

CTC 1N4001D-1N4007D RECTIFIER Datasheet

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FEATURES

Fast switching for high efficiency

Low cost

Glass passivation junction

Low reverse leakage current

Low forward voltage drop

High current capability

The plastic material carries UL recognition 94V-0

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PLASTIC SILICON RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts
FORWARD CURRENT - 1.0 Ampere

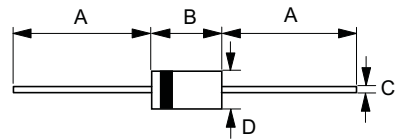
FEATURES

- Low cost
- Diffused junction
- Low forward voltage drop
- Low reverse leakage current
- High current capability
- The plastic material carries UL recognition 94V-0

MECHANICAL DATA

- Case : JEDEC DO-41 molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.012 ounces, 0.34 grams
- Mounting position : Any

DO-41



DO-41		
Dim.	Min.	Max.
A	25.4	-
B	4.20	5.20
C	0.70 $\varnothing$	0.90 $\varnothing$
D	2.00 $\varnothing$	2.70 $\varnothing$
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	1N4001D	1N4002D	1N4003D	1N4004D	1N4005D	1N4006D	1N4007D	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_A=75^{\circ}C$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC Method)	I_{FSM}	30							A
Maximum forward Voltage at 1.0A DC	V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^{\circ}C$ @ $T_J=100^{\circ}C$	I_R	5 50							μA
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	35							$^{\circ}C/W$
Operating Temperature Range	T_J	-55 to +150							$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150							$^{\circ}C$

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2.Thermal Resistance Junction to Ambient.

3.Thermal Resistance Junction to Case at 9.5mm Lead Length.PCB Mounted JEDEC Registered Value.

RATINGS AND CHARACTERISTIC CURVES

AVERAGE FORWARD RECTIFIED CURRENT AMPERES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

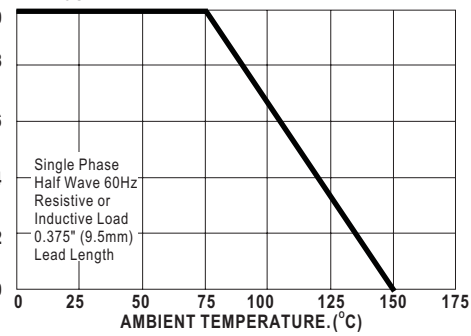


FIG.2- TYPICAL FORWARD CHARACTERISTICS

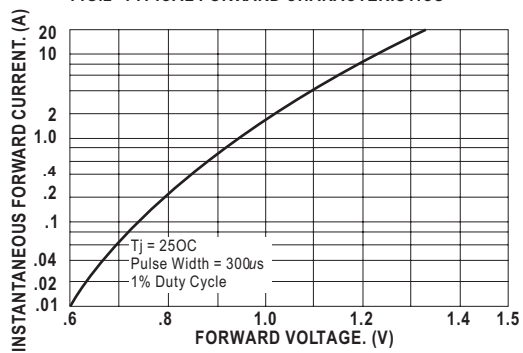


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

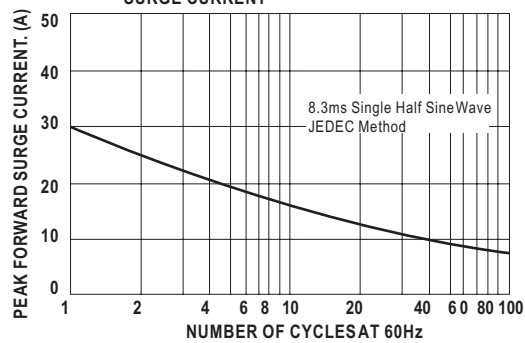


FIG.4- TYPICAL JUNCTION CAPACITANCE

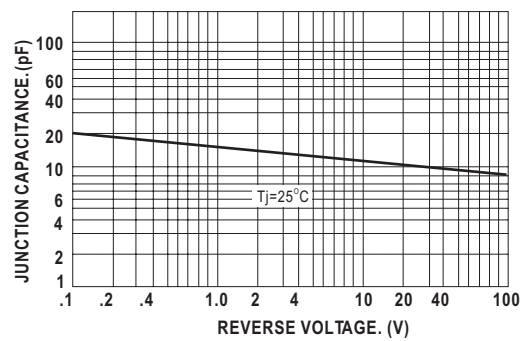


FIG.5- TYPICAL REVERSE CHARACTERISTICS

