Power Diode
Fast Recovery

Features:

- Fast reverse recovery time, t_{rr}
- Low forward voltage drop, V_F
- Low cost axial packages
- High current capability
- High reliability
- High surge current capability

Mechanical Data:

Cases	: Moulded plastic DO-201AD
Lead	: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
Polarity	: Colour band denotes cathode end
High temperature soldering guaranteed	: 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension

Maximum Ratings and Electrical Characteristics

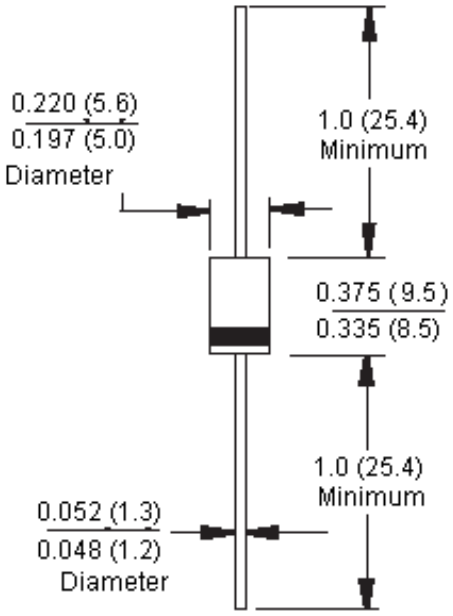
Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbol	HER305	HER307	Unit
Maximum recurrent peak reverse voltage	V_{RRM}	400	800	V
Maximum RMS voltage	V_{RMS}	280	560	
Maximum DC blocking voltage	V_{DC}	400	800	
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A = 55°C	$I_{(AV)}$	3		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150		
Maximum instantaneous forward voltage at 3A	V_F	1.3	1.7	V
Maximum DC reverse current at T_A = 25°C at rated DC blocking voltage at T_A = 100°C	I_R	10 200		μA
Maximum reverse recovery time (Note 1)	T_{rr}	50	75	ns
Typical junction capacitance (Note 2)	C_j	70	50	pF
Typical thermal resistance (Note 3)	RθJA	40		°C/W
Operating temperature range	T_J	-65 to +150		°C
Storage temperature range	T_{STG}			

Notes:

1. Reverse recovery test conditions: I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A
2. Measured at 1MHz and applied reverse voltage of 4V DC
3. Mount on Cu-Pad Size 16mm × 16mm on PCB

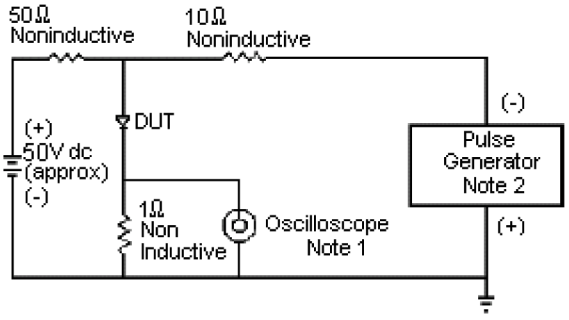
DO-201AD

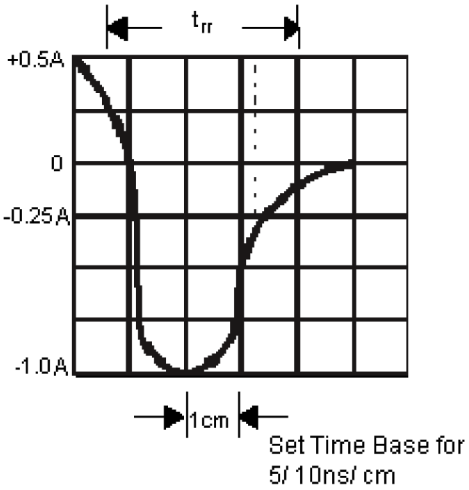


Dimensions : Millimetres (Inches)

Ratings and Characteristic Curves

Figure 1 Reverse Recovery Time Characteristic and Test Circuit Diagram





Note:
1. Rise Time = 7nS maximum
   Input Impedance = 1MΩ, 22pF
2. Rise Time = 10nS maximum
   Source Impedance = 50Ω

Figure 2 Maximum Average Forward Current Derating

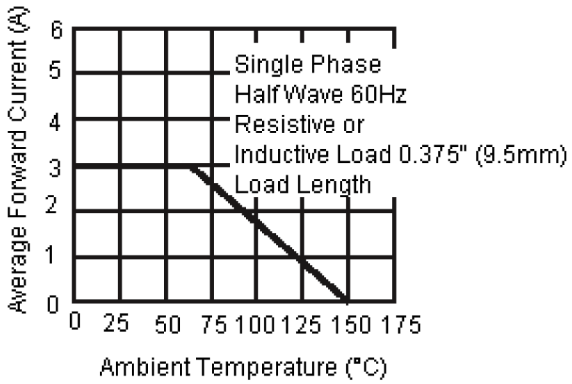


Figure 3 Typical Reverse Characteristics

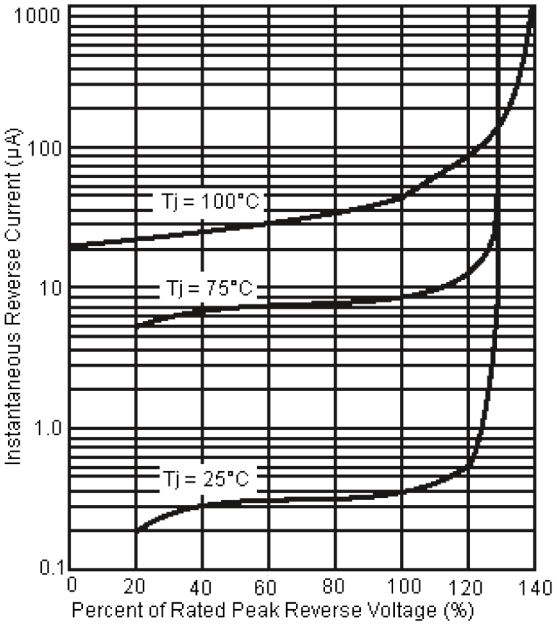


Figure 4 Maximum Non-Repetitive Forward Surge Current

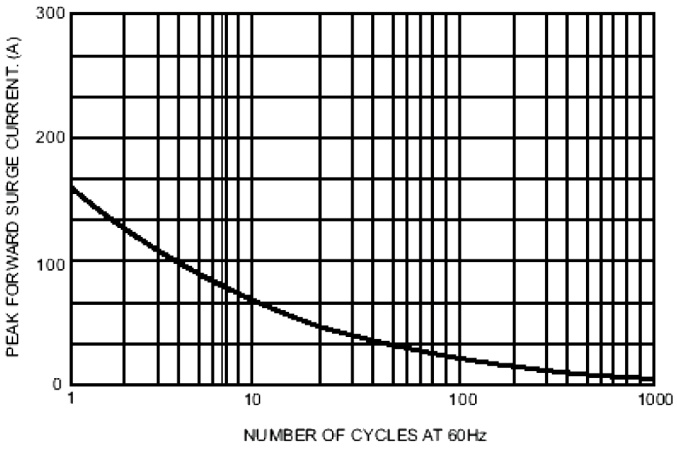


Figure 5 Typical Forward Characteristics

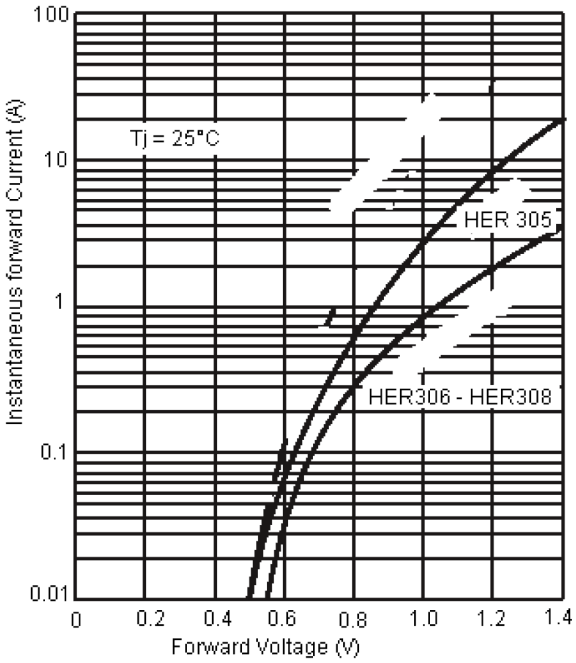
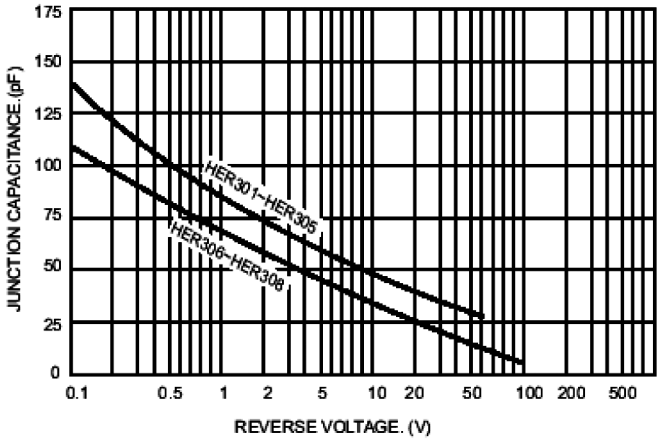


Figure 6 Typical Junction Capacitance



Part Number Table

Description	V_{rrm} max. (V)	I_F (av) (A)	I_{FSM} (A)	t_{rr} maxi. (ns)	V_F (V) at I_F = 3A	Length (mm)	Diameter (mm)	Package	Part Number
Diode, Fast, 3A, 800V	800	-	-	-	-	9.5	5.6	DO-201AD	HER307
Diode, Fast, 3A, 400V	400	3	150	50	1				HER305

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