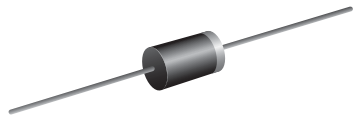
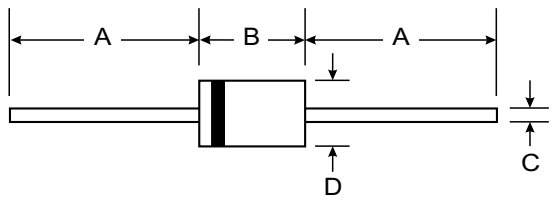
ERD09-13S - ERD09-15S

FAST RECOVERY RECTIFIER DIODES

VOLTAGE RANGE: 1300 - 1500V
CURRENT: 3.0 A





Features

- Low cost
- Diffused junction
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon,Alcohol,Isopropanol and similar solvents

Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

RoHS COMPLIANT

DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

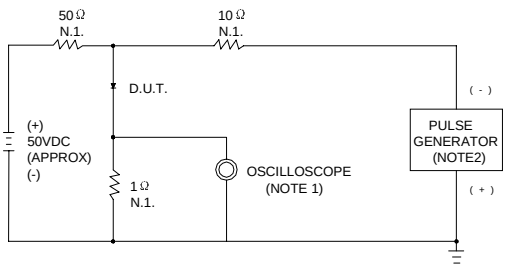
@ T_A = 25°C unless otherwise specified

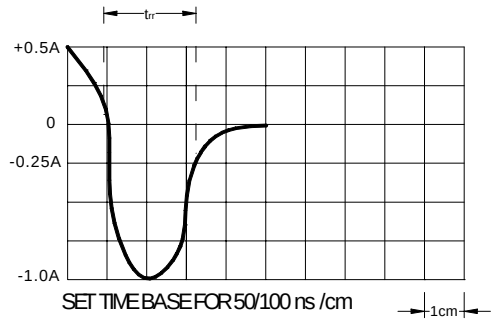
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	ERD09 -13S	ERD09 -15S	Unit
Maximum recurrent peak reverse voltage	V_{RRM}	1300	1500	V
Maximum RMS voltage	V_{RMS}	910	1050	V
Maximum DC blocking voltage	V_{DC}	1300	1500	V
Maximum average forw ard rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	3.0		A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T_J=125℃	I_{FSM}	70.0		A
Maximum instantaneous forw ard voltage at 3.0 A	V_F	1.5		V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=100℃	I_R	10.0 200.0		μA
Maximum reverse recovery time (Note1)	t_{rr}	600		ns
Typical junction capacitance (Note2)	C_J	32		pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	22		℃/W
Operating junction temperature range	T_J	-55----+150		℃
Storage temperature range	T_{STG}	-55----+150		℃

NOTE:1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.
2. Measured at 1.0MH_Z and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to ambient.

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





NOTES:1.RISE TIME =7ns MAX. INPUT IMPEDANCE=1MΩ.22pF

2.RISE TIME=10ns MAX. SOURCE IMPEDANCE=50Ω

SET TIME BASE FOR 50/100 ns /cm

FIG.2 –FORWARD DERATING CURVE

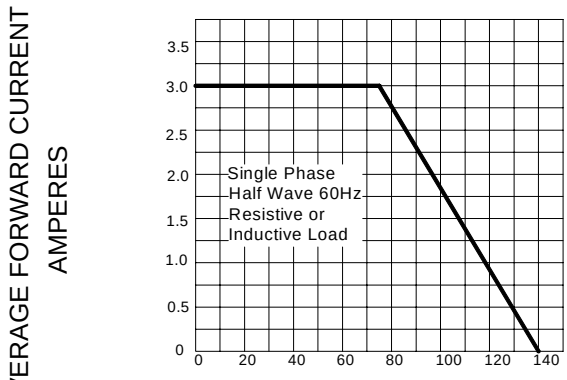


FIG.3 –PEAK FORWARD SURGE CURRENT

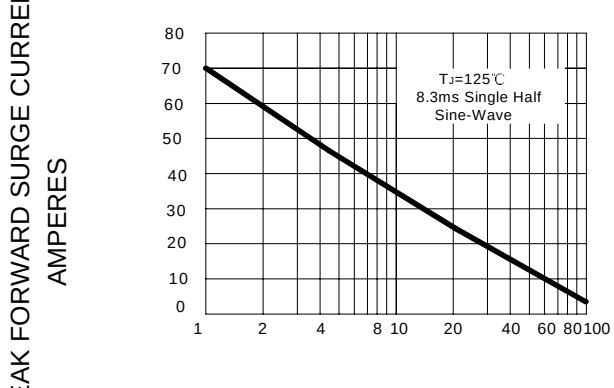


FIG.4–TYPICAL FORWARD CHARACTERISTIC

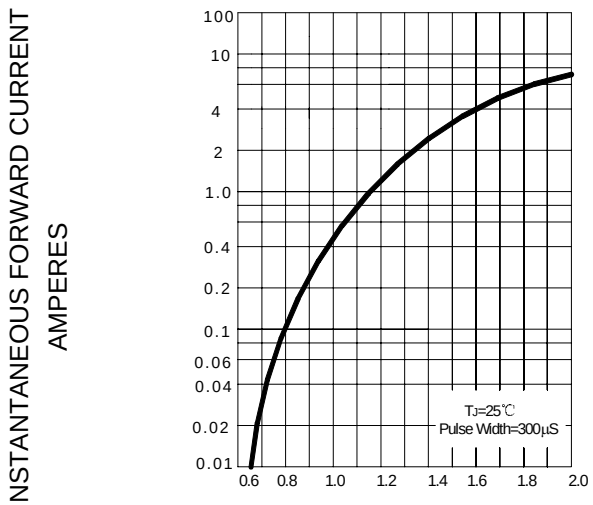


FIG.5–TYPCAL JUNCTION CAPACITANCE

