

# 1N4942 THRU 1N4948

**FMS**

## 1.0 AMP FAST RECOVERY RECTIFIERS



### 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

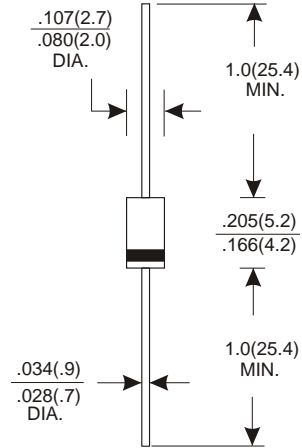
### VOLTAGE RANGE

200 to 1000 Volts

### CURRENT

1.0 Ampere

DO-41



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess 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	V
Maximum DC Reverse Current Ta=25°C						5.0	mA
at Rated DC Blocking Voltage Ta=100°C						100	mA
Maximum Reverse Recovery Time (Note 1)	150	250		500		nS	
Typical Junction Capacitance (Note 2)						15	pF
Operating and Storage Temperature Range Tj, Tstg						-65 — +150	°C

#### NOTES:

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

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

FIG.1-TYPICAL FORWARD CHARACTERISTICS

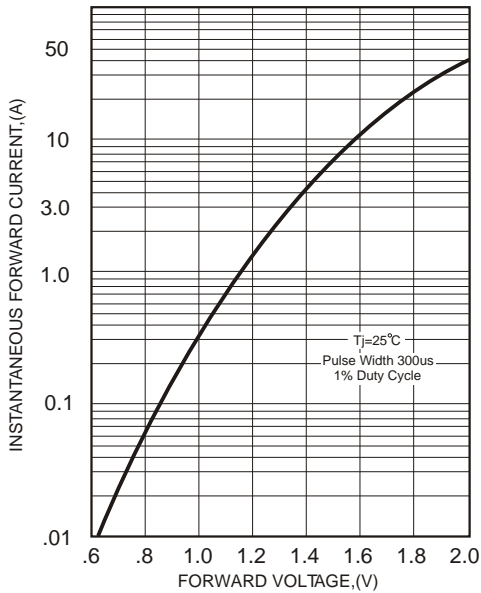


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

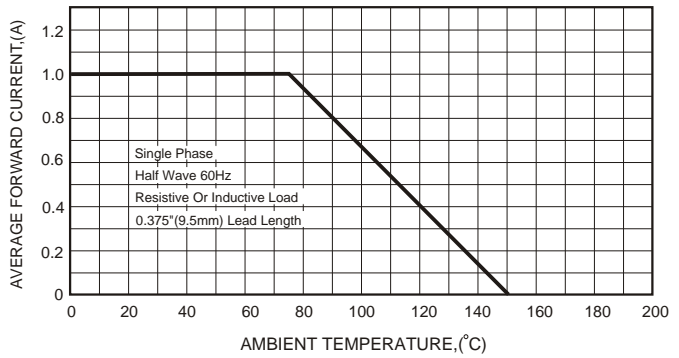


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

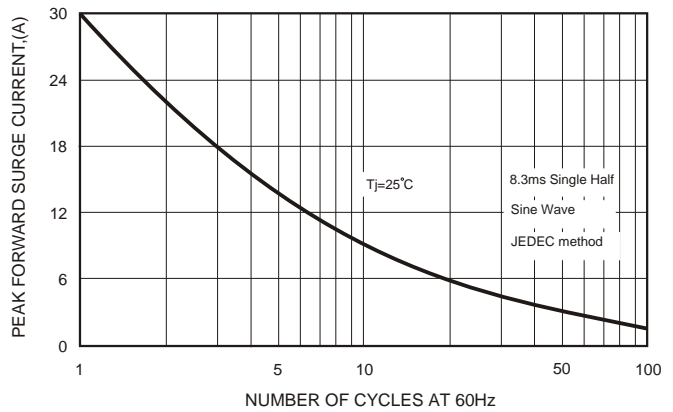
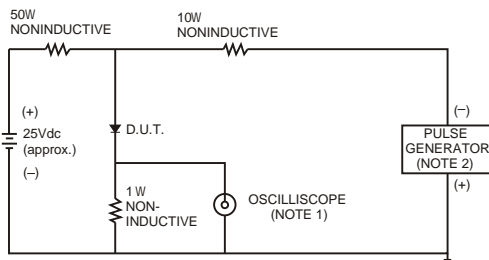


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

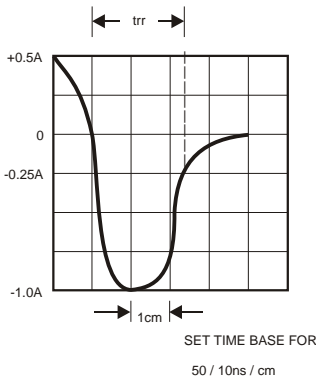


FIG.5-TYPICAL JUNCTION CAPACITANCE

