DEC

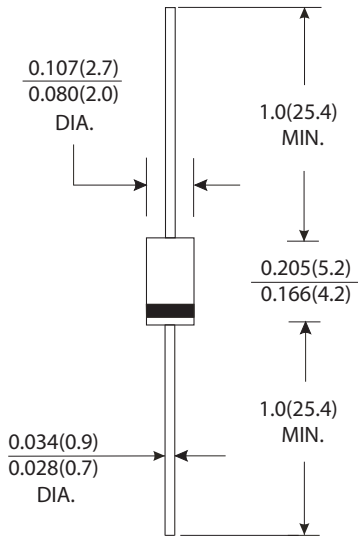
1N4001 THRU 1N4007

CURRENT 1.0 Ampere
VOLTAGE 50 to 1000 Volts

Features

- The plastic package carries Underwrites Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed : 250℃/10 seconds, 0.375"(9.5mm) lead length, 5lbs.(2.3kg).

DO-41



Dimensions in inches and (millimeters)

Mechanical Data

- Case : JEDEC DO-41 molded plastic body
- Terminals : Lead solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.012 ounce, 0.33 gram

Maximum Ratings And Electrical Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length T_A=75℃	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms half sine wave superimposed on rated load (JEDEC method) at T_A=75℃	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							Volts
Maximum reverse current at rated DC blocking voltage, T_A=25℃	I_R	5.0							μA
Maximum reverse current at rated DC blocking voltage, T_A=100℃		50.0							
Typical thermal resistance (Note 2)	$R\theta_{JA}$	50.0							℃/W
	$R\theta_{JL}$	25.0							
Typical junction capacitance (Note 1)	C_J	15.0							pF
Maximum DC blocking voltage temperature	T_A	+150							℃
Operating and storage temperature range	T_J T_{STG}	-50 to +175							℃

Notes:
(1) Measured at 1MHz and applied reverse voltage of 4.0V DC.
(2) Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length, P.C.B. mounted

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RATINGS AND CHARACTERISTIC CURVES 1N4001 THRU 1N4007

FIG.1-FORWARD CURRENT DERATING CURVE

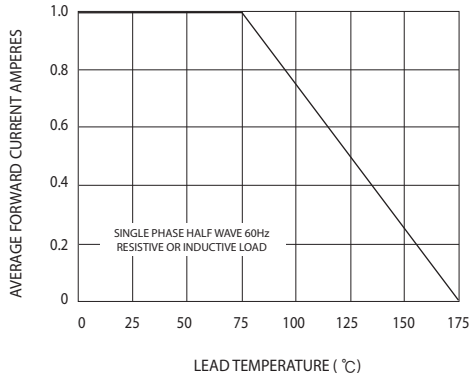

FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

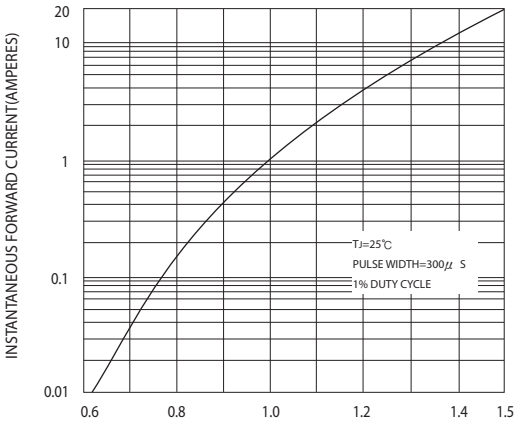

FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

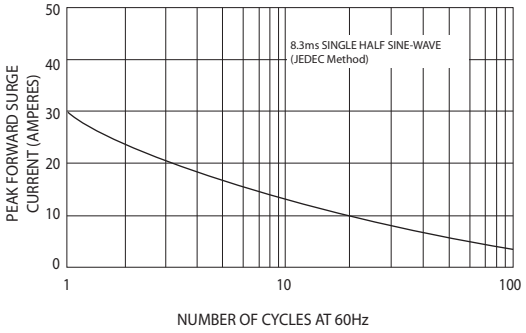

FIG.4-TYPICAL REVERSE CHARACTERISTICS

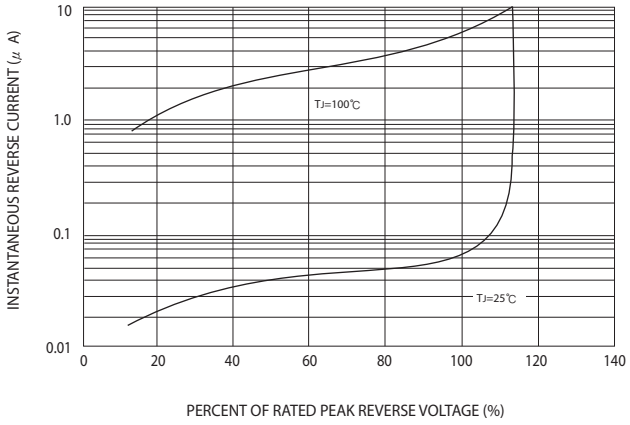

FIG.5-TYPICAL JUNCTION CAPACITANCE