

■ 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. ED5005SG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

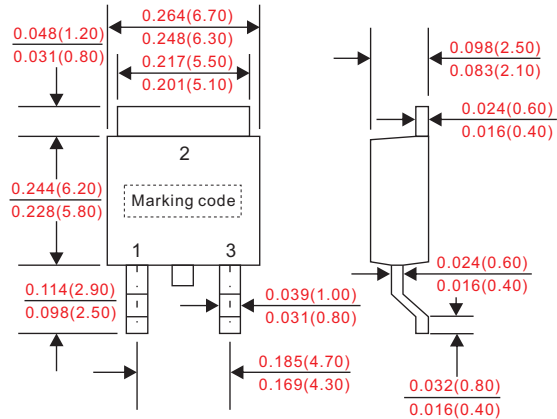
- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, DPAK / TO-252.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.34 gram.

■ 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)



Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		I_o			5.0	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 @5A, $T_A = 25^\circ\text{C}$ V_F (V)	Max. reverse recovery time(1) T_{rr} (ns)	Operating temperature T_J (°C)
ED5005S	ED5005S	50	35	50	0.95	35	-50 ~ +150
ED501S	ED501S	100	70	100			
ED502S	ED502S	200	140	200			
ED504S	ED504S	400	280	400	1.25	75	
ED506S	ED506S	600	420	600			
ED508S	ED508S	800	560	800	1.70	75	
ED510S	ED510S	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

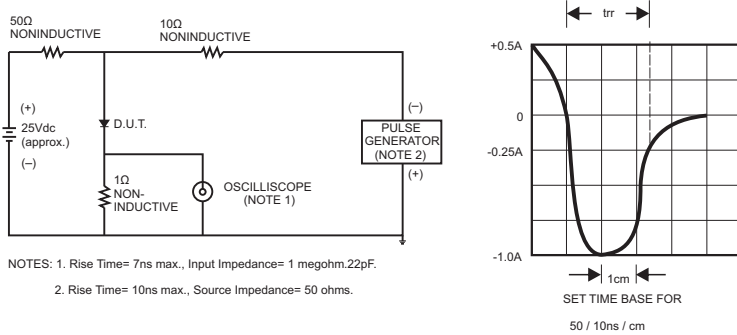


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

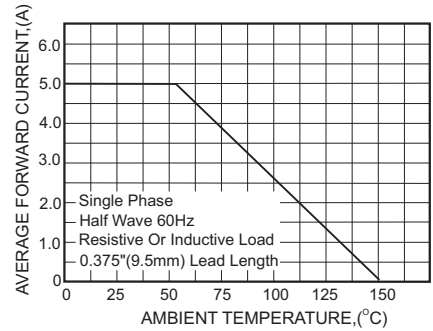


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

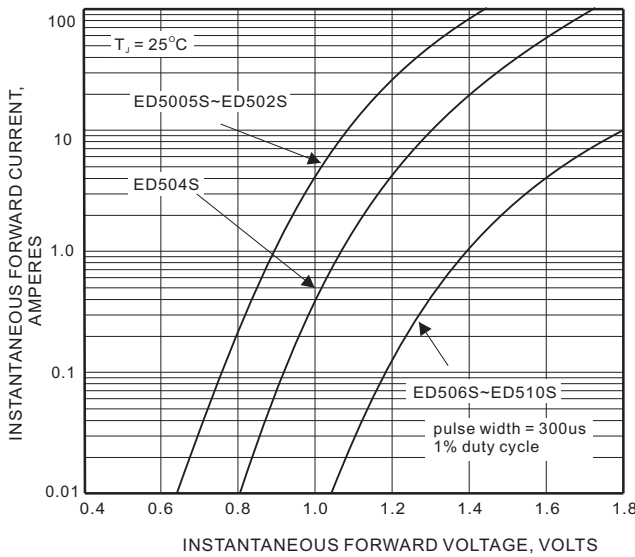


FIG.4-TYPICAL REVERSE CHARACTERISTICS

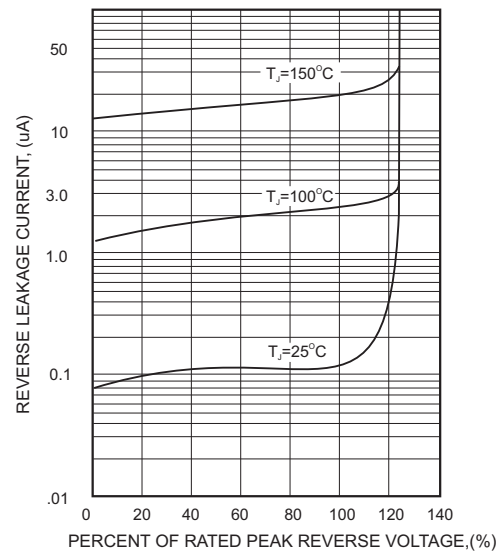


FIG.5-MAXIMUM NON-REPETITIVE

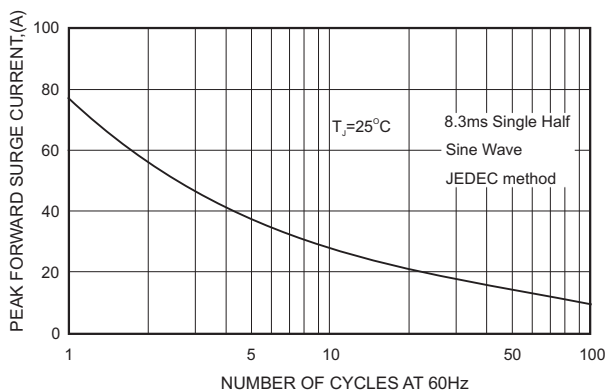
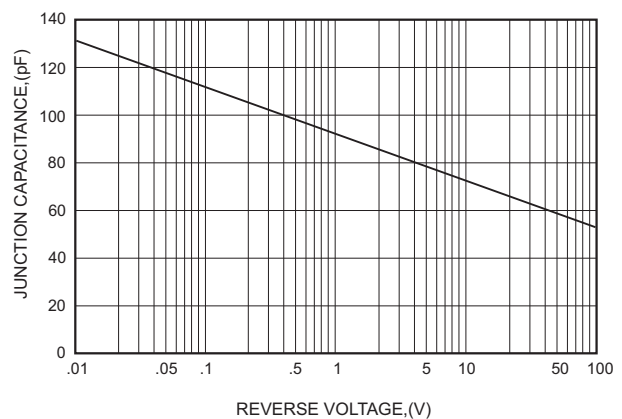
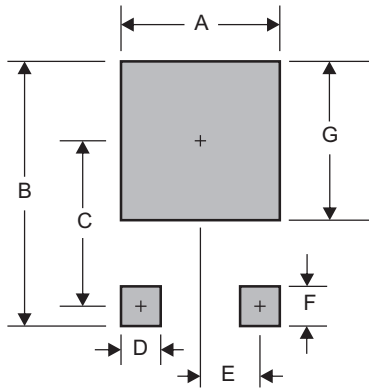


FIG.6-TYPICAL JUNCTION CAPACITANCE



■ 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)

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