

FR301-FR307

FAST RECOVERY RECTIFIERS

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristics	Symbol	FR							Units
		301	303	303	304	305	306	307	
Maximum Forward Rectified Current (Figure 2)	I _O	3.0							A
Maximum Forward Surge Current	I _{FSM}	200							A
Maximum Reverse Current V _R = V _{RRM} , T _J = 25°C V _R = V _{RRM} , T _J = 125°C	I _R	5.0 150							μA
Typical Junction Capacitance f = 1MHz and applied 4V DC Reverse Voltage	C _J	60							pF
Storage Temperature Range	T _{STG}	-65 to +175							°C
Operating Temperature Range	T _J	-55 to +125							°C
Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Continuous Reverse Voltage	V _R	50	100	200	400	600	800	1000	V
Maximum Forward Voltage @ I _F = 2.0A	V _F	1.3	1.3	1.3	1.3	1.3	1.3	1.3	V
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	150	150	150	150	250	500	500	ns

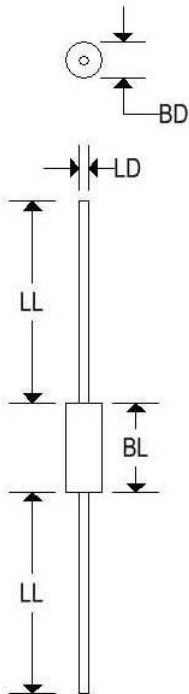
Note 1: Reverse recovery time test condition, I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

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MECHANICAL CHARACTERISTICS

Case:	DO-201AD
Marking:	Alpha-numeric
Polarity:	Cathode band



	DO-201AD			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.190	0.209	4.826	5.309
BL	0.285	0.375	7.240	9.530
LD	0.048	0.052	1.219	1.321
LL	1.000	-	25.400	-

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FIG.1-TYPICAL FORWARD CHARACTERISTICS

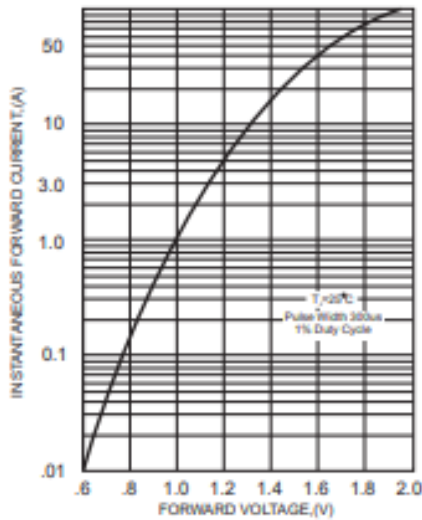


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

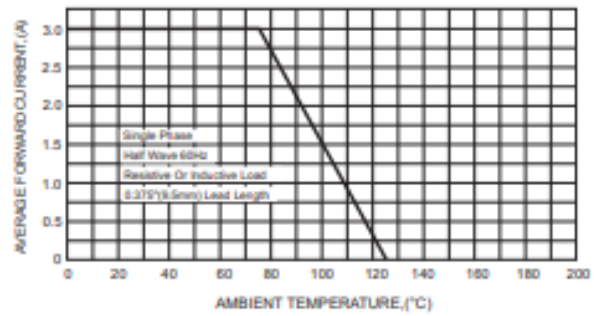


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

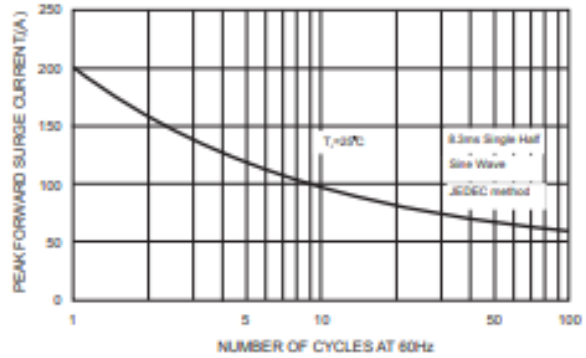
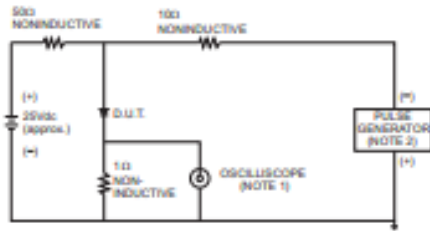


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm, 22pF.
2. Rise Time = 10ns max., Source Impedance = 50 ohms.

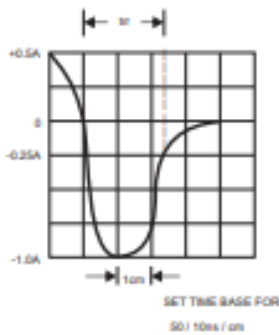


FIG.5-TYPICAL JUNCTION CAPACITANCE

