

1N5614 THRU 1N5622

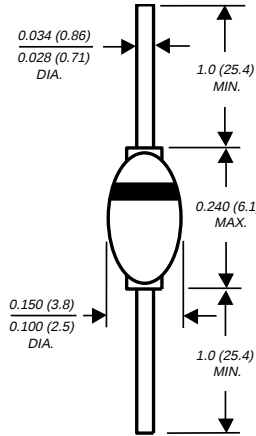
GLASS PASSIVATED MEDIUM-SWITCHING JUNCTION RECTIFIER

Reverse Voltage - 200 to 1000 Volts

Forward Current - 1.0. Ampere

PATENTED*

DO-204AP



Dimensions in inches and (millimeters)

* Brazed-lead assembly is covered by Patent No. 3,930,306

FEATURES

- ♦ High temperature metallurgically bonded construction
- ♦ 1.0 Ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway
- ♦ Typical I_R less than $0.1\mu\text{A}$
- ♦ Hermetically sealed package
- ♦ Capable of meeting environmental standards of MIL-S-19500
- ♦ High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



MECHANICAL DATA

Case: JEDEC DO-204AP solid glass body

Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.02 ounce, 0.56 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N5614	1N5616	1N5618	1N5620	1N5622	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
* Minimum reverse breakdown voltage at $50\mu\text{A}$	V_{BR}	220	440	660	880	1100	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	1.0					Amp
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0					Amps
* Maximum instantaneous forward voltage at 1.0A	V_F	1.2					Volts
* Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$ $T_A = 200^\circ\text{C}$	I_R	0.5 25.0 1500					μA
* Maximum reverse recovery time (NOTE 1)	t_{rr}	2.0					μs
Maximum junction capacitance (NOTE 2)	C_J	45	35	25	20	15	pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	55.0					$^\circ\text{C/W}$
* Operating junction temperature range	T_J	-65 to +175					$^\circ\text{C}$
* Storage temperature range	T_{STG}	-65 to +200					$^\circ\text{C}$

NOTES:

(1) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 12 Volts

(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length P.C.B. mounted

*JEDEC registered values

RATINGS AND CHARACTERISTIC CURVES 1N5614 THRU 1N5622

FIG. 1 - FORWARD CURRENT DERATING CURVE

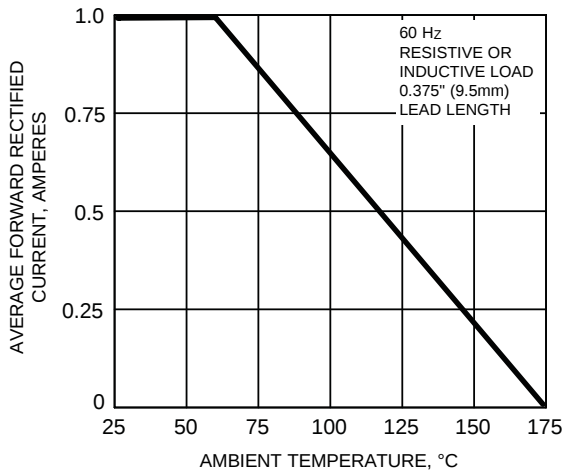


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

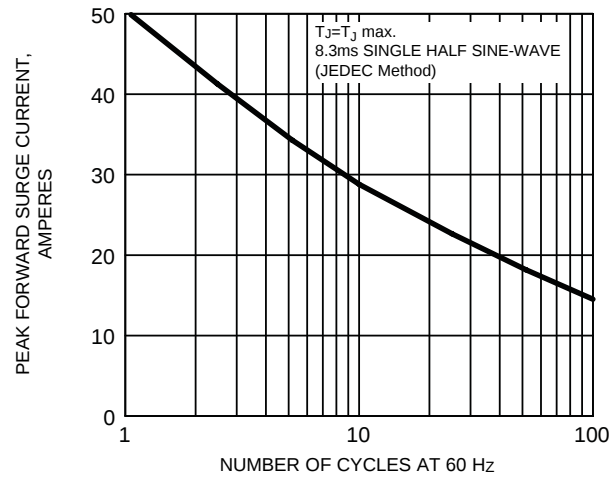


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

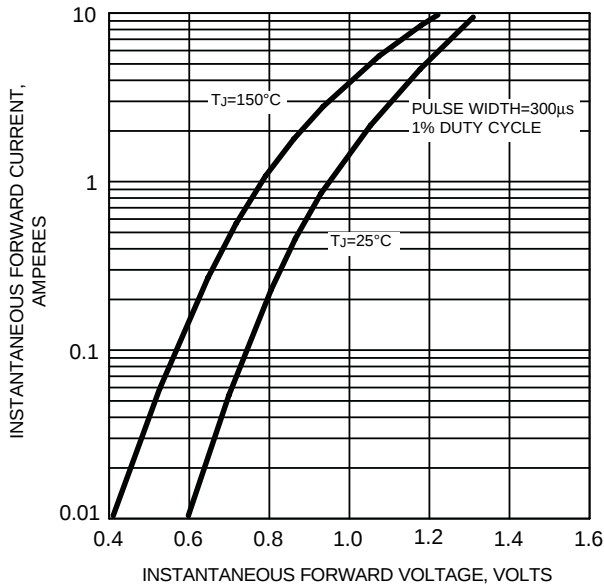


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

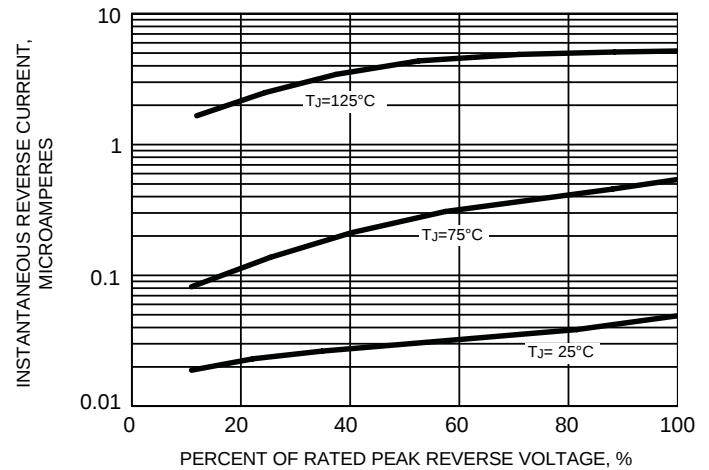


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

