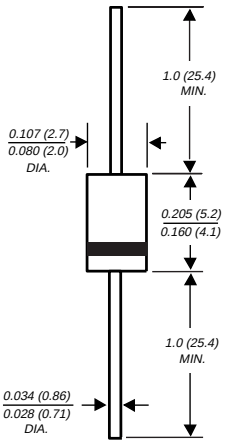
1N4942GP THRU 1N4948GP

GLASS PASSIVATED JUNCTION FAST SWITCHING PLASTIC RECTIFIER

***Reverse Voltage** - 200 to 1000 Volts* ***Forward Current** - 1.0 Ampere*

PATENTED*

DO-204AL



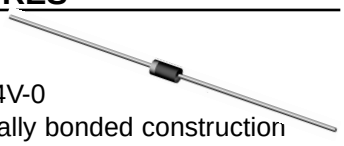
NOTE: Lead diameter is 0.026 (0.66) / 0.023 (0.58) for suffix "E" part numbers

Dimensions in inches and (millimeters)

* *Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No,3,930,306*

SUPERECTIFIER®

FEATURES



- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- For use in high frequency rectifier circuits
- Fast switching for high efficiency
- Glass passivated cavity-free junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at T_A=55°C with no thermal runaway
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AL molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N 4942GP	1N 4944GP	1N 4946GP	1N 4947GP	1N 4948GP	UNITS
* Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	Volts
* Maximum RMS voltage	V_{RMS}	140	280	420	560	700	Volts
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=55°C	$I_{(AV)}$	1.0					Amp
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25.0					Amps
* Maximum instantaneous forward voltage at 1.0A	V_F	1.3					Volts
* Maximum DC reverse current at rated DC blocking voltage T_A= 25°C / T_A=150°C	I_R	1.0 / 200.0					µA
* Maximum reverse recovery time (NOTE 1)	t_{rr}	150		250		500	ns
Typical junction capacitance (NOTE 2)	C_J	15.0					pF
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$	55.0					°C/W
* Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					°C

NOTES:
(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted
* JEDEC registered values

GENERAL SEMICONDUCTOR®

RATINGS AND CHARACTERISTIC CURVES 1N4942GP THRU 1N4948GP

FIG. 1 - FORWARD CURRENT DERATING CURVE

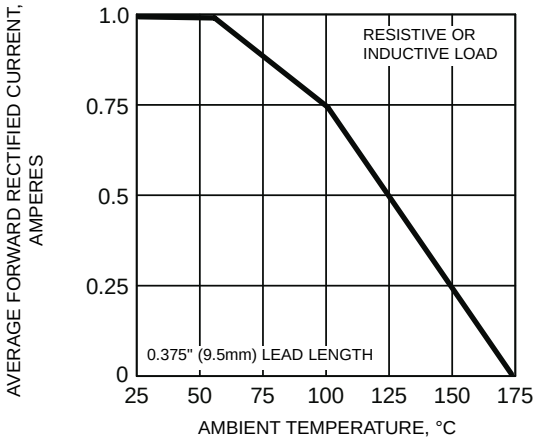


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

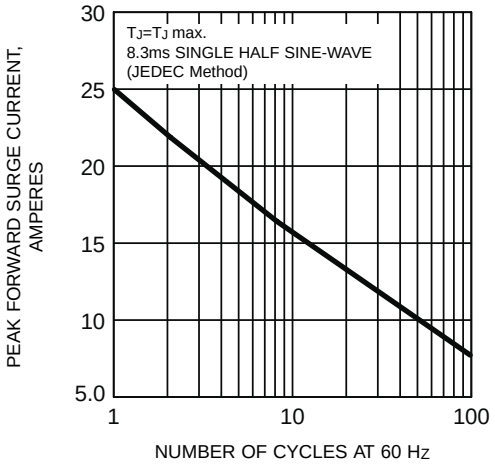


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

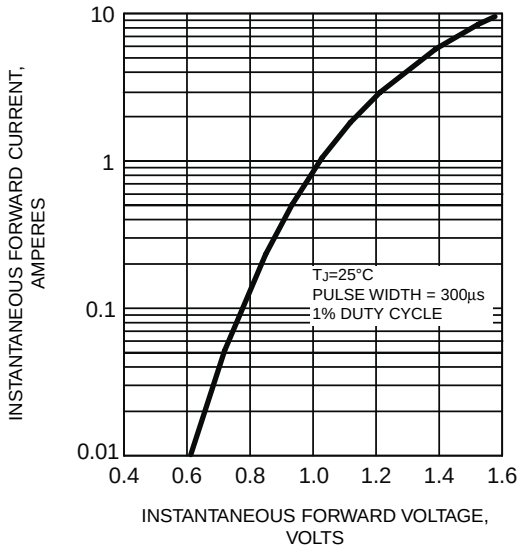


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

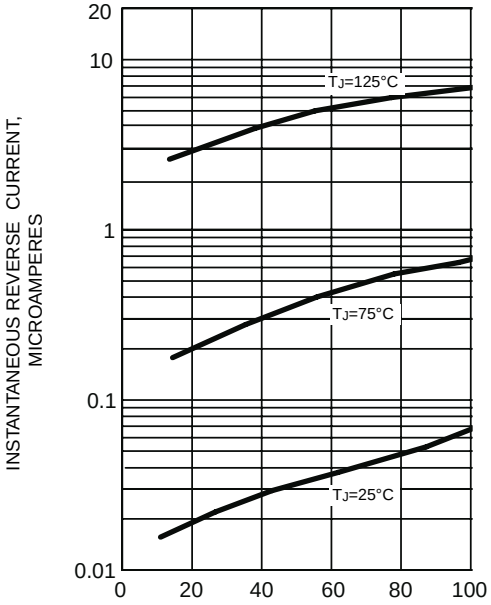


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

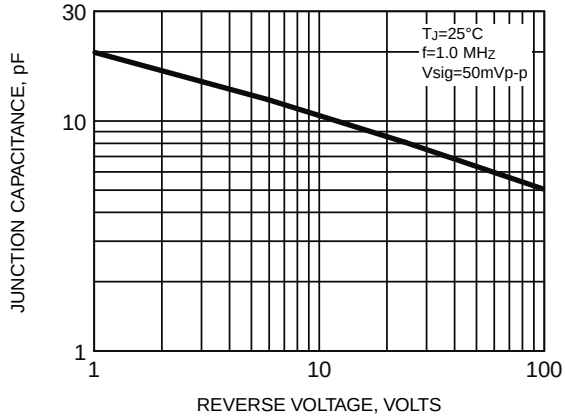
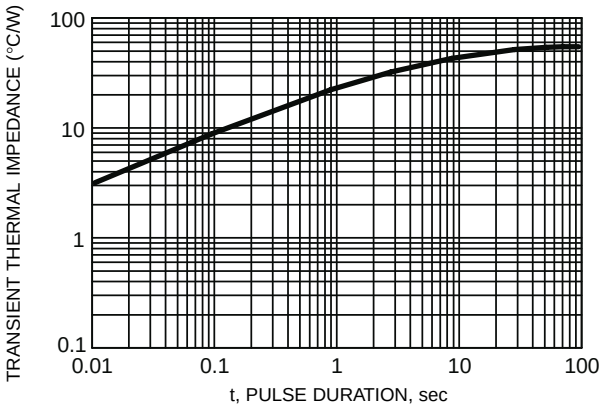


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



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