1N5391 THRU 1N5399

1.5 AMP SILICON RECTIFIERS

VOLTAGE RANGE
50 to 1000 Volts
CURRENT
1.5 Amperes

FEATURES

* Low forward voltage drop
* High current capability
* High reliability
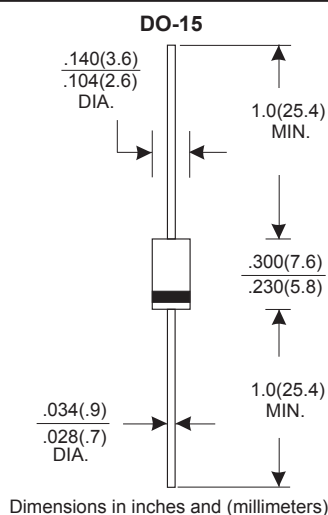* High surge current capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202,
        method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.40 grams

DO-15

.140(3.6)
.104(2.6)
DIA.

1.0(25.4)
MIN.

.300(7.6)
.230(5.8)

1.0(25.4)
MIN.

.034(.9)
.028(.7)
DIA.

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	1N5391	1N5392	1N5393	1N5395	1N5397	1N5398	1N5399	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=50°C	1.5							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	50							A
Maximum Instantaneous Forward Voltage at 1.5A	1.0							V
Maximum DC Reverse Current Ta=25°C	5.0							μA
at Rated DC Blocking Voltage Ta=100°C	50							μA
Typical Junction Capacitance (Note 1)	20							pF
Typical Thermal Resistance RθJA (Note 2)	50							°C/W
Operating and Storage Temperature Range T_J, T_{STG}	-65 — +150							°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.

RATING AND CHARACTERISTIC CURVES (1N5391 THRU 1N5399)
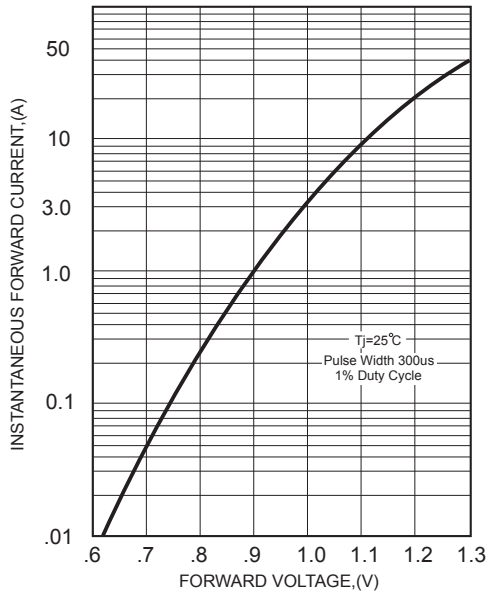
FIG.1-TYPICAL FORWARD CHARACTERISTICS

Tj=25℃
Pulse Width 300us
1% Duty Cycle

INSTANTANEOUS FORWARD CURRENT,(A)
FORWARD VOLTAGE,(V)

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

Single Phase
Half Wave 60Hz
Resistive Or Inductive Load
0.375"(9.5mm) Lead Length

AVERAGE FORWARD CURRENT,(A)
AMBIENT TEMPERATURE,(℃)
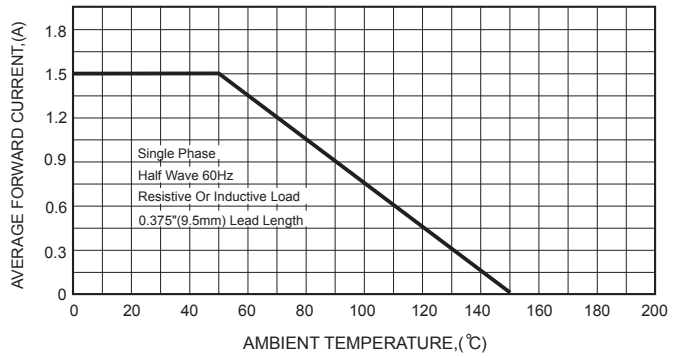
FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Tj=25℃

8.3ms Single Half
Sine Wave
JEDEC method

PEAK FORWARD SURGE CURRENT,(A)
NUMBER OF CYCLES AT 60Hz
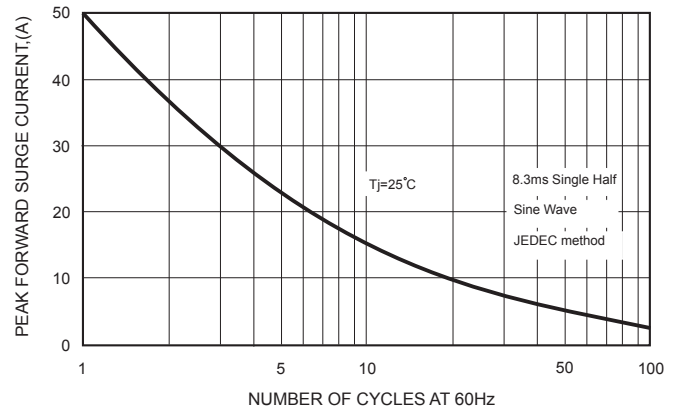
FIG.3 - TYPICAL REVERSE CHARACTERISTICS

Tj=100℃

Tj=25℃

REVERSE LEAKAGE CURRENT, (μA)
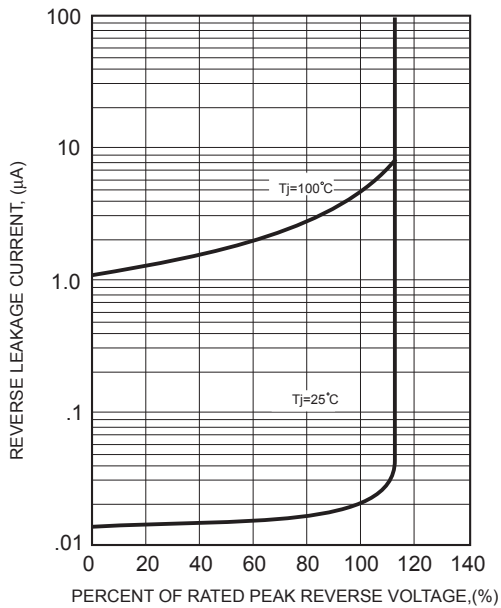PERCENT OF RATED PEAK REVERSE VOLTAGE,(%)

FIG.5-TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE,(pF)
REVERSE VOLTAGE,(V)