



# ER300~ER308

## GLASS PASSIVATED SUPERFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 800 Volt **CURRENT** 3 Ampere

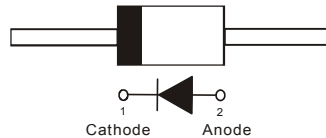
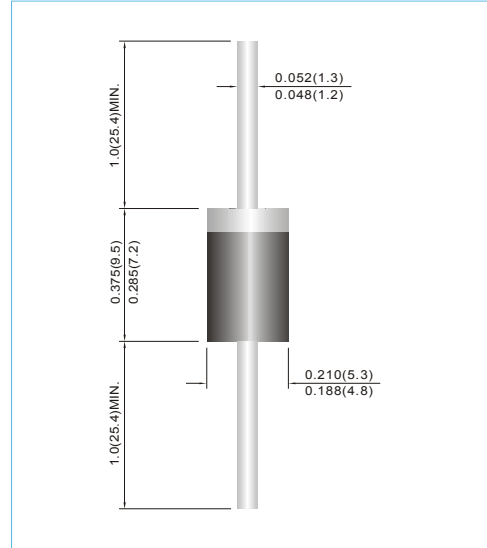
**DO-201AD** Unit : inch(mm)

### FEATURES

- Superfast recovery times-epitaxial construction.
- Low forward voltage, high current capability.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Lead free in compliance with EU RoHS 2.0

### MECHANICAL DATA

- Case: Molded plastic, DO-201AD
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.04 ounce, 1.122 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	ER300	ER301	ER301A	ER302	ER303	ER304	ER306	ER306A	ER308	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	700	800	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	490	560	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	700	800	V
Maximum Average Forward Current 0.375"(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3									A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	125									A
Maximum Forward Voltage at 3A DC	$V_F$	0.95			1.25		1.7	2	2.5		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$					1 300					$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$					35					ns
Typical Junction Capacitance (Note 2)	$C_j$					35					pF
Typical Junction Resistance (Note 3)	$R_{\theta JA}$					20					$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$					-55 to +150					$^\circ\text{C}$

NOTES:1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=-1\text{A}$ ,  $I_{rr}=-0.25\text{A}$

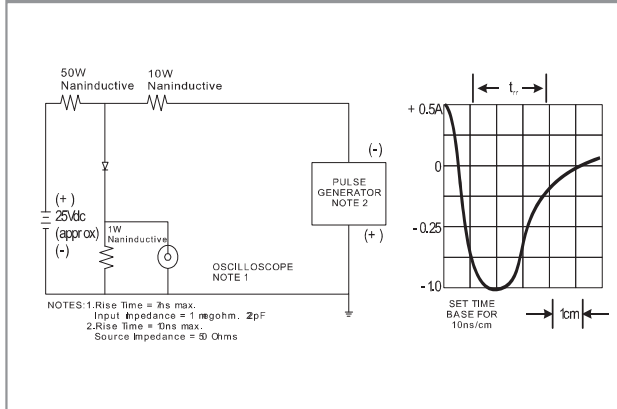
2. Measured at 1 MHz and applied reverse voltage of 4 VDC

3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

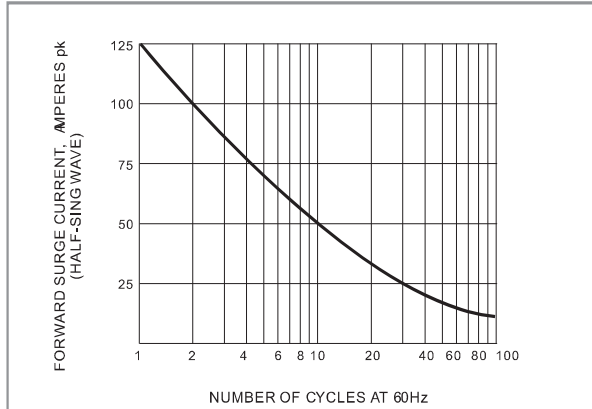


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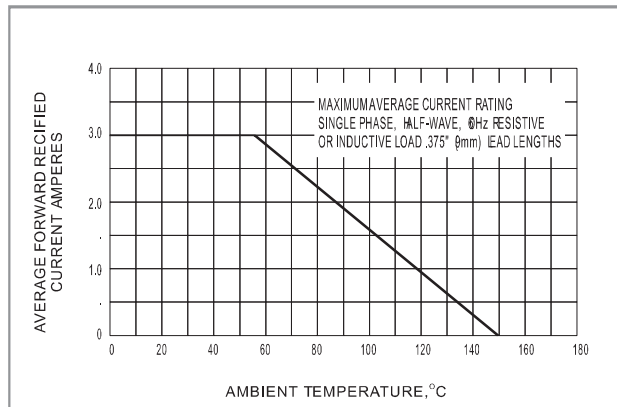
## RATING AND CHARACTERISTIC CURVES



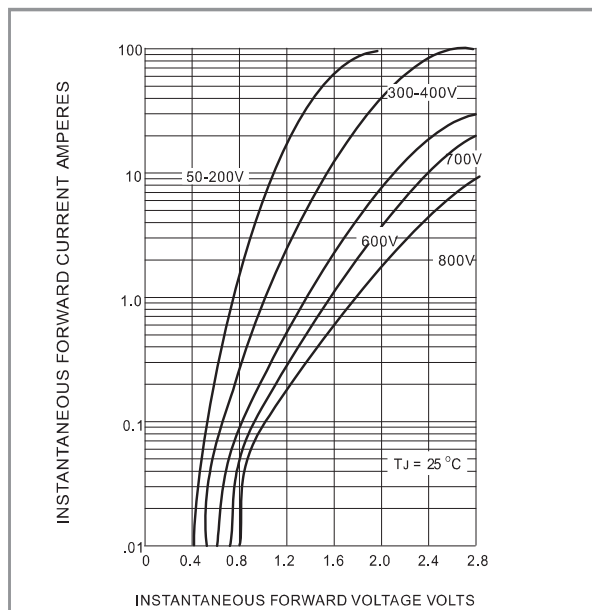
**FIG.1 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



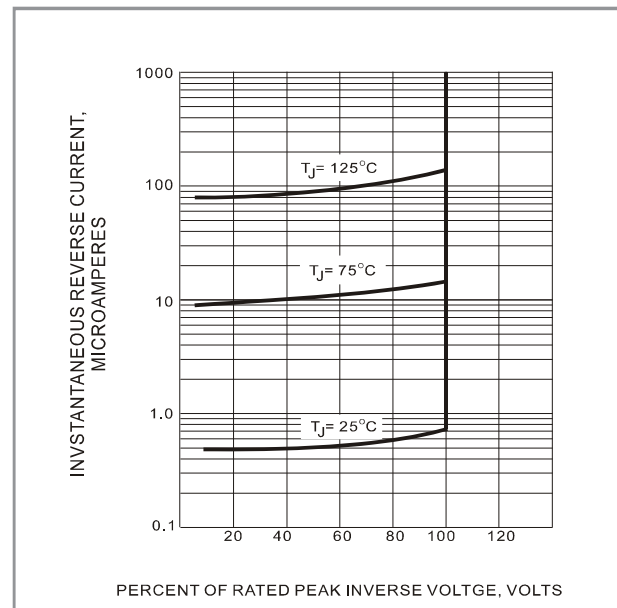
**FIG.2 MAXIMUM NON-REPEITIVE SURGE CURRENT**



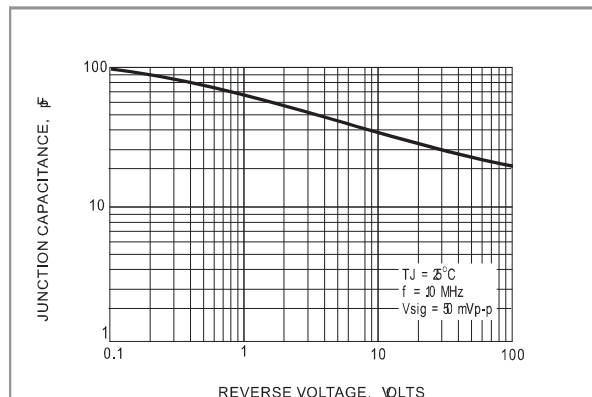
**FIG.3 MAXIMUM AVERAGE FORWARD CURRENT RATING**



**FIG.4 TYPICAL FORWARD VOLTAGE**



**FIG.5 TYPICAL REVERSE CHARACTERISTICS**



**FIG.6 TYPICAL JUNCTION CAPACITANCE**



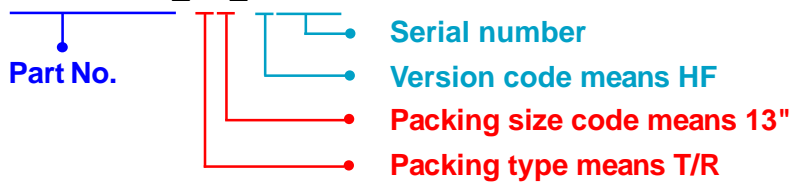
## ER300~ER308

### Part No\_packing code\_Version

ER300\_AY\_00001  
ER300\_AY\_10001  
ER300\_B0\_00001  
ER300\_B0\_10001  
ER300\_R2\_00001  
ER300\_R2\_10001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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