

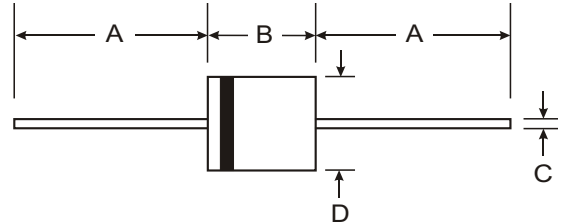
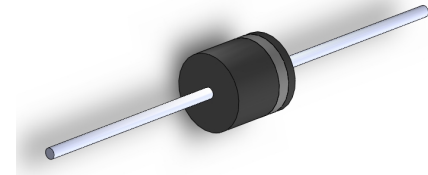
VOLTAGE RANGE: 1300 - 1500 V
CURRENT: 3.0 A

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: R-6, Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202 Method 208
- Polarity: Color Band Denotes Cathode
- Weight: 1.7 grams (approx.)
- Mounting Position: Any



R-6		
Dim	Min	Max
A	25.4	—
B	8.6	9.1
C	1.2	1.3
D	8.6	9.1
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%.

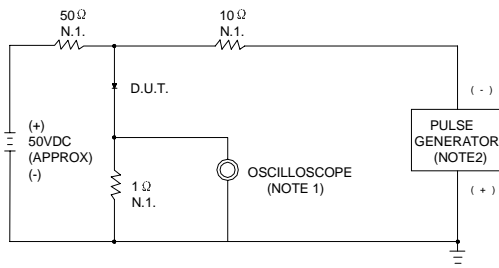
Characteristic	Symbol	ERD09 -13	ERD09 -15	Unit
Maximum recurrent peak reverse voltage	V _{RRM}	1300	1500	V
Maximum RMS voltage	V _{RMS}	910	1050	V
Maximum DC blocking voltage	V _{DC}	1300	1500	V
Maximum average forward rectified current 9.5mm lead length, @ T _A =75°C	I _{F(AV)}	3.0		A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ T _J =125°C	I _{FSM}	70.0		A
Maximum instantaneous forward voltage at 3.0 A	V _F	1.5		V
Maximum reverse current @ T _A =25°C at rated DC blocking voltage @ T _A =100°C	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 _{θJA}	22		°C/W
Operating junction temperature range	T _J	-55-----+150		°C
Storage temperature range	T _{STG}	-55-----+150		°C

NOTE:1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

2. Measured at 1.0MHz 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

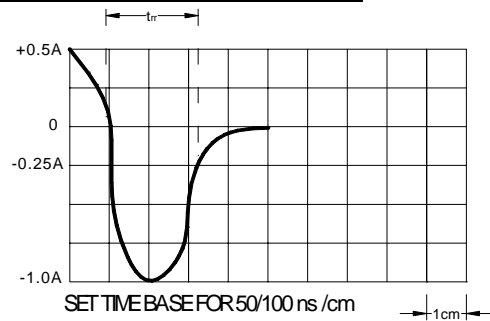
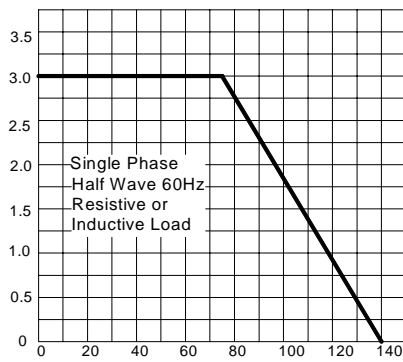


FIG.2 – FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT
AMPERES

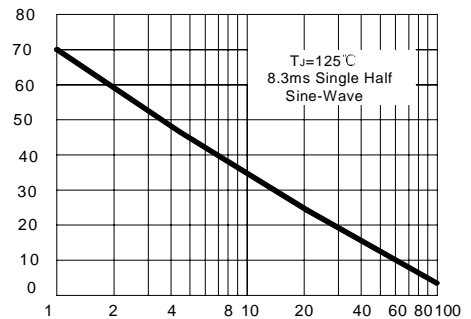


AMBIENT TEMPERATURE, °C

Single Phase
Half Wave 60Hz
Resistive or
Inductive Load

FIG.3 – PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT
AMPERES

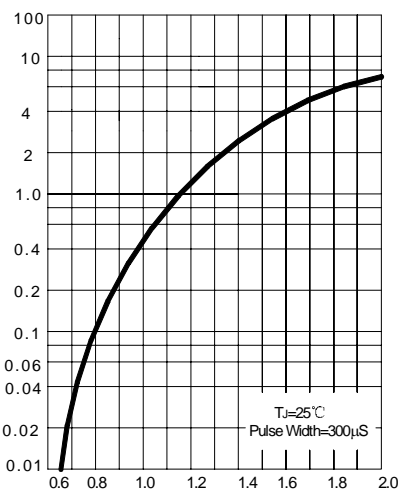


NUMBER OF CYCLES AT 60 Hz

$T_J = 125^\circ\text{C}$
8.3ms Single Half
Sine-Wave

FIG.4 – TYPICAL FORWARD CHARACTERISTIC

INSTANTANEOUS FORWARD CURRENT
AMPERES

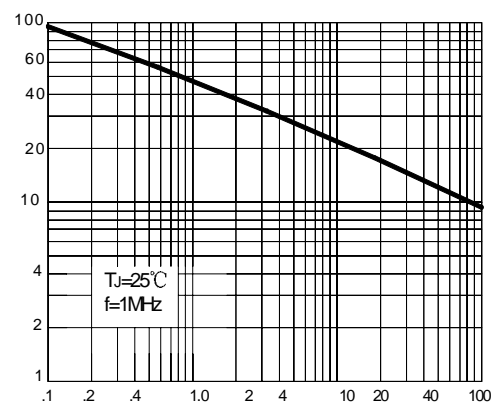


INSTANTANEOUS FORWARD VOLTAGE, VOLTS

$T_J = 25^\circ\text{C}$
Pulse Width = 300μs

FIG.5 – TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS

$T_J = 25^\circ\text{C}$
 $f = 1\text{MHz}$