

SF51_9

PRV : 50 - 1000 Volts

Io : 5.0 Amperes

Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Super fast recovery time
- RoHS compliant package

Mechanical Data

- 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 : 1.10 grams

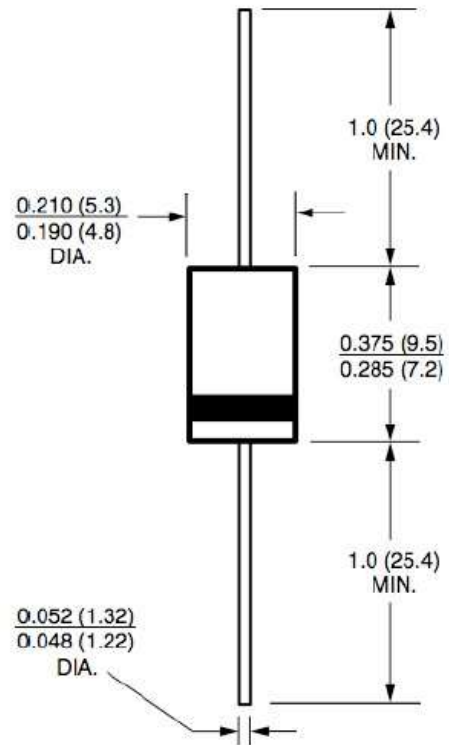
Package type : DO-201AD

Packing & Order Information

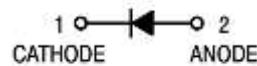
1,250/T



RoHS
COMPLIANT



Graphic symbol



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specific.

Single phase, half wave, 60 Hz, resistive or inductive load

For capacitive load, derate current by 20%

Rating	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58	SF59	Unit
Recurrent Peak Reverse Voltage (Max.)	V_{RRM}	50	100	150	200	300	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	$I_{F(AV)}$	5.0									A

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Rating	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58	SF59	Unit
Maximum Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	135									A
Maximum Peak Forward Voltage at $I_F = 5.0$ A	V_R	0.95			1.7			4.0			V
Maximum DC Reverse Current $T_j = 25$ °C	I_R	10									mA
at Rated DC Blocking Voltage $T_j = 100$ °C	$I_{R(H)}$	500									mA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35									Ns
Typical Junction Capacitance (Note 2)	C_J	50									pF
Junction Temperature Range	T_J	- 65 to + 150									°C
Storage Temperature Range	TSTG	- 65 to + 150									°C

Notes

(1) Reverse Recovery Test Conditions : $I_F = 0.5$ A, $I_R = 1.0$ A, $I_{rr} = 0.25$ A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

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■ RATING AND CHARACTERISTIC CURVES (GROA - GROM)

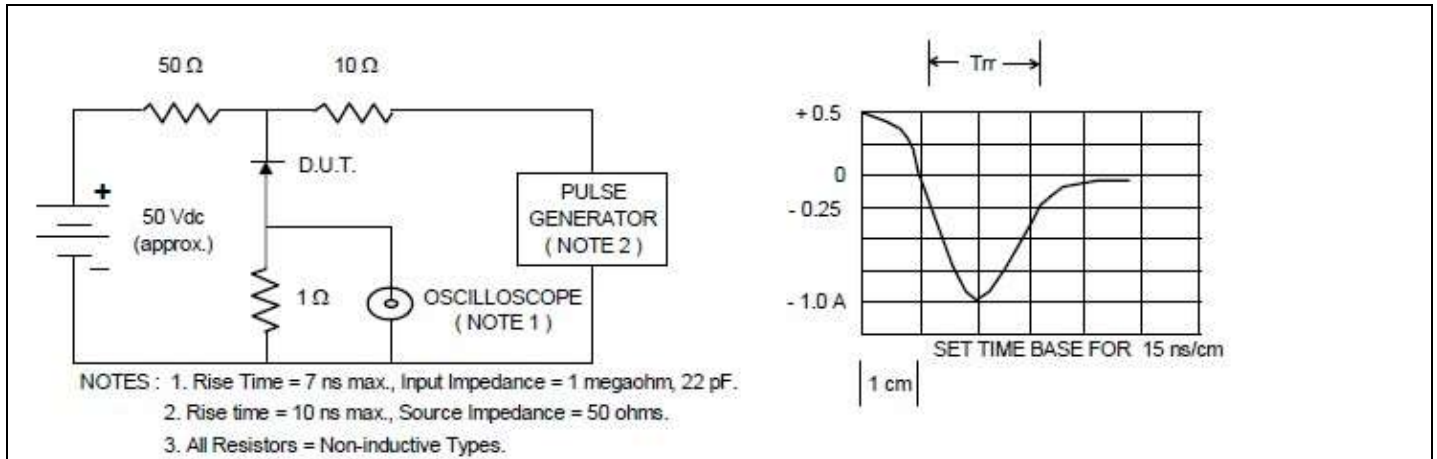


FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

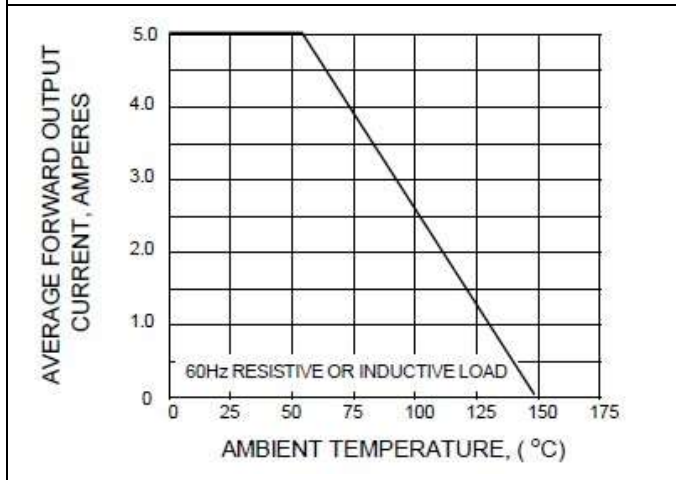


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

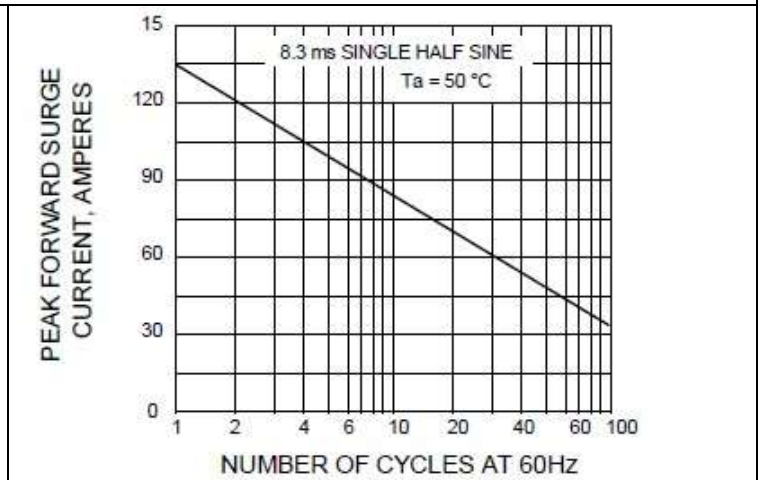


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

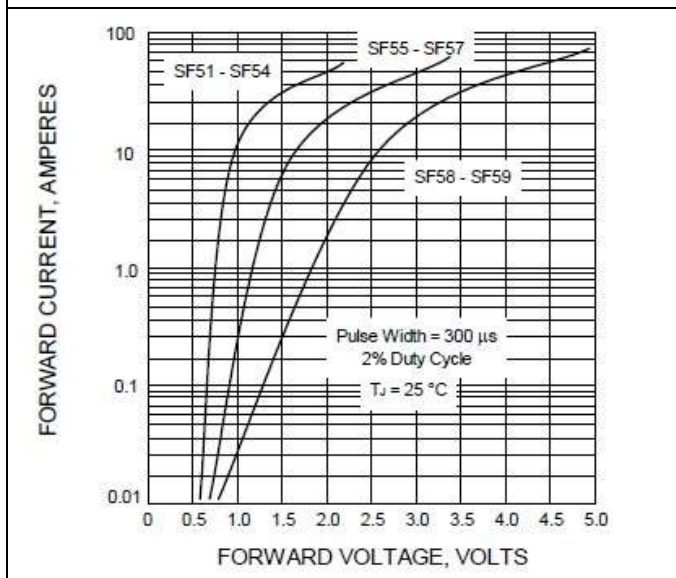


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

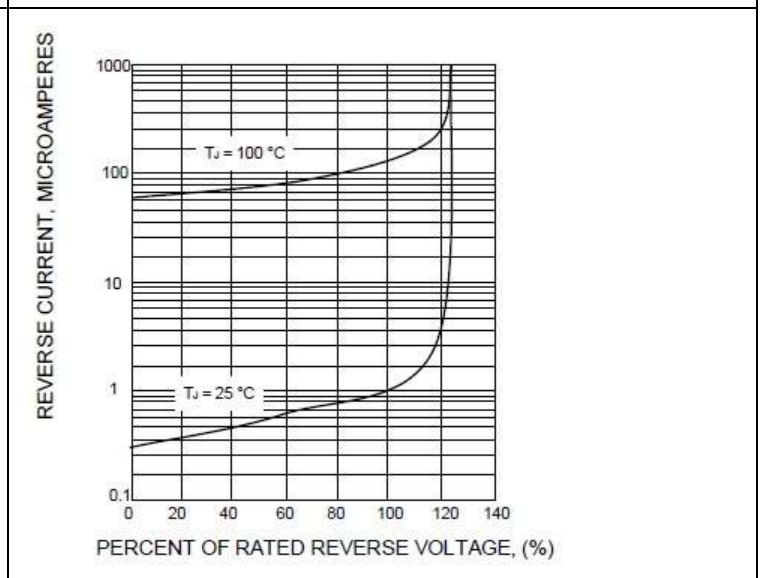


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

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