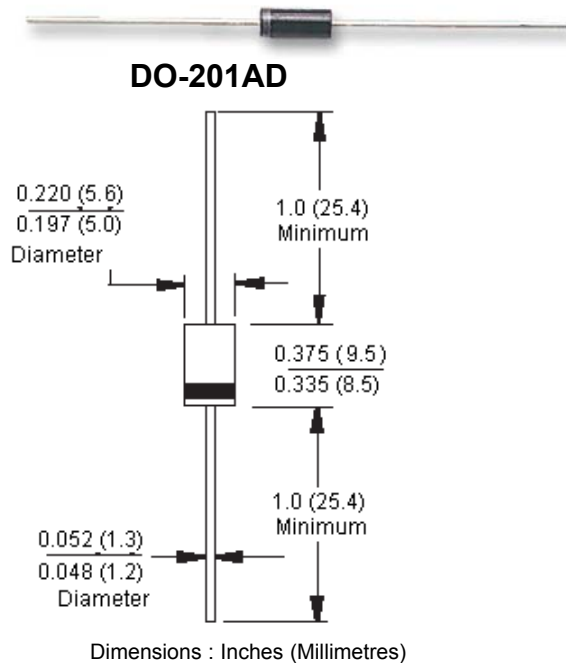


HER305, HER307

Power Diodes - Fast Recovery



High Efficiency



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 $T_A = 55^\circ\text{C}$	$I_{(AV)}$	3.0		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 3.0A	V_F	1.3	1.7	V
Maximum DC reverse current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage at $T_A = 100^\circ\text{C}$	I_R	10 200		μA
Maximum reverse recovery time (Note 1)	T_{rr}	50	75	ns



HER305, HER307

Power Diodes - Fast Recovery



Type Number	Symbol	HER305	HER307	Unit
Typical junction capacitance (Note 2)	C_j	70	50	pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	40		$^{\circ}\text{C/W}$
Operating temperature range	T_J	-65 to +150		$^{\circ}\text{C}$
Storage temperature range	T_{STG}			

Notes:

- Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
- Measured at 1MHz and applied reverse voltage of 4.0V dc.
- Mount on Cu-Pad Size 16mm x 16mm on PCB.

Ratings and Characteristic Curves

Figure 1 Reverse Recovery Time Characteristic and Test Circuit Diagram

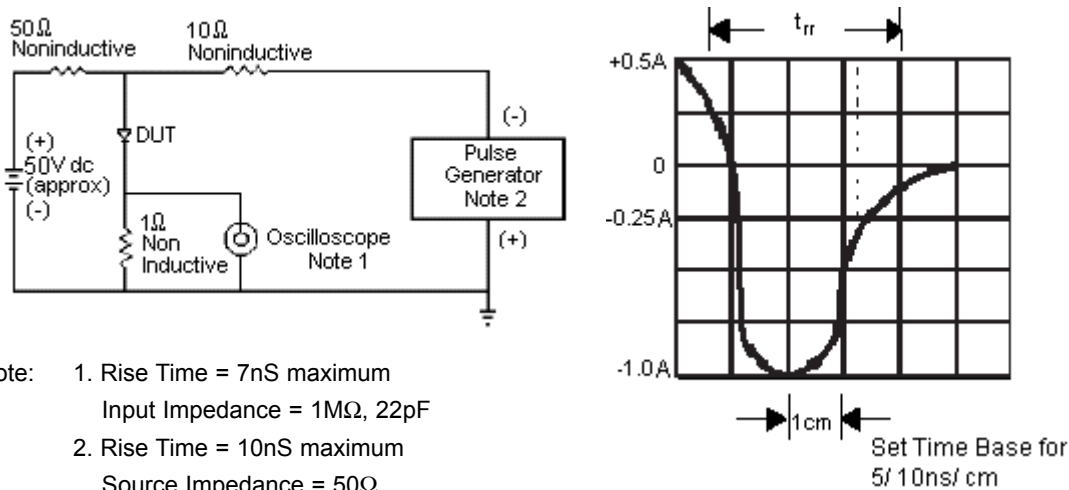
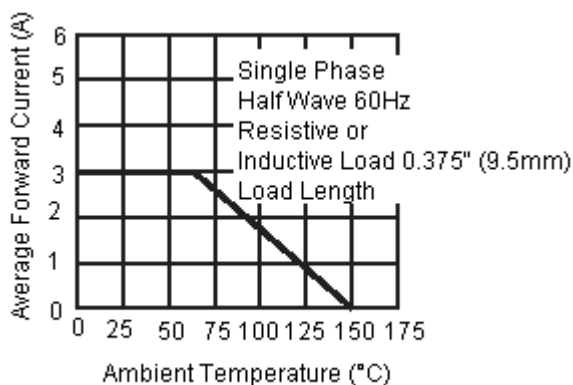


Figure 2 Maximum Average Forward Current Derating



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Power Diodes - Fast Recovery



Figure 3 Typical Reverse Characteristics

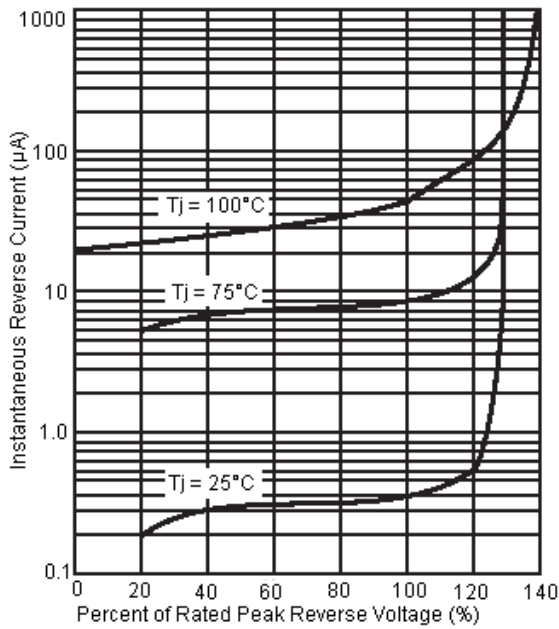


Figure 4 Maximum Non-Repetitive Forward Surge Current

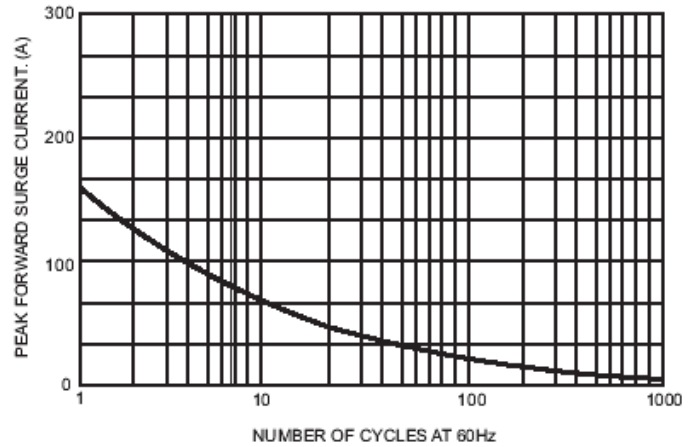


Figure 5 Typical Forward Characteristics

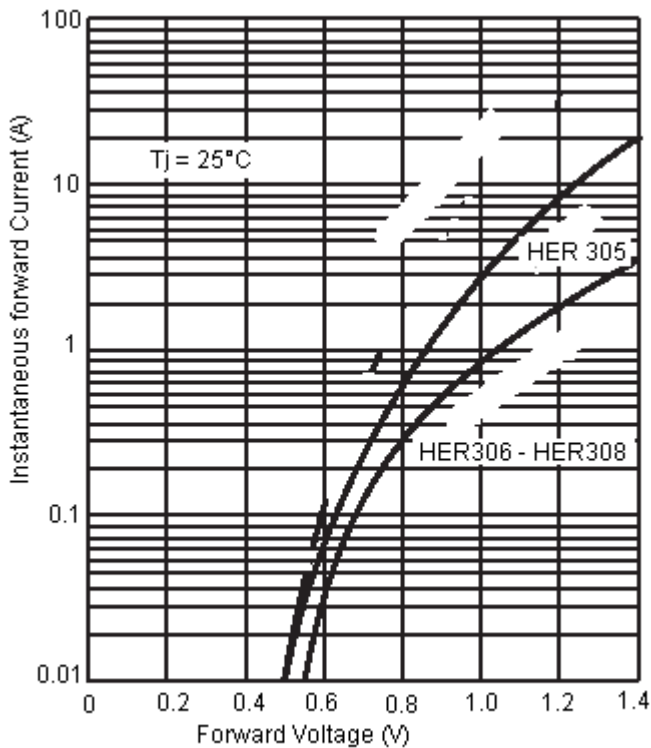
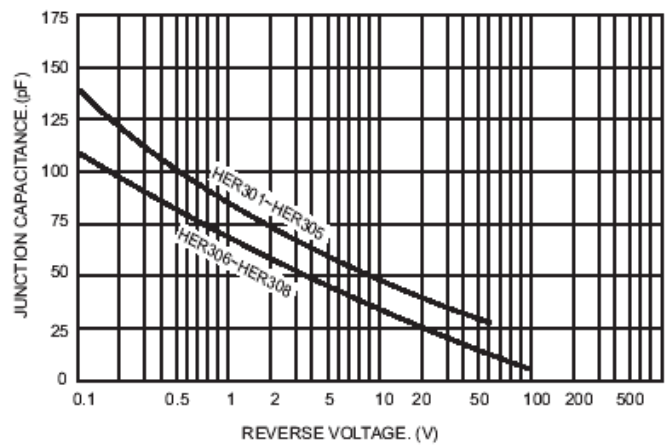


Figure 6 Typical Junction Capacitance



HER305, HER307

Power Diodes - Fast Recovery



Specifications

V_{rrm} maximum (V)	I_F (av) (A)	I_{FSM} (A)	t_{rr} maximum (ns)	V_F (V) at $I_F = 3A$	Length	Diameter	Package	Part Number
800	-	-	-	-	9.5	5.6	DO-201AD	HER307.
400	3.0	150	50	1				HER305

Dimensions : Millimetres

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