

# 1.0 AMP GLASS PASSIVATED FAST RECOVERY RECTIFIERS

# 1N4942 THRU 1N4948 Vishaymas General Semiconductor

## FEATURES

- Low forward voltage drop
- Low leakage current
- High reliability
- High current capability
- Glass passivated junction

## MECHANICAL DATA

**Case:** Molded plastic

**Epoxy:** UL 94V-0 rate flame retardant

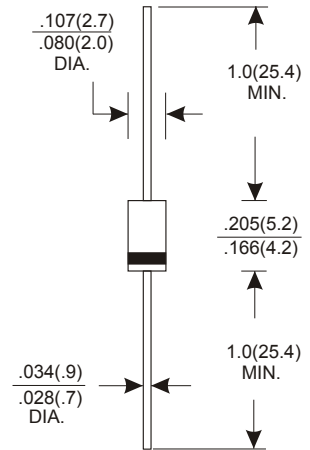
**Lead:** Axial leads, solderable per MIL-STD-202, method 208 guaranteed

**Polarity:** Color band denotes cathode end

**Mounting position:** Any

**Weight:** 0.34 grams

## DO - 41



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

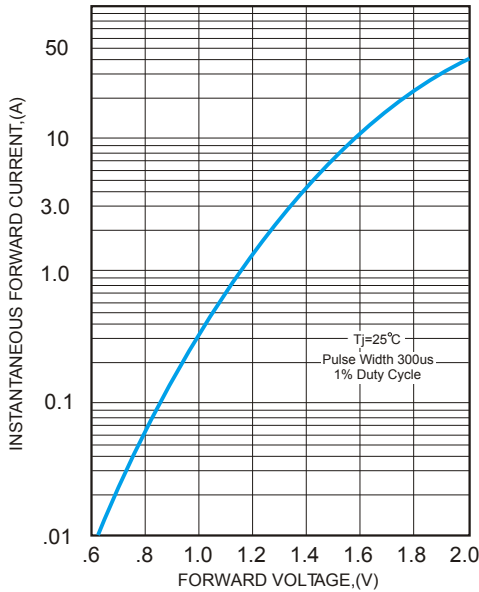
Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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=55°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					V
Maximum DC Reverse Current Ta=25°C	5.0					µA
at Rated DC Blocking Voltage Ta=100°C	100					µA
Maximum Reverse Recovery Time (Note 1)	150		250		500	nS
Typical Junction Capacitance (Note 2)	15					pF
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>	-65 — +150					°C

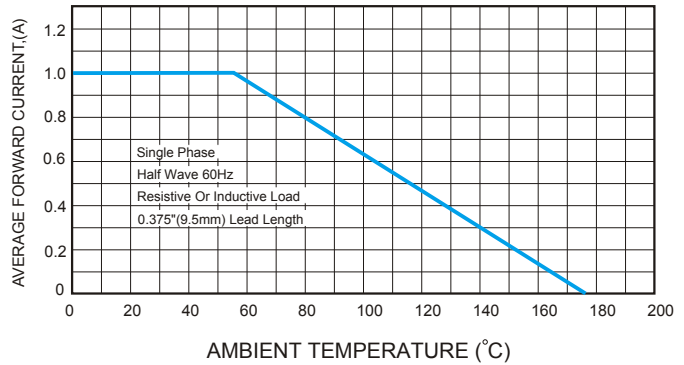
## NOTES:

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.

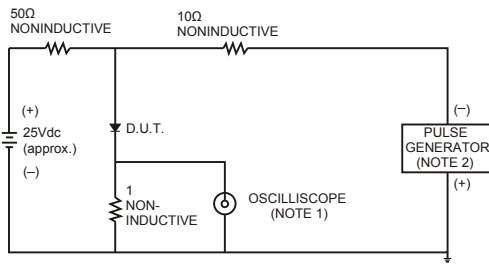
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



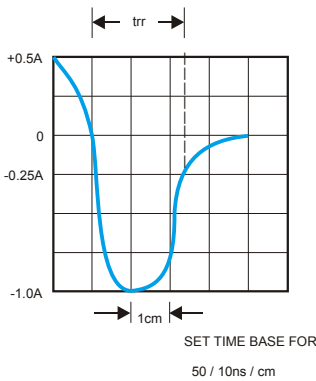
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



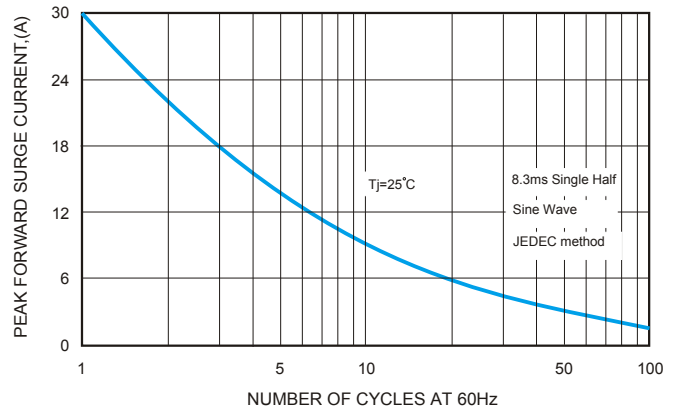
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



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**

