

■ 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

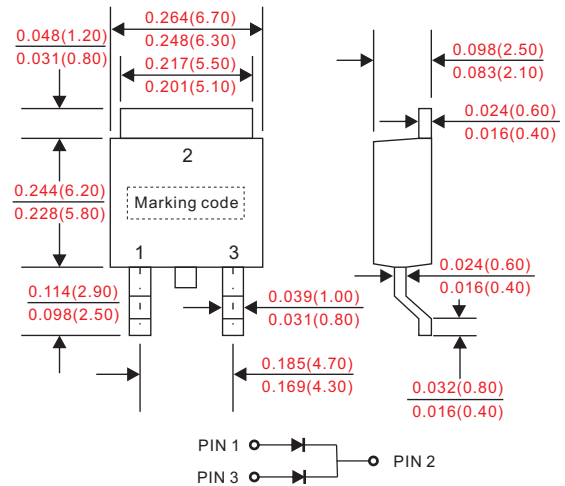
- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, DPAK / TO-252.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.34 gram.

■ 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%.

■ Outline

DPAK(TO-252)



Dimensions in inches and (millimeters)

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 method)	I_{FSM}			75	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			1.0	uA
	$V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$				300	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_j		80		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, $T_A = 25^\circ\text{C}$ V_F (V)	Max. reverse recovery time(1) T_{rr} (ns)	Operating temperature T_J (°C)
ED6005CT	ED6005CT	50	35	50	0.95	35	-50 ~ +150
ED601CT	ED601CT	100	70	100			
ED602CT	ED602CT	200	140	200			
ED604CT	ED604CT	400	280	400	1.25	35	
ED606CT	ED606CT	600	420	600			
ED608CT	ED608CT	800	560	800	1.70	75	
ED610CT	ED610CT	1000	700	1000			

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

Rating and characteristic curves

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

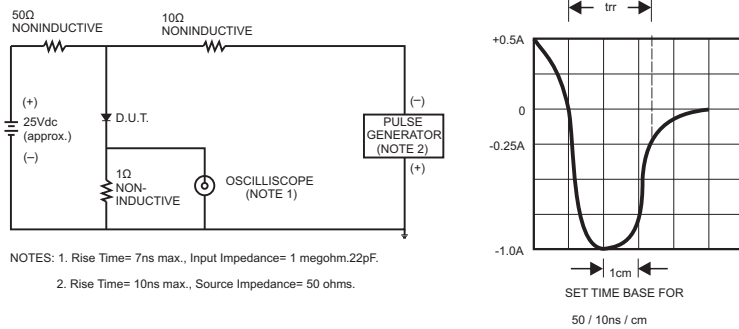


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

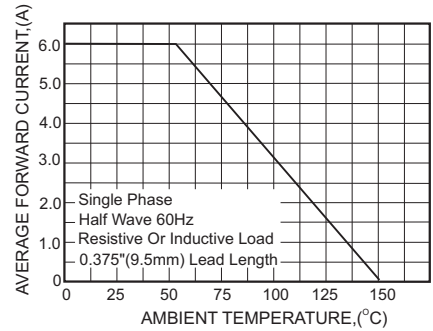


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

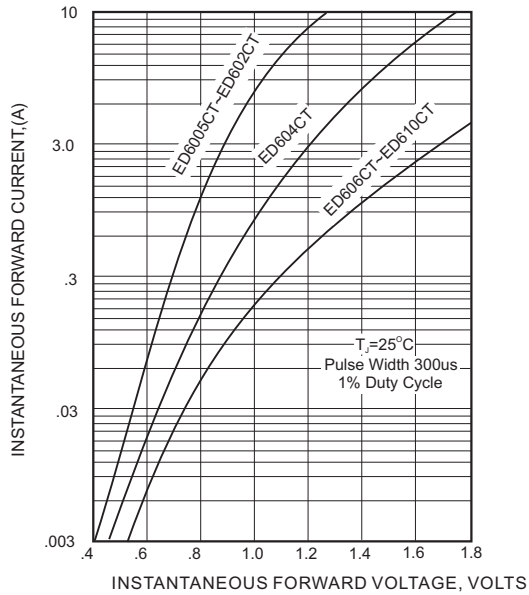


FIG.4-TYPICAL REVERSE CHARACTERISTICS

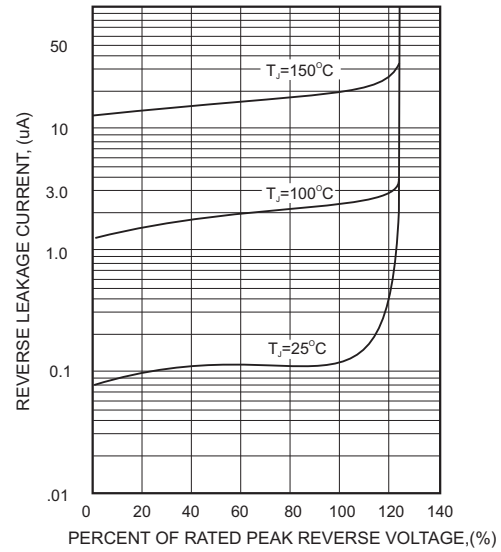


FIG.5-MAXIMUM NON-REPETITIVE

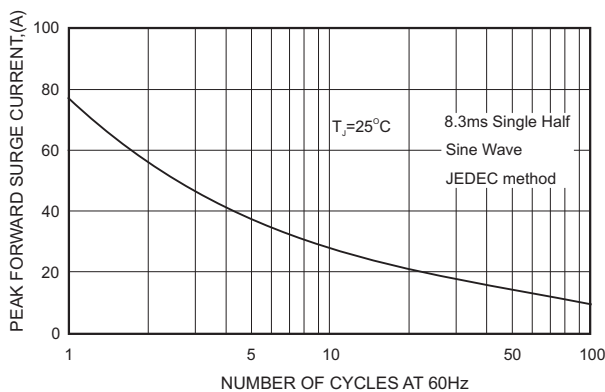
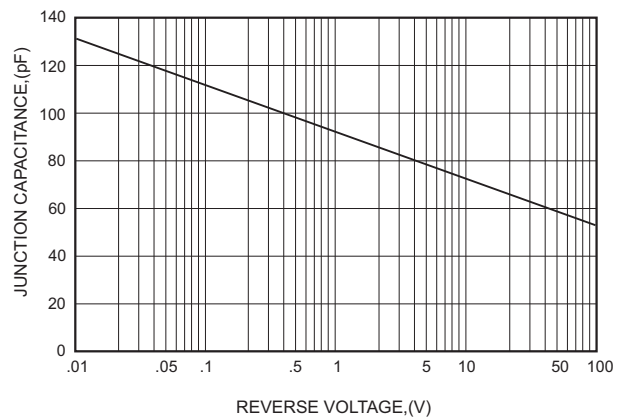
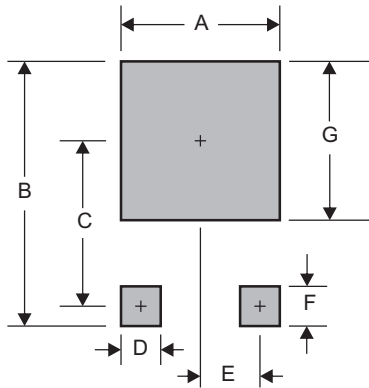


FIG.6-TYPICAL JUNCTION CAPACITANCE



■ DPAK(TO-252) foot print



A	B	C	D	E	F	G
0.276 (7.00)	0.457 (11.60)	0.272 (6.90)	0.059 (1.50)	0.091 (2.30)	0.098 (2.50)	0.276 (7.00)

Dimensions in inches and (millimeters)

- CITC reserves the right to make changes to this document and its products and specifications at any time without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- CITC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CITC assume any liability for application assistance or customer product design.
- CITC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of CITC.
- CITC products are not authorized for use as critical components in life support devices or systems without express written approval of CITC.