

ET3005 THRU ET310

3 Amperes High Power Super Fast Rectifiers
VOLTAGE : 50 TO 1000Volts

Features		Outline	
• 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. ET3005G • Lead-free parts meet environmental standards of MIL-STD-19500 /228		TO-220AC Dimensions in inches and (millimeters)	
Mechanical data			
• Epoxy : UL94-V0 rated flame retardant. • Case : JEDEC TO-220AC molded plastic body over passivated chip. • Lead : Axial leads, solderable per MIL-STD-202, Method 208 guranteed. • Polarity: Color band denotes cathode end. • Mounting Position : Any. • Weight : Approximated 1.86 gram.			

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	Symbol	ET3005	ET301	ET302	ET304	ET306	ET308	ET310	UNIT
Making code		ET3005	ET301	ET302	ET304	ET306	ET308	ET310	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	
Maximum Forward Voltage	V _F	0.95			1.25	1.70			V
Operating Temperature	T _J	-50 ~ +150							°C

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 methode)	I _{FSM}			75	A
Reverse current	V _R = V _{RRM} T _A = 25°C	I _R			1.0	uA
	V _R = V _{RRM} T _A = 100°C				300	
Maximum reverse recovery time	I _F = 0.5A, I _R = 1.0A , I _{RR} = 0.25A	T _{rr}			35	nS
Typical junction capacitance	f=1MHz and applied 4V DC reverse voltage	C _j		45		pF

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Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

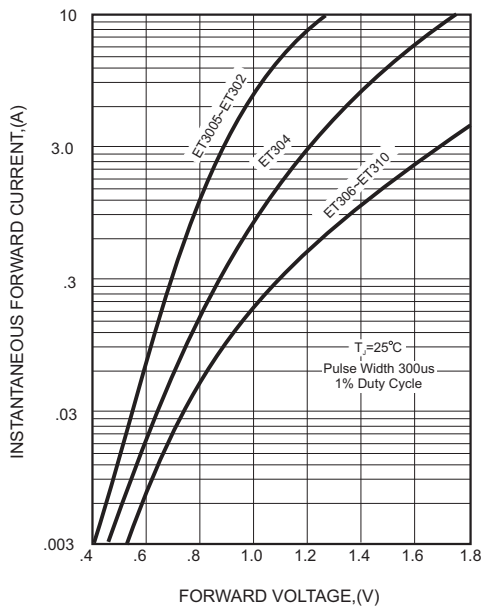
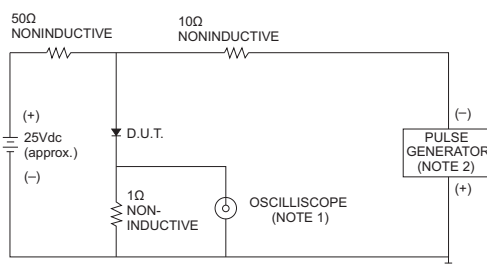


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

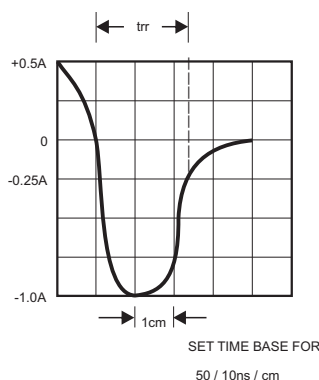


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

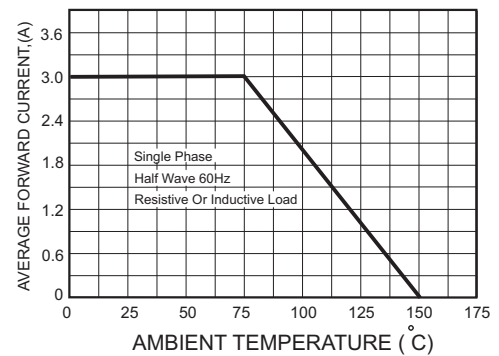


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

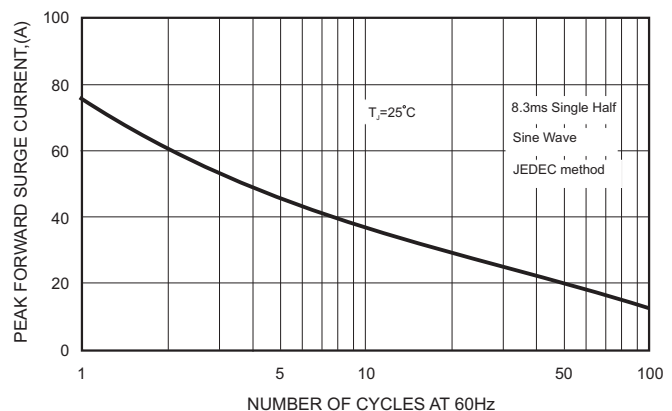


FIG.5-TYPICAL JUNCTION CAPACITANCE

