

**Silcon Rectifier**

**Reverse Voltage 50 to 1300 Volts Forward Current 1.0 Ampere**

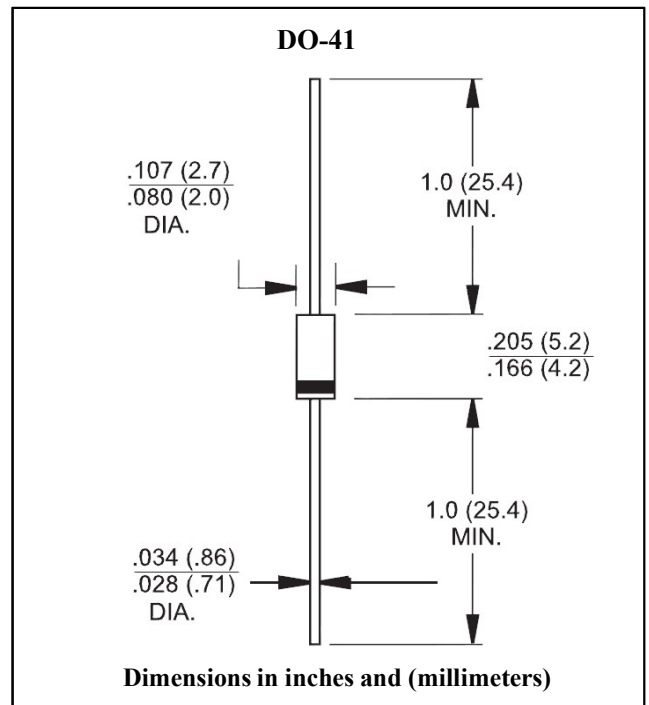
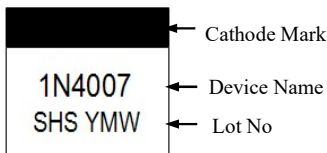
**Features**

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

**Mechanical Data**

- Case : Molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Lead : Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity : Color band denotes cathode end
- High temperature soldering guaranteed : 260°C/10 seconds /0.375",(9.5mm) lead lengths at 5lbs.,(2.3kg) tension
- Weight : 0.34gram

**Marking**



**Maximum Ratings & 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%

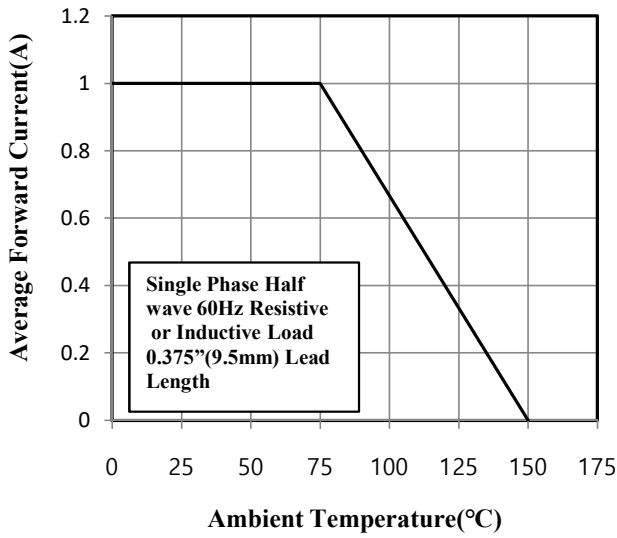
Parameter	Symbol	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	BY 133	Unit	Remark
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1300	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	910	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1300	V	
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length	$I_F(AV)$	1.0								A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.0								V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	5.0								uA	Ta=25°C
		50								uA	Ta=100°C
Maximum Full Load Reverse Current, Full Cycle Average 0.375"(9.5mm) Lead Length	$HT_{IR}$	30								uA	Ta=75°C
Typical Junction Capacitance	$C_J$	15								pF	Note 1
Typical Thermal Resistance	$R_{th(j-a)}$	50								°C /W	Note 2
Operation Junction Temperature Range	$T_J$	-55 to +150								°C	
Storage Temperature Range	$T_{STG}$	-55 to +150								°C	

Note 1. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.

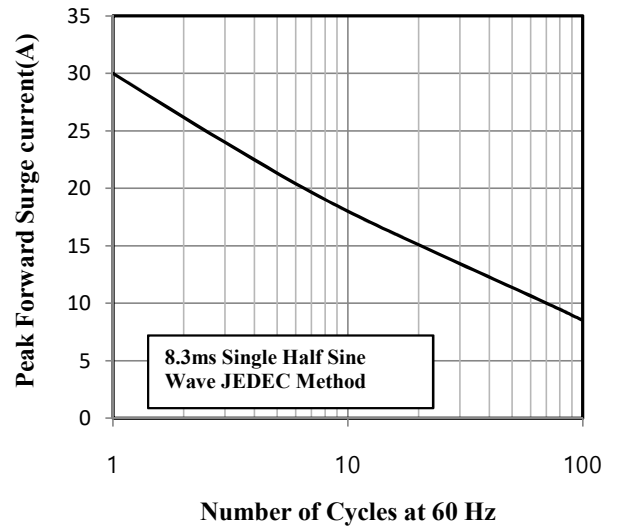
Note 2. Mount on Cu-Pad Size 5mm×5mm on P.C.B.

Ratings and Characteristics Curves ( $T_a=25^\circ\text{C}$  unless otherwise noted)

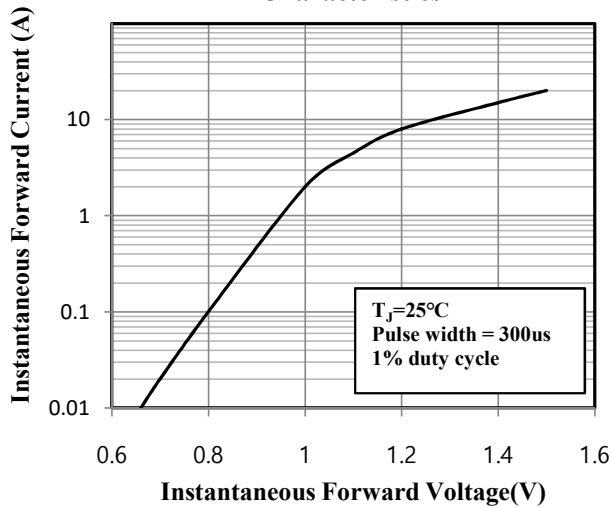
**Fig.1 Forward Current Derating Curve**



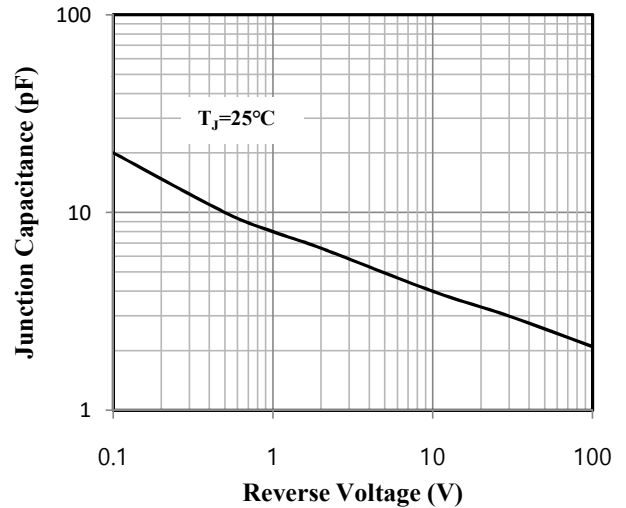
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Typical Reverse Characteristics**

