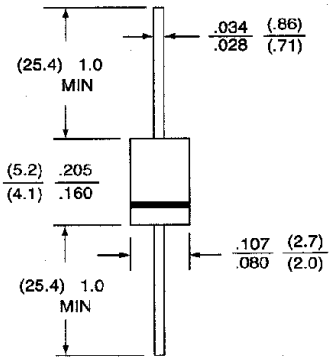
1N4933 THRU 1N4937

FAST SWITCHING PLASTIC RECTIFIER
VOLTAGE - 50 to 600 Volts CURRENT - 1.0 Ampere

FEATURES

- High surge current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Void-free Plastic in a DO-41 package.
- 1.0 ampere operation at $T_A = 55°C$ with no thermal runaway.
- Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228

DO-41



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic, DO-41

Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting position: Any

Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	1N4933	1N4934	1N4935	1N4936	1N4937	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	V
Maximum RMS Voltage	35	70	140	280	420	V
Maximum DC Blocking Voltage	50	100	200	400	600	V
Maximum Average Forward Rectified Current .375″, (9.5mm) Lead Length at $T_A = 55°C$	1.0					A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30					A
Maximum Forward Voltage at 1.0A	1.2					V
Maximum Reverse Current Tj = 25°C at rated DC Blocking Voltage Tj = 100°C	5.0 500					μA
Typical Junction Capacitance (Note 1) CJ	12					pF
Maximum Reverse Recovery Time (Note 2)	200					ns
Typical Thermal Resistance (NOTE 3) RΘJA	41					°C/W
Storage and Operating Temperature Range	-55 to +150					°C

NOTES:
1—Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2—Reverse Recovery Test Conditions: $I_F = .5A$, $I_R = 1A$, $I_{rr} = .25A$.
3—Thermal resistance from junction to ambient at 0.375″ (9.5mm) lead length P.C.B. mounted.

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RATING AND CHARACTERISTIC CURVES
1N4933 THRU 1N4937

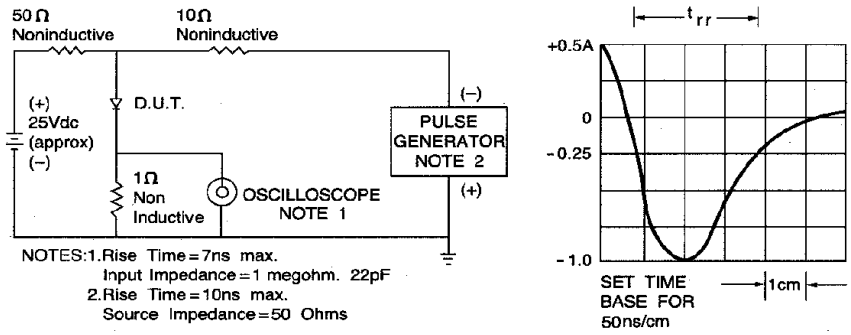

Fig. 1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

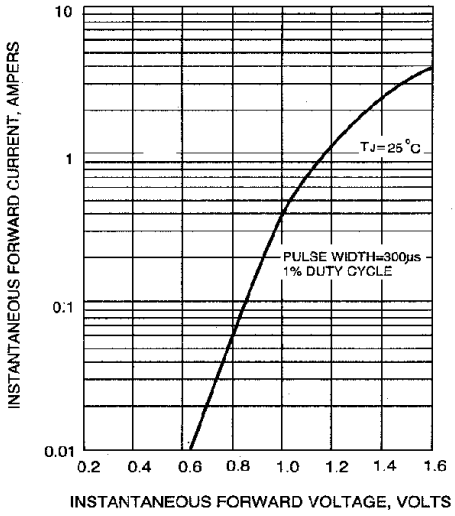

Fig. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

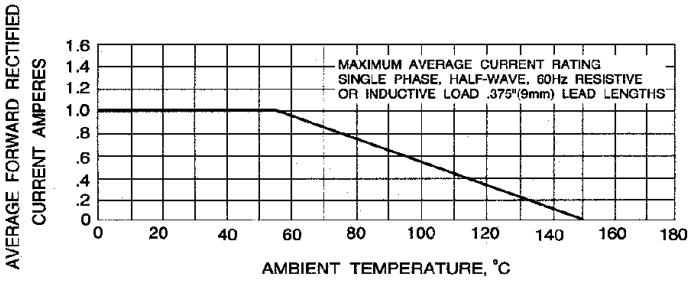

Fig. 3 – FORWARD CURRENT DERATING CURVE

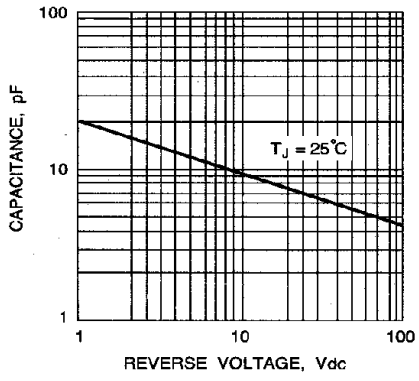

Fig. 4 – TYPICAL JUNCTION CAPACITANCE

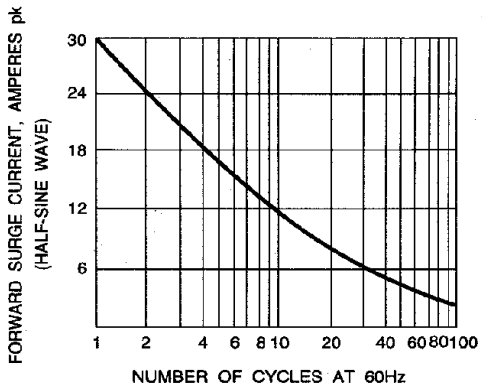

Fig. 5 – PEAK FORWARD SURGE CURRENT

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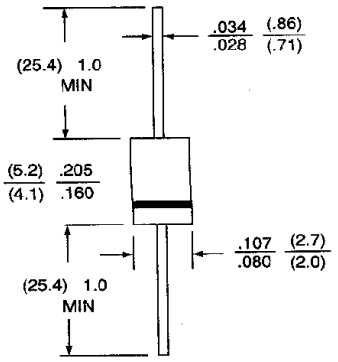
1N4942 THRU 1N4948

FAST SWITCHING PLASTIC RECTIFIER
VOLTAGE - 200 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

- High surge current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Void-free plastic in a DO-41 package.
- 1.0 ampere operation at $T_A = 55°C$ with no thermal runaway.
- Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228

DO-41



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic, DO-41

Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting position: Any

Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	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 $T_A = 55°C$	1.0					A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30					A
Maximum Forward Voltage at 1.0A	1.3					V
Maximum Reverse Current Tj = 25°C at rated DC Blocking Voltage Tj = 100°C	5.0 500					μA
Typical Junction Capacitance (Note 1)	12					pF
Maximum Reverse Recovery Time (Note 2)	150	150	250	250	250	ns
Typical Thermal Resistance (NOTE 3) RΘJA	41					°C/W
Storage and Operating Temperature Range	-55 to +150					°C

NOTES:
1—Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2—Reverse Recovery Test Conditions: $I_F = .5A$, $I_R = 1A$, $I_{rr} = .25A$.
3—Thermal resistance from junction to ambient at 0.375″ (9.5mm) lead length P.C.B. mounted.

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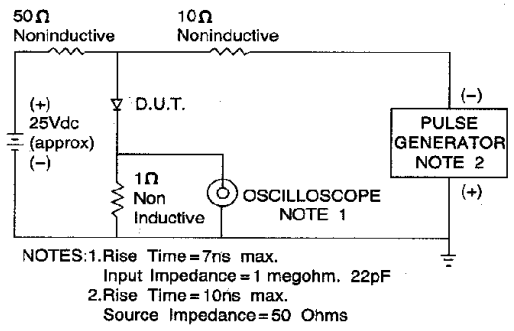
RATING AND CHARACTERISTIC CURVES
1N4942 THRU 1N4948



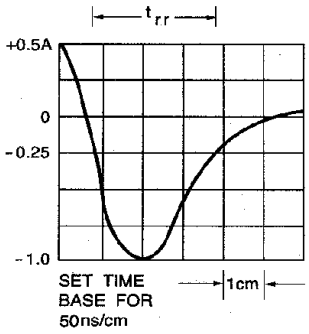


Fig. 1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

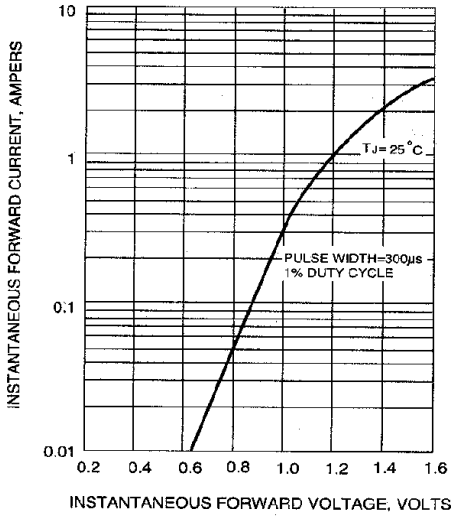


Fig. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

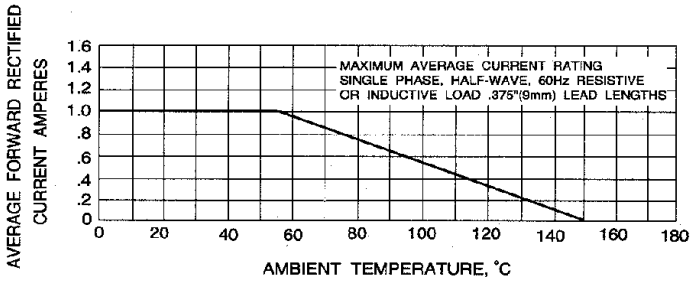


Fig. 3 – FORWARD CURRENT DERATING CURVE

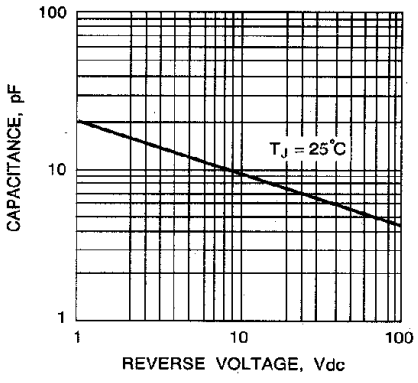


Fig. 4 – TYPICAL JUNCTION CAPACITANCE

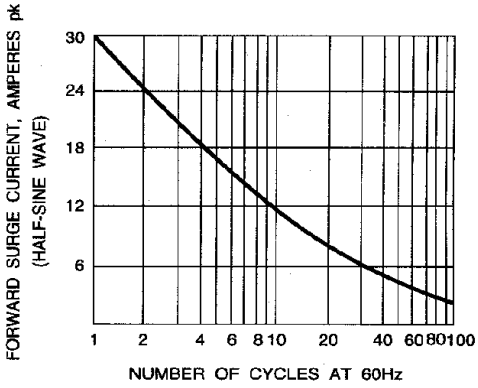


Fig. 5 – PEAK FORWARD SURGE CURRENT

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