

1.5 AMP SILICON RECTIFIERS

1N5391 THRU 1N5399

TECHNICAL SPECIFICATION

FEATURES

- Low cost construction utilizing void - free moulded plastic technique
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Diffused junction
- High surge current capability
- Low leakage
- High temperature soldering capability : 250°C/10 seconds/9.5mm (.375in.) lead length at 2.3kg (5lb) tension
- Easily cleaned with Freon, Alcohol, Chloroethene and other similar solvents

MECHANICAL DATA

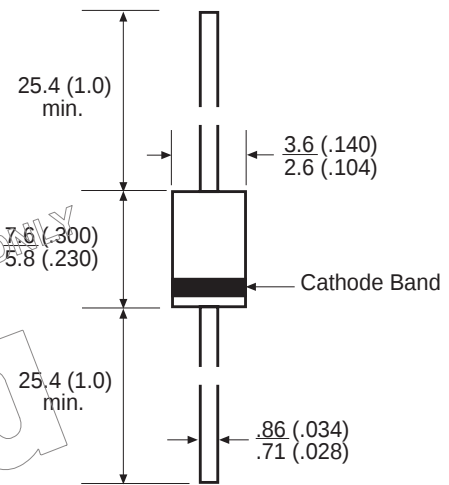
Case : JEDEC DO-15, moulded plastic.
 Terminals : Plated axial leads, solderable per MIL-STD-202, Method 208.
 Polarity : Colour band denotes cathode end.
 Mounting Position : Any
 Weight : 0.41 grams (0.014 ounce)

VOLTAGE
 50 to 1000 Volts

CURRENT
 1.5 Amp

DIMENSIONS - millimeters (inches)

DO-15



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	1N5391	1N5392	1N5393	1N5394	1N5395	1N5396	1N5397	1N5398	1N5399	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	V
Maximum Average Forward Rectified Current 9.5mm (.375in.) Lead Length at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	1.5									A
Peak Forward Surge Current, 8.3 ms single half sine - wave superimposed on rated load	I_{FSM}	50									A
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.4									V
Maximum Reverse Current at Rated DC Blocking Voltage	I_R										μA
$T_A = 25^\circ\text{C}$											μA
$T_A = 100^\circ\text{C}$											μA
Maximum Full load Reverse Current Full Cycle Average, 9.5mm (.375in.) Lead Length at $T_L = 75^\circ\text{C}$	$I_{R(AV)}$	30									μA
Typical Junction Capacitance (see Note 1)	C_J	30									pF
Typical Thermal Resistance (see Note 2)	R_{THja}	50									$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 50 to + 175									$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 50 to + 175									$^\circ\text{C}$

Notes :

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. Thermal Resistance from Junction to Ambient

RATING AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

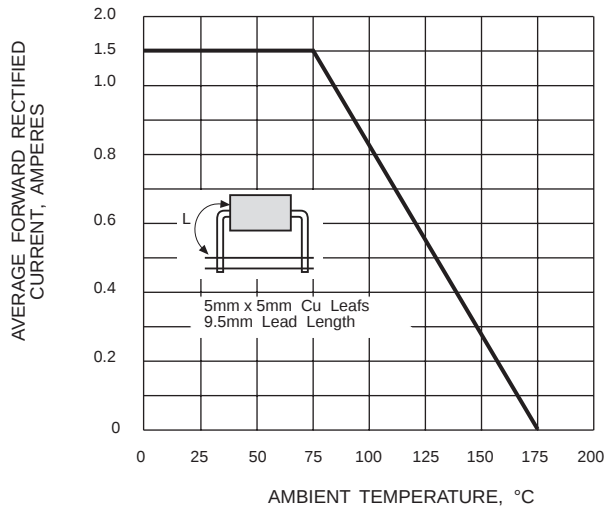


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

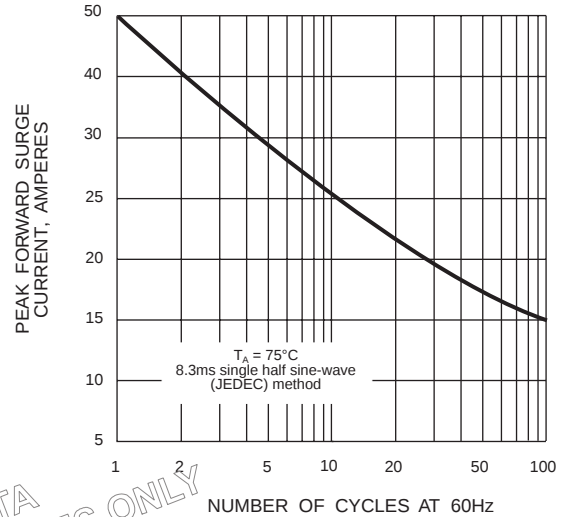


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

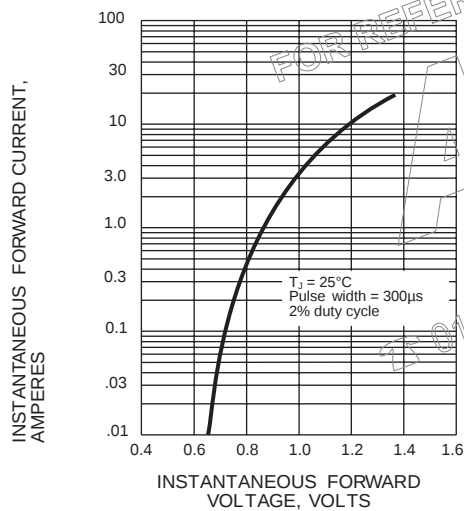


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

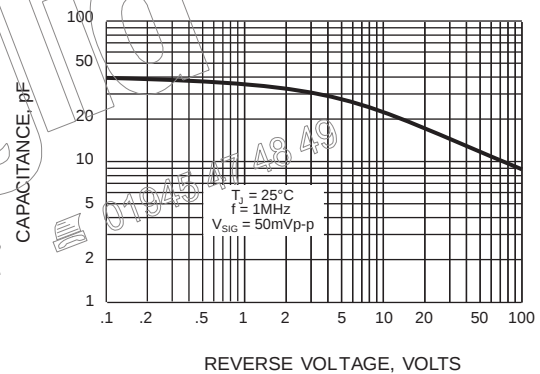


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

