

Features

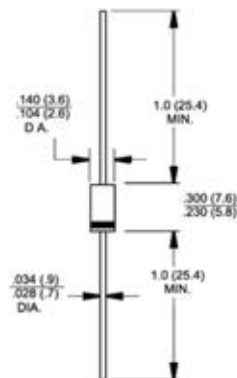
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ Cavity-free glass passivated junction
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ 1.5 Amperes operation at $T_L=70^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ High temperature soldering guaranteed:
350°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension



DO-204AC (DO-15)

Mechanical Data

- ◆ Case: JEDEC DO-204AC(DO-15), 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: 0.014 ounce, 0.395 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	1N53 91G	1N53 92G	1N53 93G	1N53 94G	1N53 95G	1N53 96G	1N53 97G	1N53 98G	1N53 99G	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	Volts	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=70^\circ\text{C}$	I_{AV}	1.5										Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{SM}	50.0										Amps
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length $T_L=70^\circ\text{C}$	$I_{R(AV)}$	300										μA
Maximum instantaneous forward voltage at 1.5A, $T_L=70^\circ\text{C}$	V_F	1.4										Volts
Maximum DC reverse current @ $T_L=25^\circ\text{C}$ at rated DC blocking voltage @ $T_L=150^\circ\text{C}$	I_R	5.0 300										μA
Typical reverse recovery time at $I_L=0.5\text{A}$, $I_F=1.0\text{A}$, $I_R=0.25\text{A}$	t_r	1.0										μs
Typical junction capacitance at 4.0V, 1MHz	C_j	15.0										pF
Typical thermal resistance (NOTE 1)	$R_{\theta JK}$	45.0										$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150										$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150										$^\circ\text{C}$

Notes: 1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

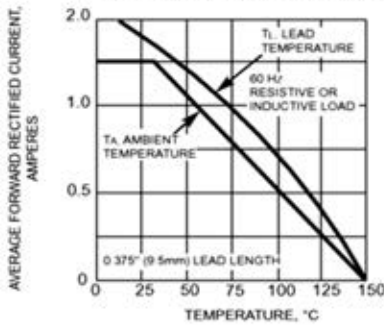


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

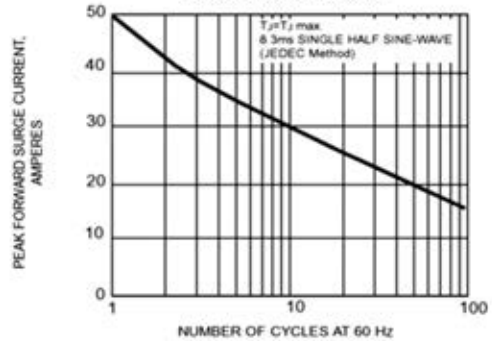


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

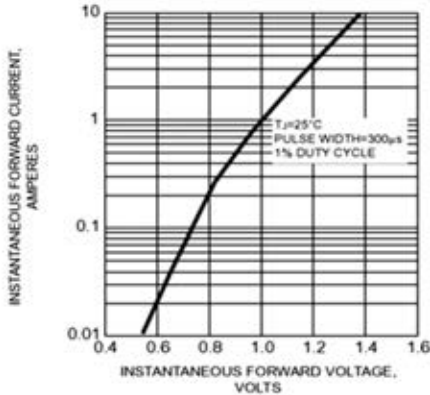


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

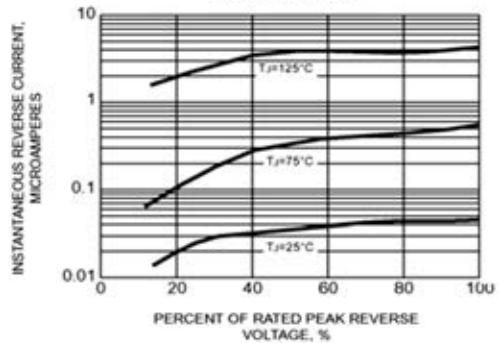


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

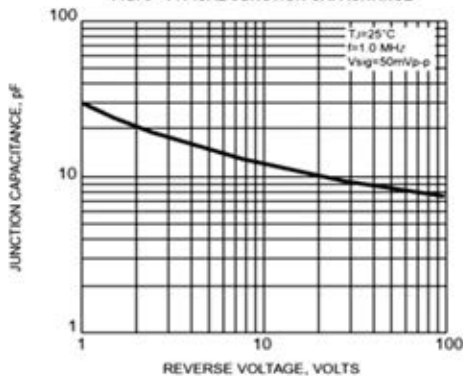


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

