

ER300 THRU ER308

3.0A Axial Leaded Super Fast Rectifiers-50-800V

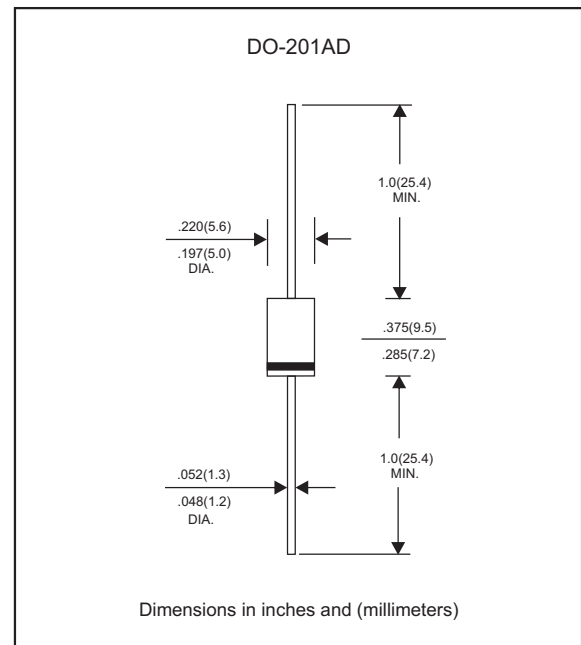
Features

- Axial lead type devices for through hole design
- High current capability.
- Superfast recovery time for switching mode application,
- High surge capability.
- Silicon rubber coating chip junction.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free parts.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 1.10 gram

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	Ambient temperature = 55°C	I_o			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I_{FSM}			125	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM}$ $T_J = 100^\circ\text{C}$				100	
Diode junction capacitance	$f=1\text{MHz}$ and applied 4V DC reverse voltage	C_J		50		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	Operating temperature $T_J, (^\circ\text{C})$
ER300	50	35	50	0.95	35	-55 to +150
ER301	100	70	100			
ER301A	150	105	150			
ER302	200	140	200	1.25		
ER303	300	210	300			
ER304	400	280	400	1.70		
ER305	500	350	500			
ER306	600	420	600	2.00		
ER307	700	490	700			
ER308	800	560	800	2.50		

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=3.0\text{A}$
- *5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves (ER300 THRU ER308)

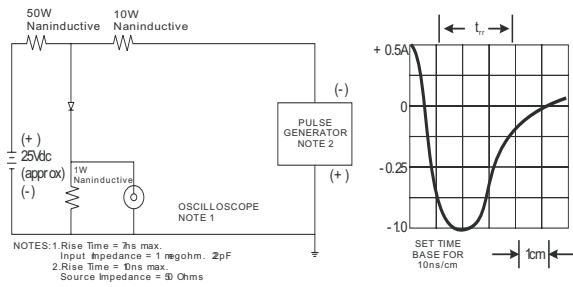


FIG.1 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

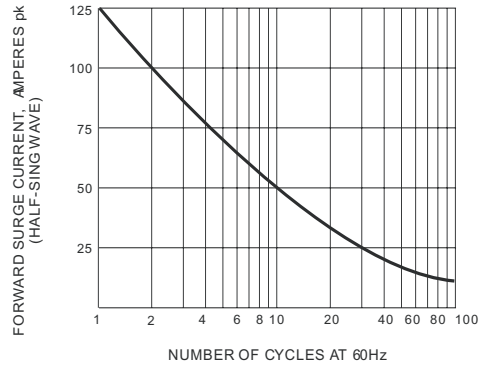


FIG.2 MAXIMUM NON-REPEITIVE SURGE CURRENT

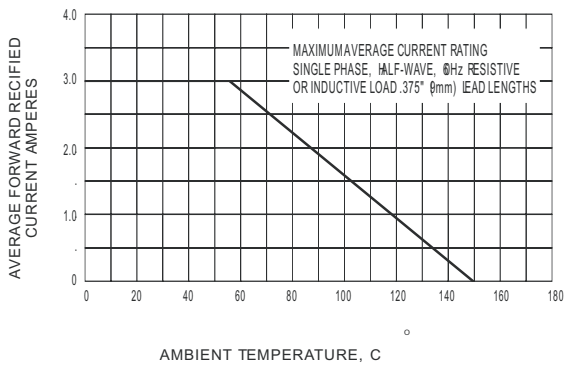


FIG.3 MAXIMUM AVERAGE FORWARD CURRENT RATING

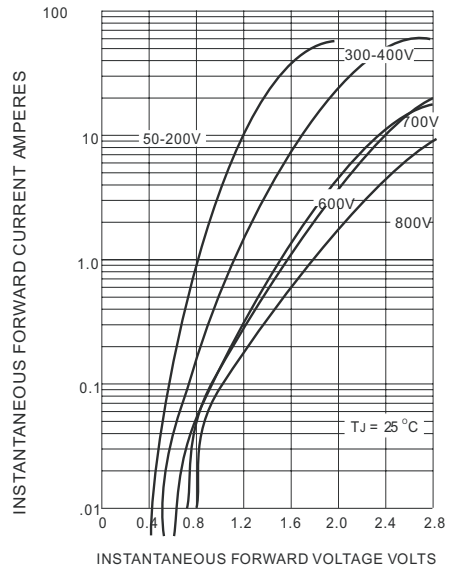


FIG.4 TYPICAL JUNCTION CAPACITANCE

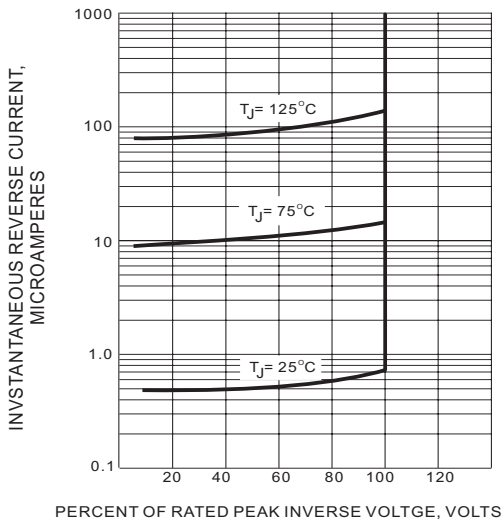


FIG.5 TYPICAL REVERSE CHARACTERISTICS

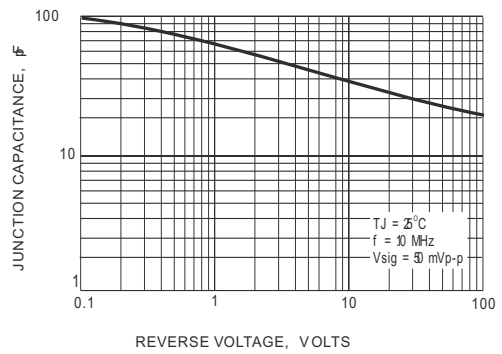


FIG.6 TYPICAL JUNCTION CAPACITANCE