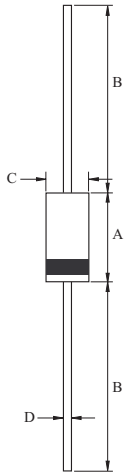
1N4007

General Purpose Plastic Rectifier

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Construction utilizes void-free molded plastic technique.
- Low reverse leakage.
- High forward surge capability.
- High temperature soldering guaranteed: 250℃/10 seconds, 0.375 (9.5mm) lead length, 5 lbs. (2.3kg) tension.
- Tj is 150 ℃(Max.) and T_{stg} is 175 ℃(Max.) with PI glue



DIM	MILLIMETERS
A	4.2~5.2
B	MIN 25.4
C	2.0~2.7
D	0.71~0.86

DO-41

APPLICATIONS

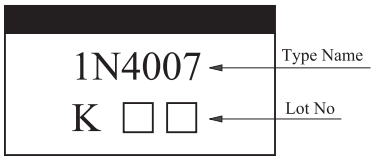
- General purpose rectification of power supply application
- Consumer & automotive application

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
RMS Voltage	V_{RMS}	700	V
DC Blocking Voltage	V_{DC}	1000	V
Average Forward Rectified Current	$I_{F(AV)}$*	1	A
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC Method) Ta=50 ℃	I_{FSM}	30	A
Operation Junction	T_j	-55 ~125	℃
Storage Temperature Range	T_{stg}	-55 ~150	℃

* 0.375 (9.5mm) lead length at Ta= 50 ℃

Marking

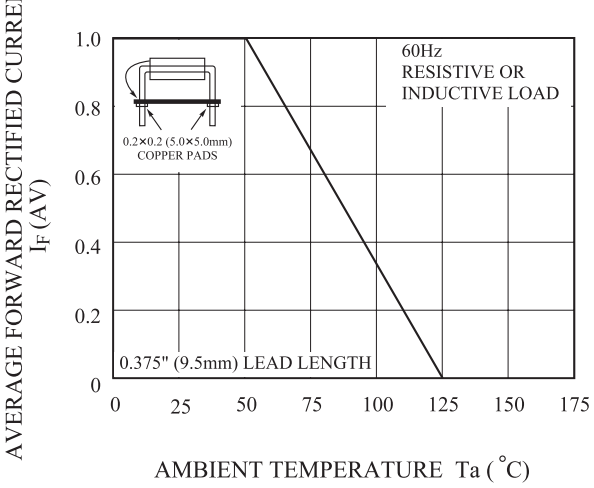


ELECTRICAL CHARACTERISTICS (Ta=25℃)

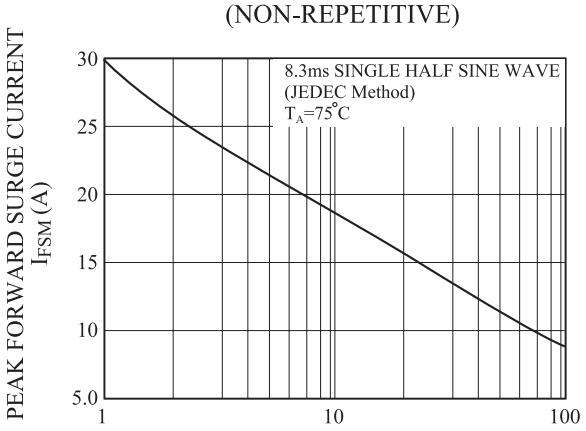
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	I_F=1A	-	-	1.1	V
Leakage Current	I_R	V_{RRM}=1000V	-	-	5.0	μA
		V_{RRM}=1000V, Ta=100 ℃	-	-	50	
Reverse Recovery Time	t_{rr}	I_{FM}=20mA, I_{FM}=1mA	-	1.0	-	μs
Junction Capacitance	C_j	V_{RM}=4.0V, f=1MHz	-	15	-	pF
Thermal Resistance	$R_{th(j-a)}$	Junction to ambient	-	50	-	℃/ W
	$R_{th(j-l)}$	Junction to lead	-	25	-	

Note 1) Thermal resistance from junction to ambient at 0.375 (9.5mm) lead length P.C.B mounted.

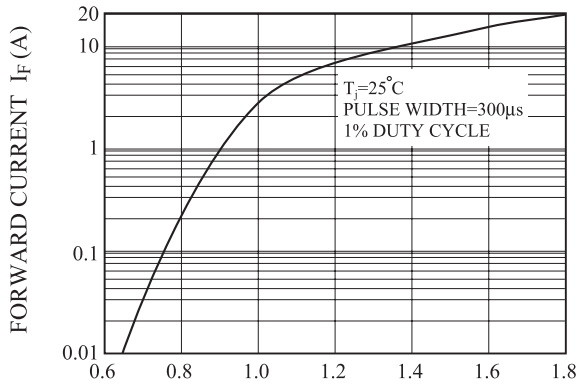
$I_{F(AV)}$ - Ta



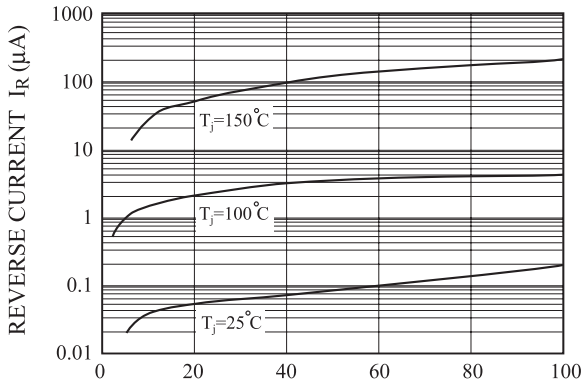
SURGE FORWARD CURRENT
(NON-REPETITIVE)



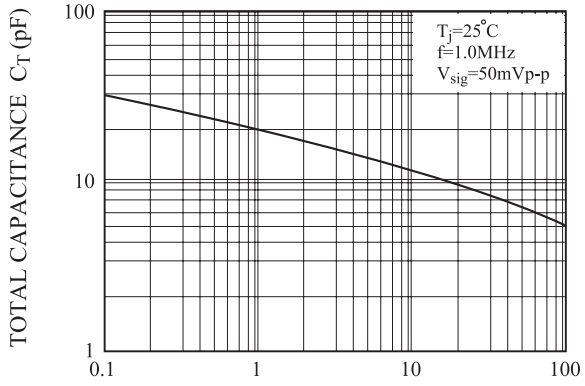
I_F - V_F



TYPICAL REVERSE CHARACTERISTICS



C_T - V_R



r_{th} - t_w