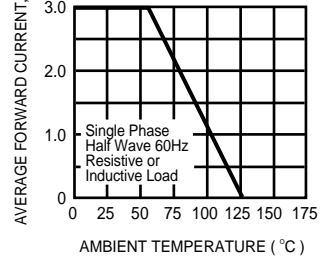


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

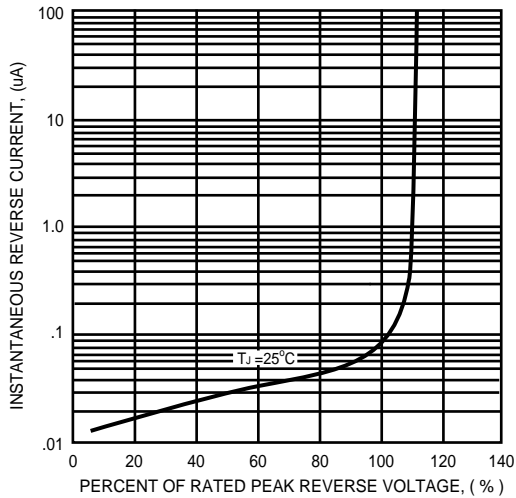


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

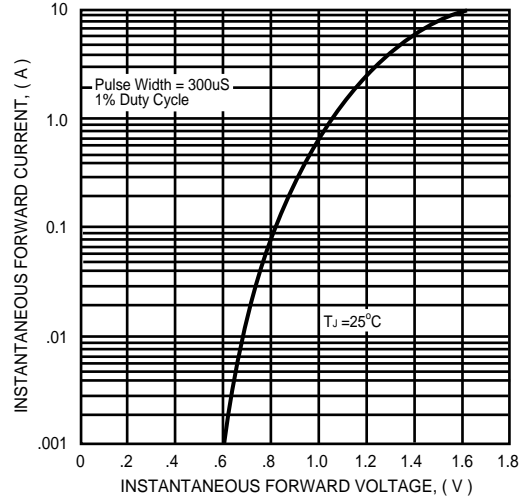


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

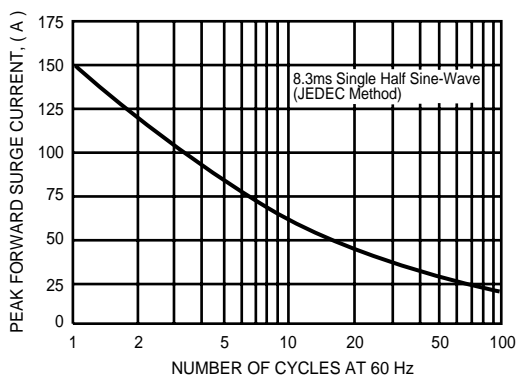


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

