

## HIGH VOLTAGE RECTIFIERS

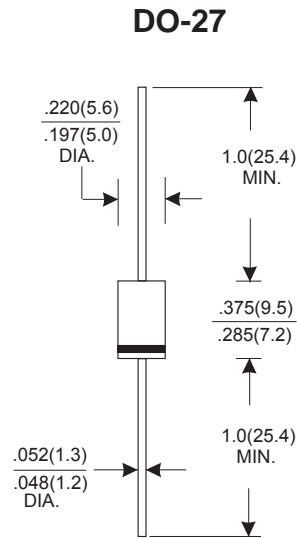
VOLTAGE RANGE: 20--- 30 V    CURRENT: 3.0 A

### FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding
- High current operation 3.0 ampera at TL=95°C
- Exceeds environme ntal standards of MIL-S 19500/228
- For use in low voltage,high frequency inverters free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case:DO-27 molded plastic body
- Terminals:Lead solderable per MIL-STD-750,method 2026
- Polarity:Color band denotes cathode end
- Mounting Position:Any



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate by 20%.

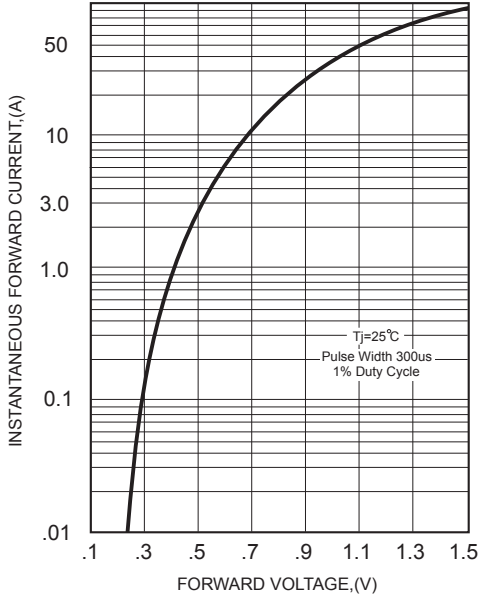
TYPE NUMBER	SYMBOL	1N5820	1N5821	1N5822	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward rectified Current	$I_{F(AV)}$	3.0			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80.0			A
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	0.5			V
Maximum reverse current at rated DC blocking voltage	@ $T_A=25$	0.5			mA
	@ $T_A=100$	50.0			
Typical Junction Capacitance (Note1)	$C_J$	250			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20			
Storage Temperature	$T_{STG}$	- 55 ---- + 150			°C
Operation Junction Temperature	$T_j$	- 55 ---- + 125			°C

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

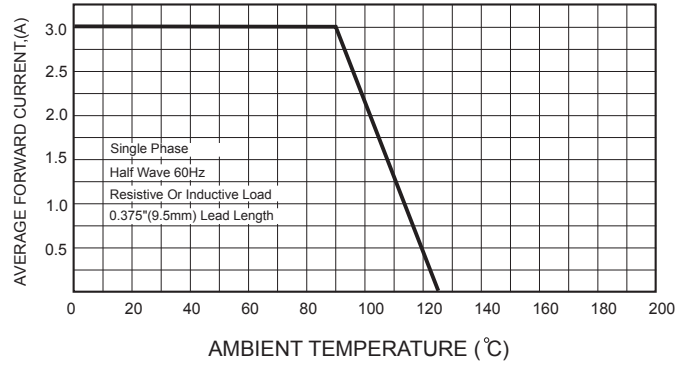
2. Thermal Resistance from Junction to Ambient 0.5"(12.7mm) lead length.

# RATINGS AND CHARACTERISTIC CURVES

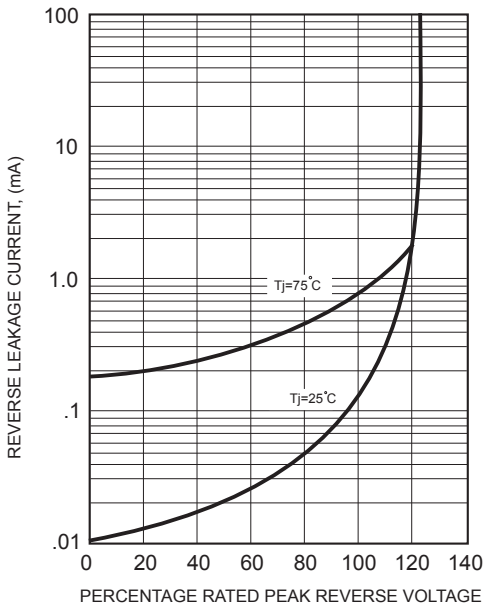
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



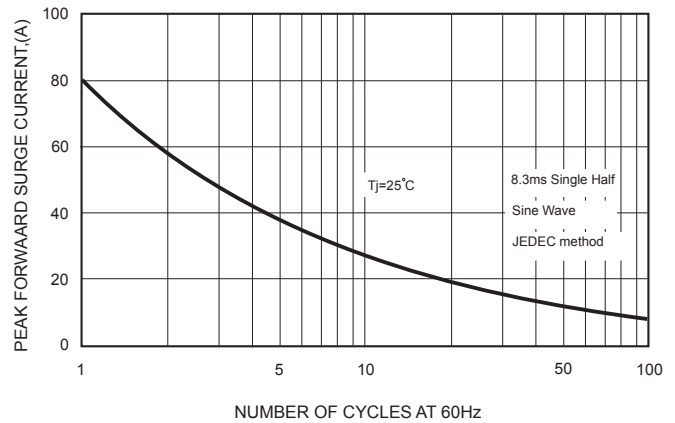
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

