

■ Features

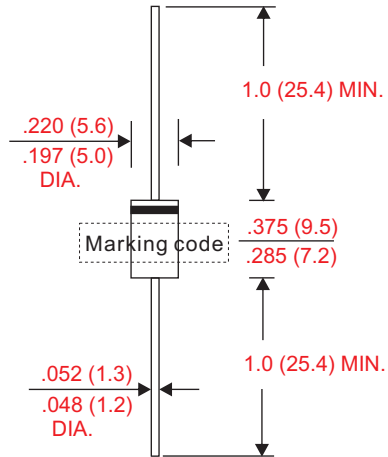
- Axial lead type devices for through hole design.
- High current capability.
- Superfast recovery time for switching mode application.
- High surge current capability.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. ER3005G
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD / DO-27
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guranteed
- Polarity : Color band denotes cathode end
- Weight : Approximated 1.10 gram

■ Outline

DO-27(DO-201AD)



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

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

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		I_O			3.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			125	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ C$	I_R			1.0	uA
	$V_R = V_{RRM}$ $T_A = 125^\circ C$				300	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_j		45		pF
Storage temperature		T_{STG}	-50		+150	°C

Symbol	Marking code	Max. repetitive peak reverse voltage V_{RRM} (V)	Max. RMS voltage V_{RMS} (V)	Max. DC blocking voltage V_R (V)	Max. forward voltage @3A, $T_A = 25^\circ C$ V_F (V)	Max. reverse recovery time(1) T_{rr} (ns)	Operating temperature T_J (°C)
ER3005	ER3005	50	35	50	0.95	35	-50 ~ +150
ER301	ER301	100	70	100			
ER302	ER302	200	140	200			
ER304	ER304	400	280	400	1.25	75	
ER306	ER306	600	420	600	1.70		
ER308	ER308	800	560	800			
ER310	ER310	1000	700	1000			

Note : 1. $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

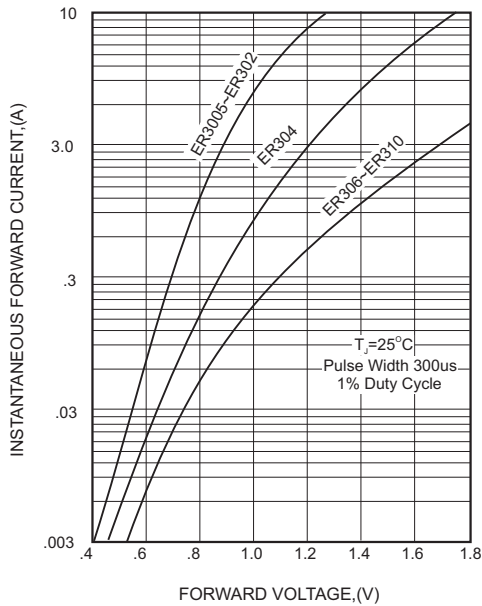


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

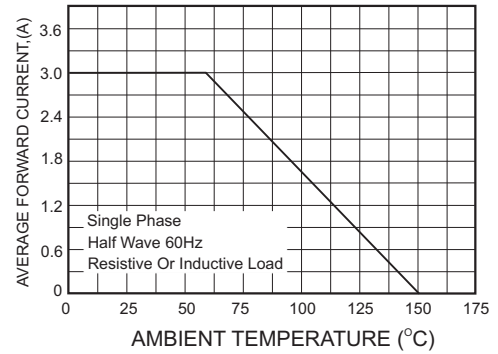
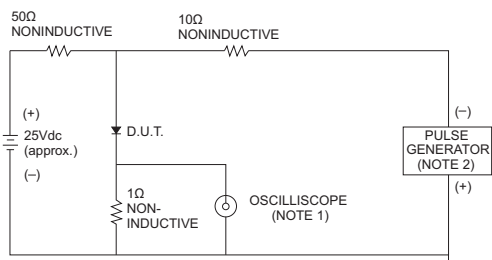


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

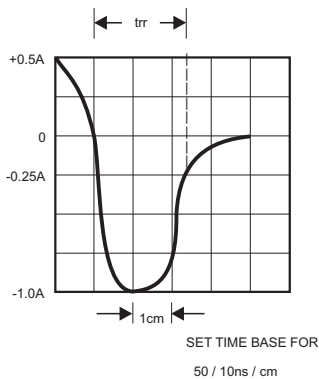


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

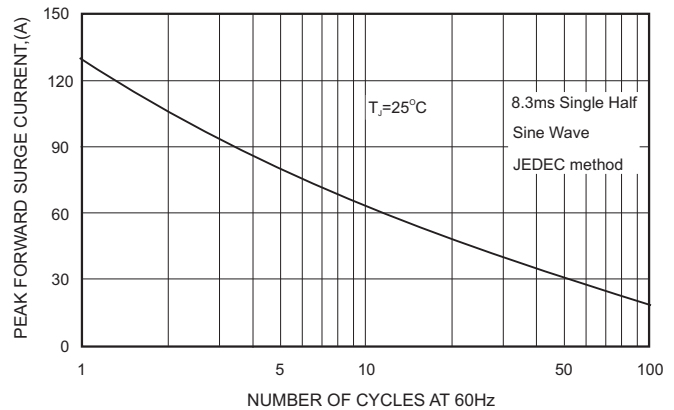
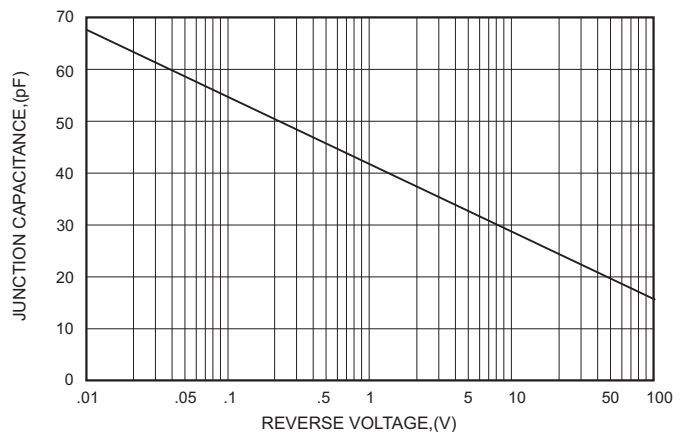


FIG.5-TYPICAL JUNCTION CAPACITANCE



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