ED6005CT THRU ED610CT

6.0 Amperes Surface Mount Super High Power Super Fast Rectifiers
VOLTAGE : 50 TO 1000Volts

Features

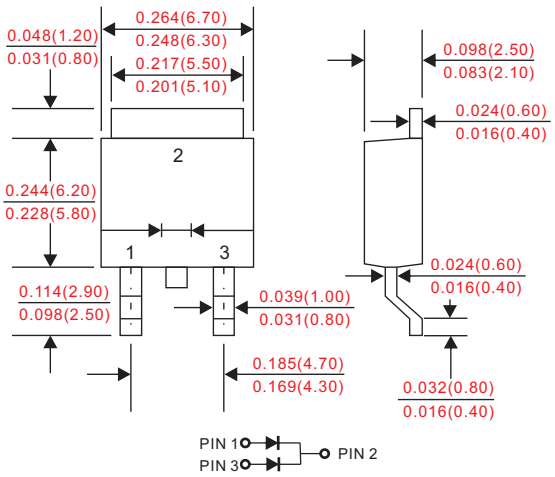
- Low profile surface mounted application in order to optimize board space.
- High current capability, low forward voltage drop.
- High surge capability.
- Superfast recovery time for switching mode application.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. ED6005CTG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, DPAK / TO-252.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.34 gram.

Outline

DPAK(TO-252)



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	Symbol	ED6005CT	ED601CT	ED602CT	ED604CT	ED606CT	ED608CT	ED610CT	UNIT
Making code		ED6005CT	ED601CT	ED602CT	ED604CT	ED606CT	ED608CT	ED610CT	
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@3.0A, T_A = 25°C	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			6.0	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 = 125°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		80		pF

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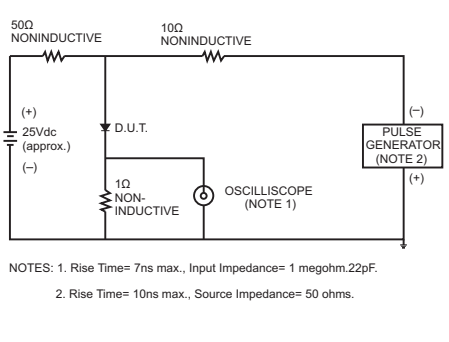
Rating and characteristic curves

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



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

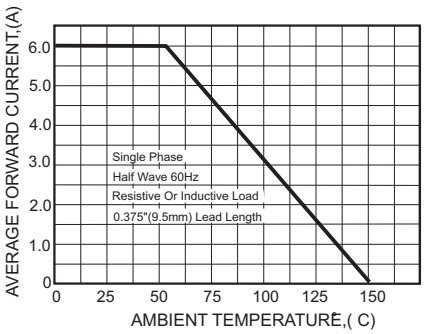


FIG. 3 - TYPICAL INSTANTANEOUR FORWARD
CHARACTERISTICS

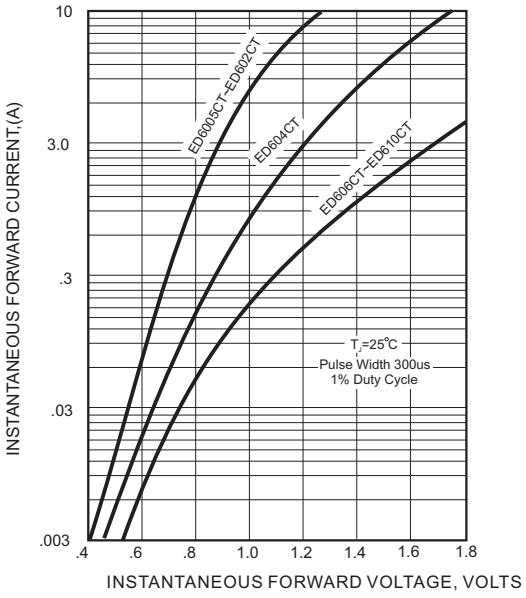


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

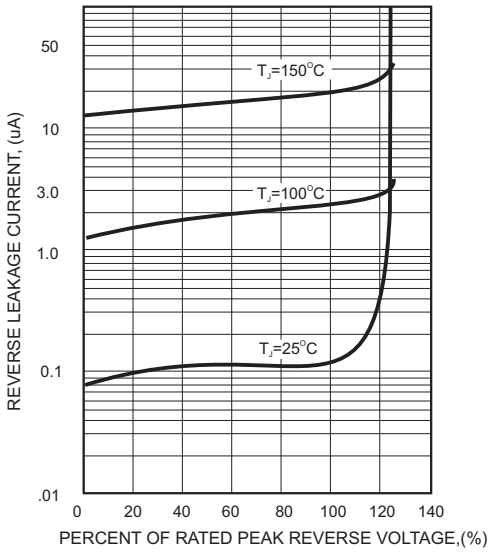


FIG.5-MAXIMUM NON-REPETITIVE

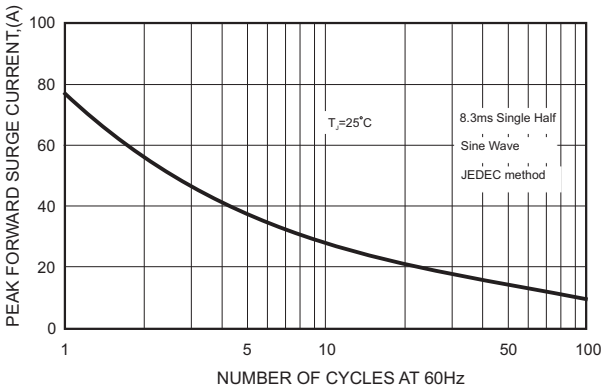


FIG.6-TYPICAL JUNCTION CAPACITANCE