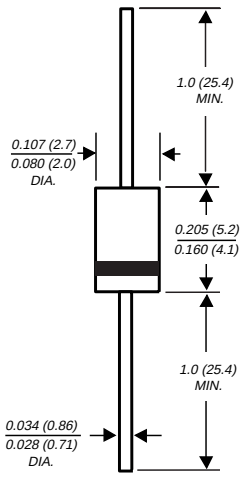
1N5391 THRU 1N5399

GENERAL PURPOSE PLASTIC RECTIFIER

***Reverse Voltage** - 50 to 1000 Volts* ***Forward Current** - 1.5 Amperes*

DO-204AL



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- 1.5 Ampere operation at T_L=70°C with no thermal runaway
- Low reverse leakage
- Construction utilizes void-free molded plastic technique
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AL molded plastic 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 5391	1N 5392	1N 5393	1N 5394	1N 5395	1N 5396	1N 5397	1N 5398	1N 5399	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 0.500" (12.7mm) lead length at T_L=70°C	$I_{(AV)}$	1.5									Amps
*Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T_A=75°C	I_{FSM}	50.0									Amps
*Maximum instantaneous forward voltage at 1.5A T_A=70°C	V_F	1.4									Volts
*Maximum DC reverse current T_A=25°C at rated DC blocking voltage T_A=150°C	I_R	5.0 300.0									µA
*Maximum full load reverse current full cycle average, 0.375",(9.5mm) lead length at T_L=70°C	$I_{R(AV)}$	300.0									µA
Typical reverse recovery time (NOTE 1)	t_{rr}	2.0									µs
Typical junction capacitance (NOTE 2)	C_J	15.0									pF
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$ $R_{\Theta JL}$	50.0 25.0									°C/W
*Maximum DC blocking voltage temperature	T_A	+150									°C
*Operating junction temperature range	T_J	-50 to + 170									°C
*Storage temperature range	T_{STG}	-50 to+175									°C

NOTES:
(1) Measured with I_F=0.5A, I_R=0.1A, 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 and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted
*JEDEC registered value

GENERAL SEMICONDUCTOR®

RATINGS AND CHARACTERISTIC CURVES 1N5391 THRU 1N5399

FIG. 1 - FORWARD CURRENT DERATING CURVE

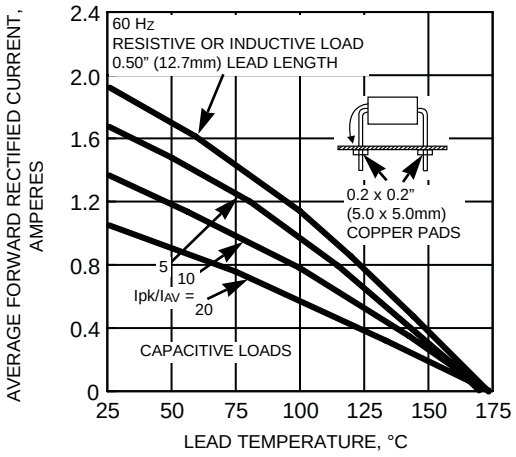


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

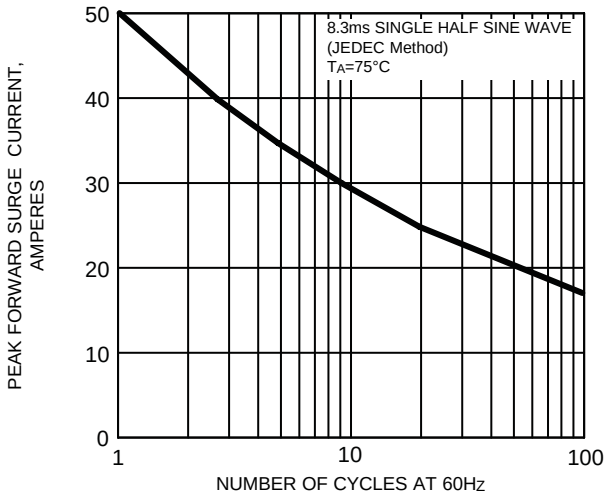


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

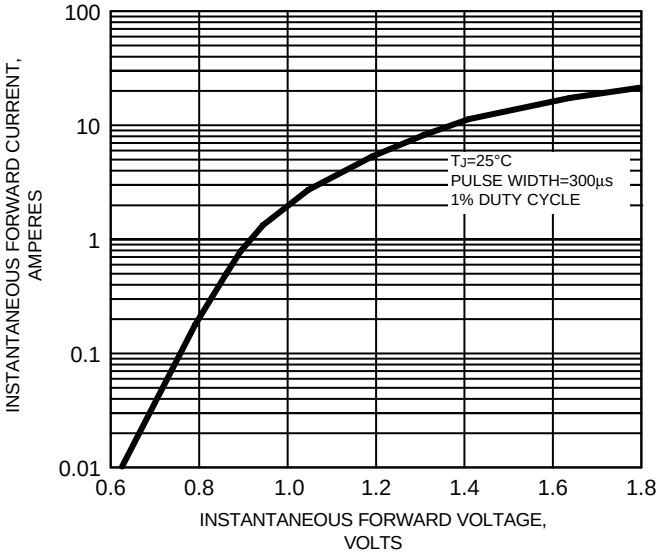


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

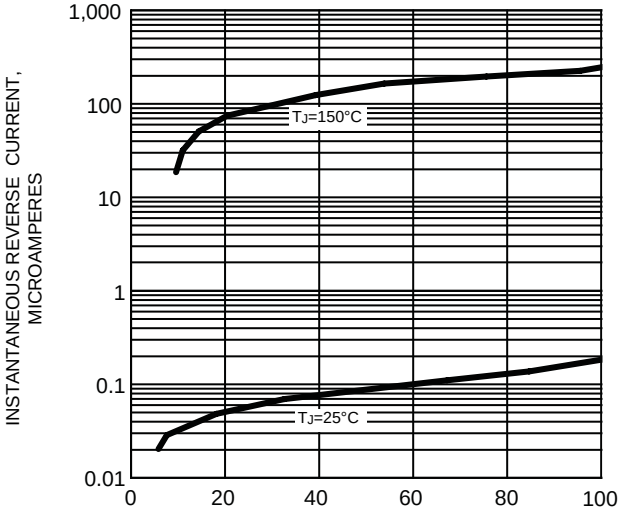


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

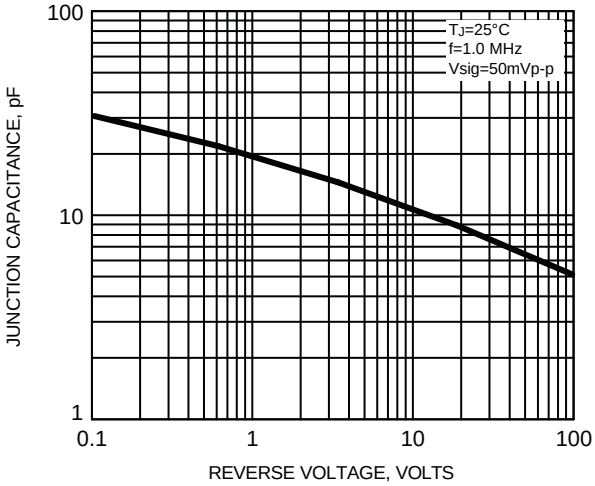
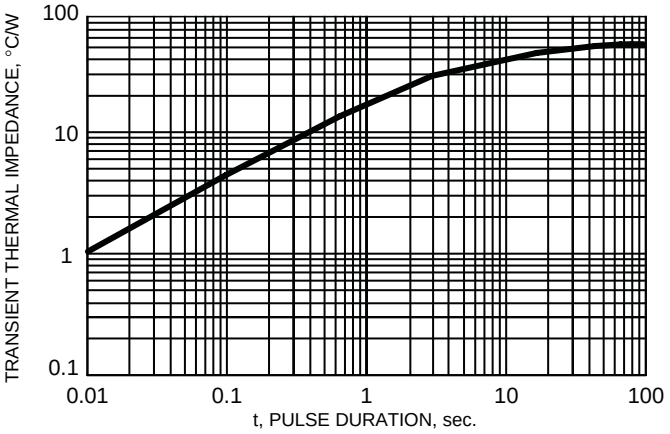


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



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