1SR124-100 ~ 1SR124-400

FAST RECOVERY RECTIFIER DIODES

PRV : 100 - 400 Volts
Io : 1.0 Ampere

FEATURES :

* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Fast switching for high efficiency
* Pb / RoHS Free

MECHANICAL DATA :

* Case : DO-41 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.339 gram

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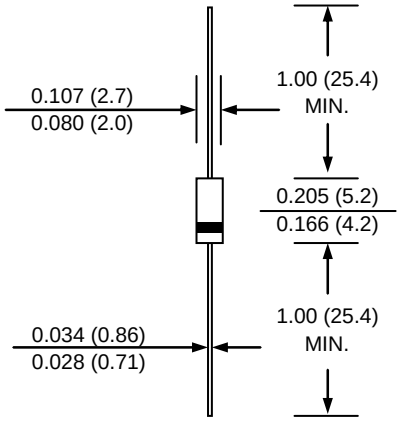


Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 ℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive loa d.
For capacitive load, derate current by 20%

RATING	SYMBOL	1SR124 - 100	1SR124 - 200	1SR124 - 400	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	400	V
Maximum RMS Voltage	V_{RMS}	70	140	280	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 ℃	$I_{F(AV)}$	1.0			A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	35			A
Maximum Peak Forward Voltage at I_F = 1.0 Amp.	V_F	1.3			V
Maximum DC Reverse Current Ta = 25 ℃	I_R	5			µA
at Rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	50			µA
Maximum Reverse Recovery Time (Note 1)	Trr	250			ns
Typical Junction Capacitance (Note 2)	C_J	50			pF
Junction Temperature Range	T_J	- 65 to + 150			℃
Storage Temperature Range	T_{STG}	- 65 to + 150			℃

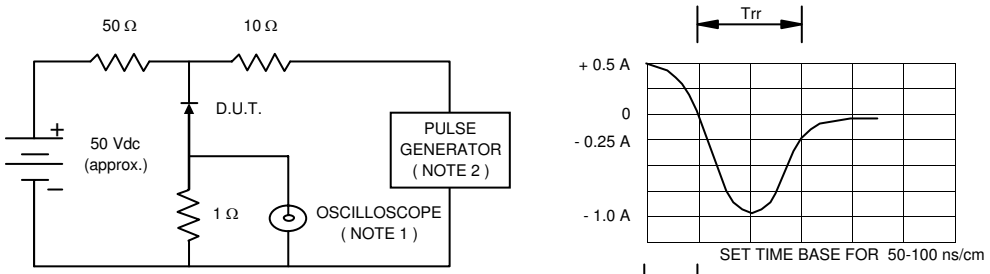
Notes :

(1) Reverse Recovery Test Conditions : I_F = 0.5 A, I_R = 1.0 A, Irr = 0.25 A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

RATING AND CHARACTERISTIC CURVES (1SR124-100 ~ 1SR124-400)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

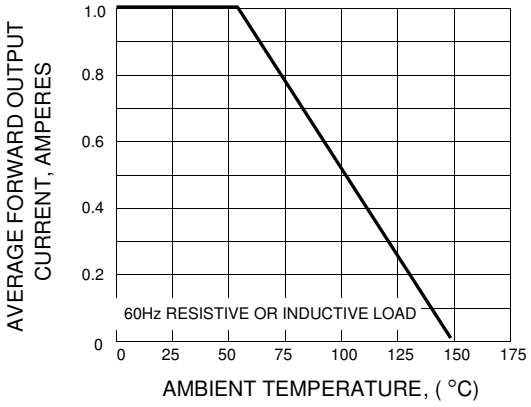


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

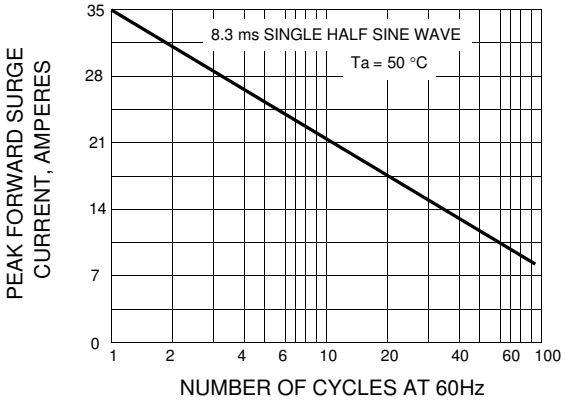


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

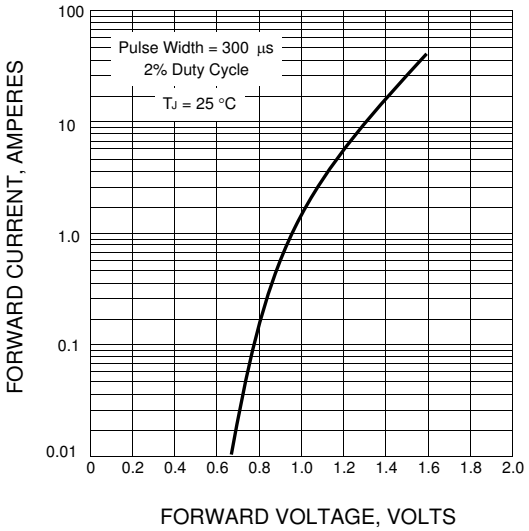


FIG.5 - TYPICAL REVERSE CHARACTERISTICS