



# DATA SHEET

## 1F1~1F7

### FAST RECOVERY PLASTIC RECTIFIERS

**VOLTAGE** 50 to 1000 Volts    **CURRENT** 1.0 Amperes

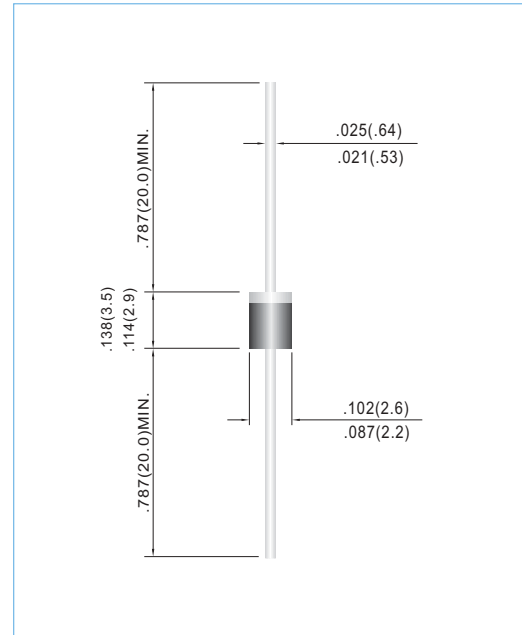
**R-1** Unit: inch(mm)

#### FEATURES

- High current capability.
- Plastic package has Underwriters Laboratories, Flammability Classification 94V-O utilizing, Flame Retardant Epoxy Molding Compound.
- Low leakage.
- Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: Molded plastic, R-1  
Terminals: Axial leads, solderable per MIL-STD-202, Method 208  
Polarity: Band denotes cathode  
Mounting Position: Any  
Weight: 0.0064 ounce, 0.181 gram



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

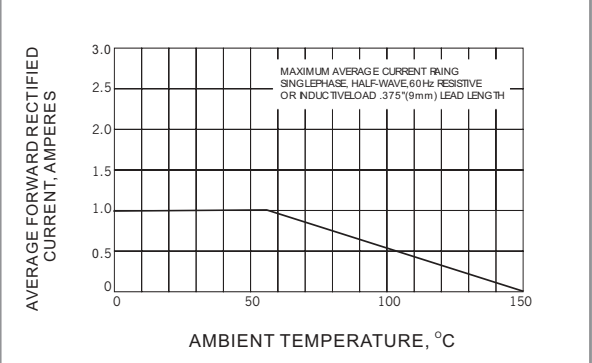
Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	1F1	1F2	1F3	1F4	1F5	1F6	1F7	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current .375"(9.5mm) lead length at TA=55°C	I <sub>AV</sub>	1.0							A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	30							A
Maximum Forward Voltage at 1.0A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current TA=25°C at Rated DC Blocking Voltage TA=100°C	I <sub>R</sub>	5.0 500							uA
Typical Junction capacitance (Note 1)	C <sub>J</sub>	12							pF
Maximum Reverse Recovery Time	T <sub>RR</sub>	150				250	500		ns
Typical Thermal Resistance	R <sub>θJA</sub>	67							°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 TO +150							°C

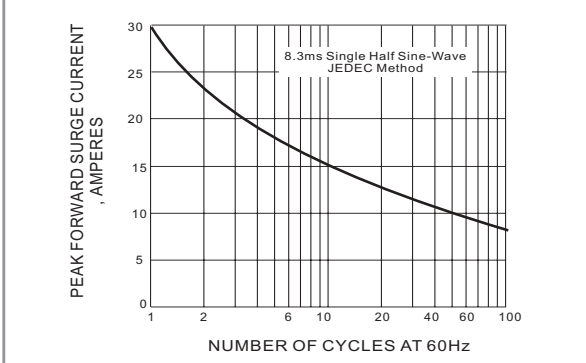
- NOTES: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A  
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC  
3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted with 0.22 x 0.22" ( 5.5 x 5.5mm ) copper pads.



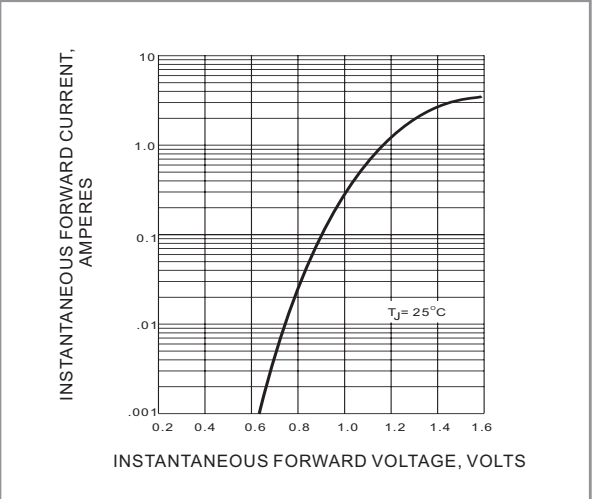
**RATING AND CHARACTERISTIC CURVES**



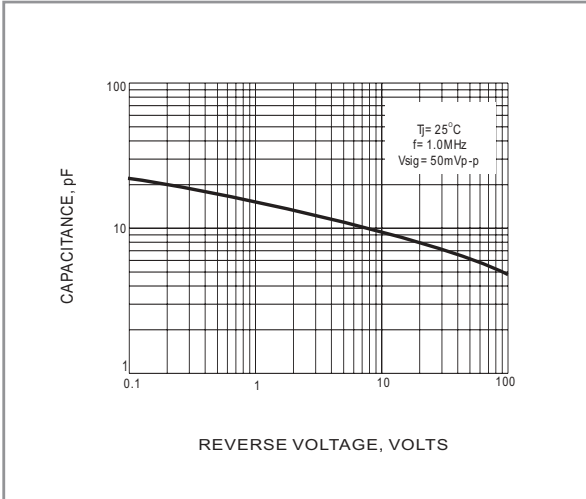
**Fig.1 FORWARD CURRENT DERATING CURVE**



**Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL JUNCTION CAPACITANCE**