



# CHENMKO ENTERPRISE CO.,LTD

## SILICON RECTIFIER

VOLTAGE RANGE 1200 - 2000 Volts CURRENT 0.2 to 0.5 Ampere

**R1200FPT  
THRU  
R2000FPT**

Lead free devices

### FEATURES

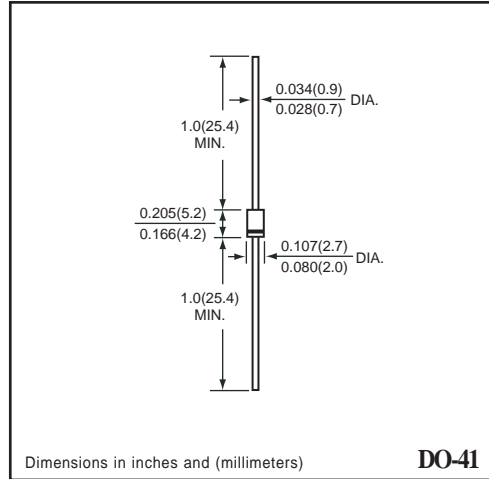
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Fast switching
- \* Low leakage
- \* High current capability
- \* High surge capability
- \* High reliability

### MECHANICAL DATA

**Case:** JEDEC DO-41 molded plastic  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.35 gram



DO-41



DO-41

### 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	R1200FPT	R1500FPT	R1800FPT	R2000FPT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1200	1500	1800	2000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	840	1050	1260	1400	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1200	1500	1800	2000	Volts
Maximum Average Forward Rectified Current at TA = 50°C	I <sub>O</sub>	500			200	mAmps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30				Amps
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175				°C

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

CHARACTERISTICS	SYMBOL	R1200FPT	R1500FPT	R1800FPT	R2000FPT	UNITS
Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC	V <sub>F</sub>	2.5			4.0	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	I <sub>R</sub>	5.0				uAmps
Maximum Full Load Reverse Current Average, Full Cycle 0.375" (9.5mm) lead length at TL = 75°C		100				uAmps
Maximum Reverse Recovery Time ( NOTE )	t <sub>rr</sub>	500				nS

NOTES : Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = -1.0 A, I<sub>RR</sub> = -0.25 A

2001-6

## RATING CHARACTERISTIC CURVES ( R1200FPT THRU R2000FPT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

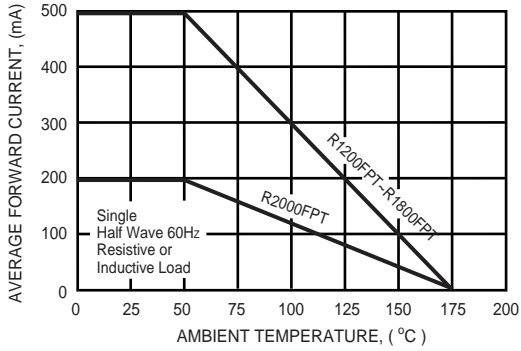


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

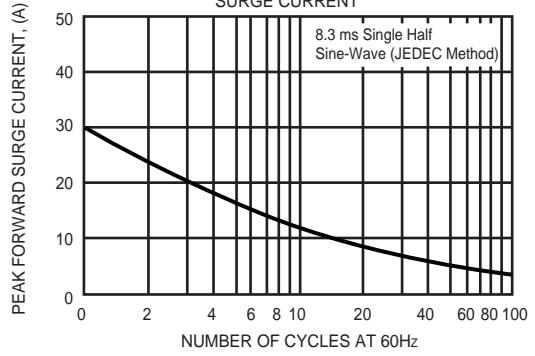
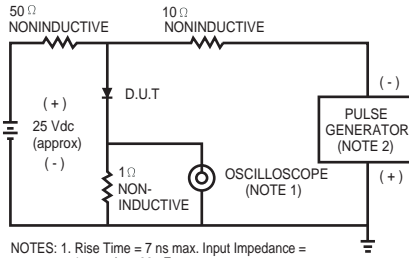


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

