



GENERAL PURPOSE RECTIFIER

1N5391 THRU 1N5399

VOLTAGE RANGE
CURRENT

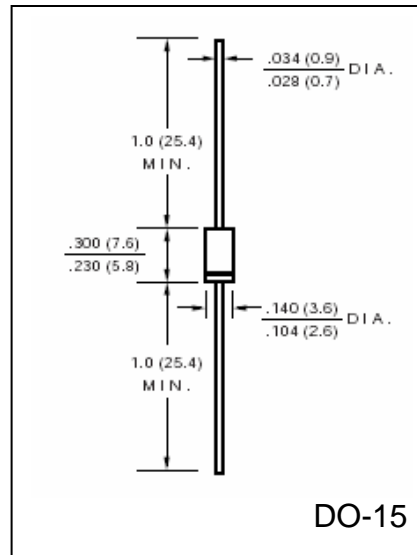
50 to 1000 Volts
1.5 Ampere

FEATURES

- Low reverse leakage
- High forward surge current capacity
- High temperature soldering guaranteed:
260 /10 seconds, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: any
- Weight: 0.014 ounce, 0.39 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	1N 5391	1N 5392	1N 5393	1N 5394	1N 5395	1N 5396	1N 5397	1N 5398	1N 5399	UNIT
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_{FSM}	50									Amps
Maximum Instantaneous Forward Voltage @ 1.5A	V_F	1.1									Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	I_R	5.0									μA
$T_A = 25^\circ\text{C}$		50									
Maximum Full Load Reverse Current, full cycle Average 0.375" (9.5mm) lead length at $T_L = 75^\circ\text{C}$	$I_{R(AV)}$	30									μA
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	20									pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50									$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	(-65 to +175)									$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-65 to +175)									$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted with 0.2" x 0.2" (5.0mm x 5.0mm) copper pads



RATINGS AND CHARACTERISTIC CURVES 1N5391 THRU 1N5399

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

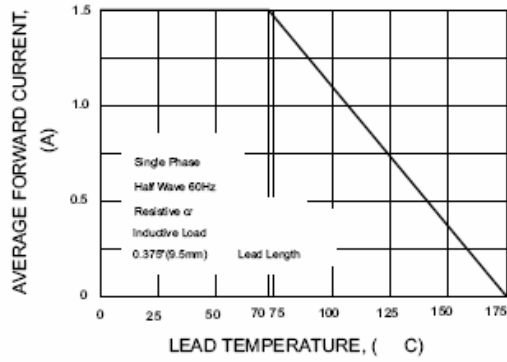


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

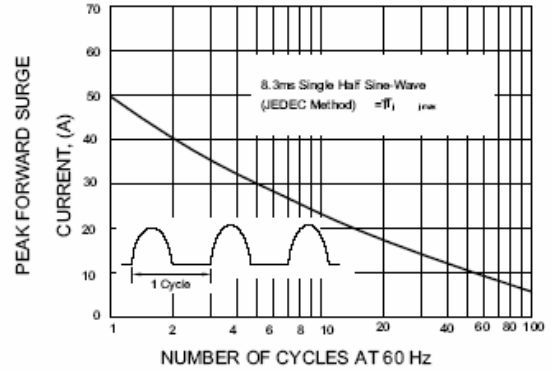


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

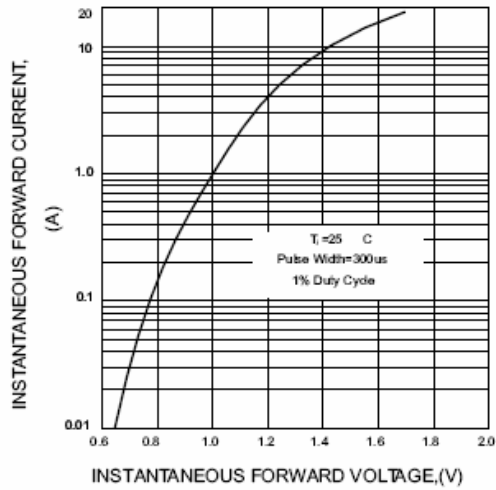


FIG.4-TYPICAL REVERSE CHARACTERISTICS

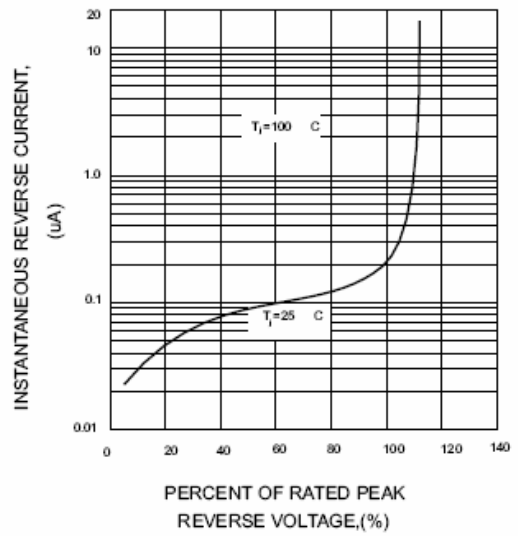


FIG.5-TYPICAL JUNCTION CAPACITANCE

