



## FEATURES

- \* Low forward voltage drop
- \* Low leakage current
- \* High reliability
- \* High current capability

## MECHANICAL DATA

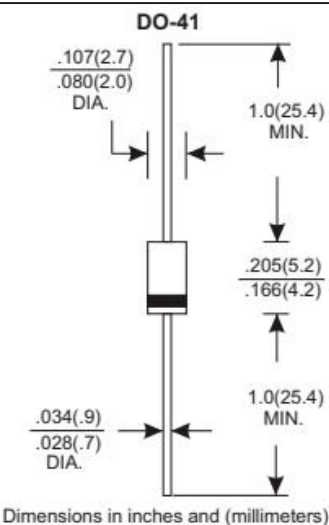
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.34 grams

## VOLTAGE RANGE

200 to 1000 Volts

## CURRENT

1.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25 C ambient temperature unies otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

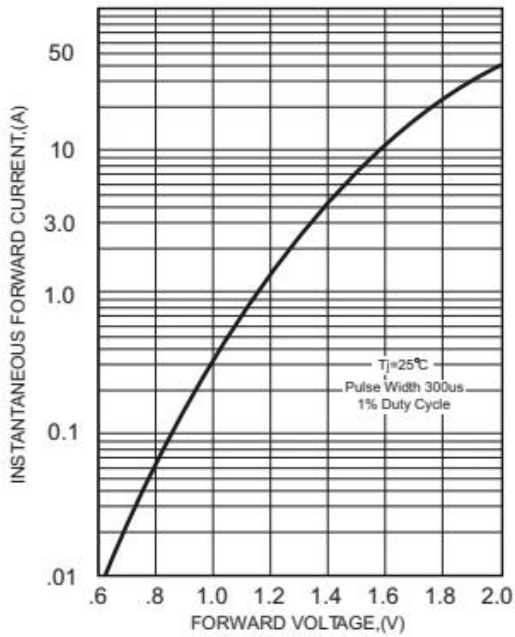
TYPE NUMBER	1N4942	1N4944	1N4946	1N4947	1N4948	UNITS
Maximum Recurrent Peak Reverse Voltage	200	400	600	800	1000	V
Maximum RMS Voltage	140	280	420	560	700	V
Maximum DC Blocking Voltage	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 375"(9.5mm) Lead Length at Ta=75 C	1.0					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30					A
Maximum Instantaneous Forward Voltage at 1.0A	1.3					VA
Maximum DC Reverse Current Ta=25 C	5.0					A
at Rated DC Blocking Voltage Ta=100 C	100					nS
Maximum Reverse Recovery Time (Note 1)	150	250		500		pF
Typical Junction Capacitance (Note 2)	15					
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>stg</sub>	-65 — +150					C

### NOTES:

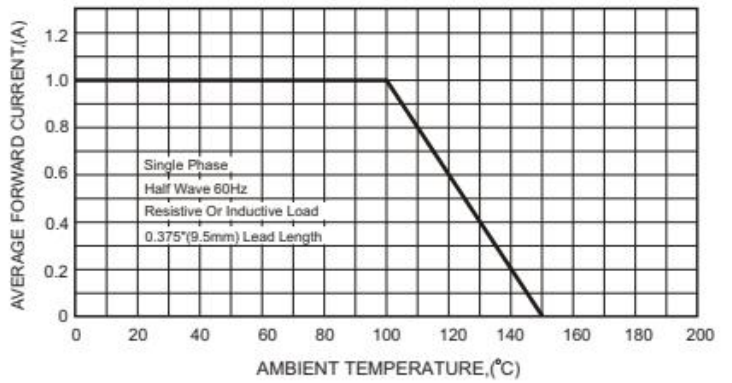
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (1N4942 THRU 1N4948)

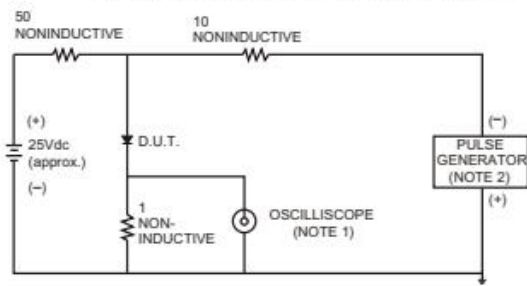
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



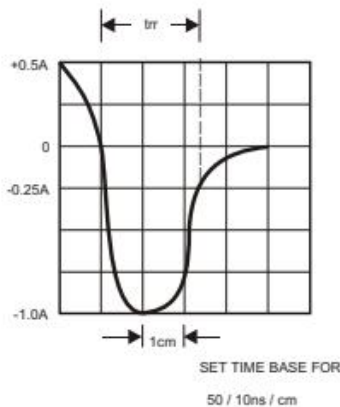
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



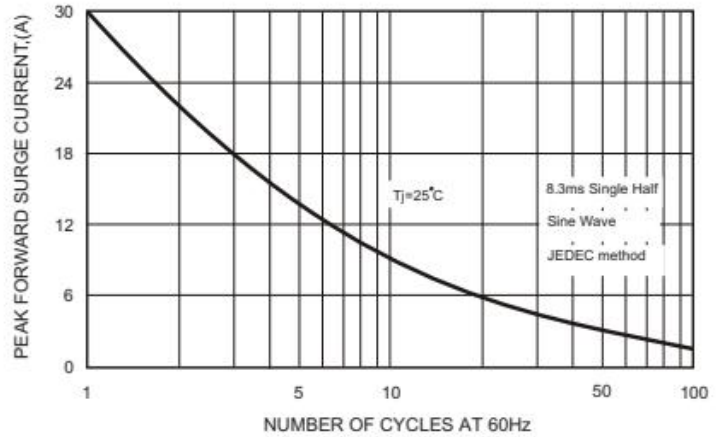
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



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



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

