

Switchmode Power Rectifiers

Designed for use in switching power supplies, inverters and as free wheeling diodes. These state-of-the-art devices have the following features:

- * High Surge Capacity
- * Low Power Loss, High efficiency
- * Glass Passivated chip junctions
- * 150 Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction
- * Low Forward Voltage , High Current Capability
- * Ultrafast 50 & 75 Nanosecond Recovery Time
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

Plating pb free

The marking is indicated by part no. add. "M".
ex:HER301M~HER305M

MAXIMUM RATINGS

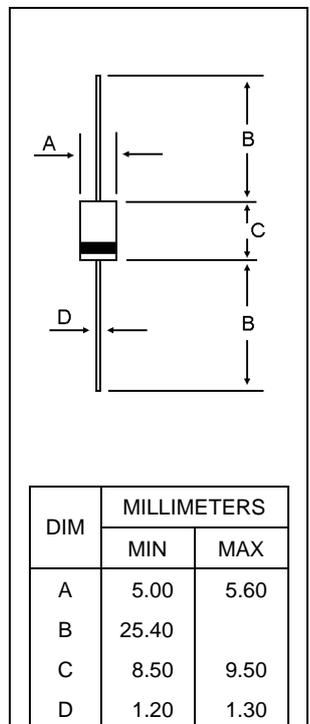
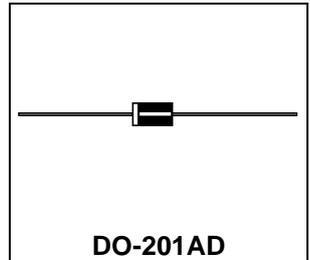
Characteristic	Symbol	HER					Unit
		301	302	303	304	305	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{R50}	50	100	200	300	400	V
RMS Reverse Voltage	$VR_{(RMS)}$	35	70	140	210	280	V
Average Rectifier Forward Current	I_O	3.0					A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase,60Hz)	I_{FSM}	50					A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150					

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	HER					Unit
		301	302	303	304	305	
Maximum Instantaneous Forward Voltage ($I_F=3.0$ Amp, $T_C = 25$)	V_F	1.00			1.30		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$) (Rated DC Voltage, $T_C = 125$)	I_R	5.0 50					μA
Reverse Recovery Time ($I_F = 0.5$ A, $I_R = 1.0$, $I_{rr} = 0.25$ A)	T_{rr}	50			75		ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz)	C_P	55			45		pF

ULTRAFAST
RECTIFIERS

3.0 AMPERES
50-400 VOLTS



CASE---
Transfer molded
plastic

POLARITY---
Cathode indicated
polarity band

HER301 Thru HER305

FIG-1 TYPICAL FORWARD CHARACTERISTICS

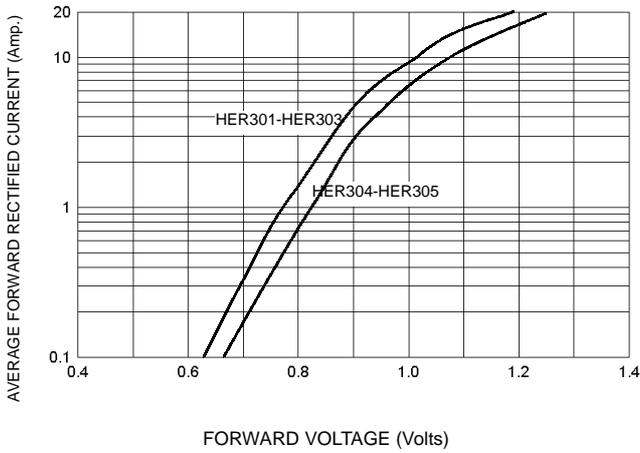


FIG-3 FORWARD CURRENT DERATING CURVE

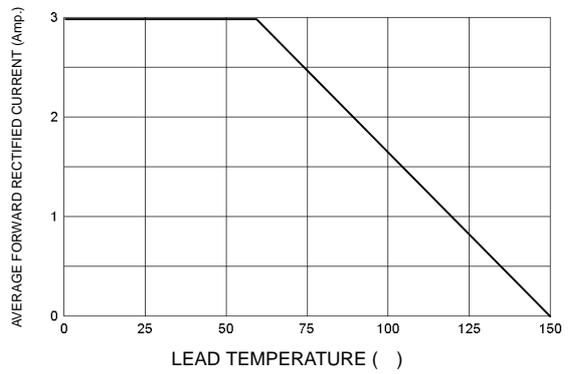


FIG-2 TYPICAL REVERSE CHARACTERISTICS

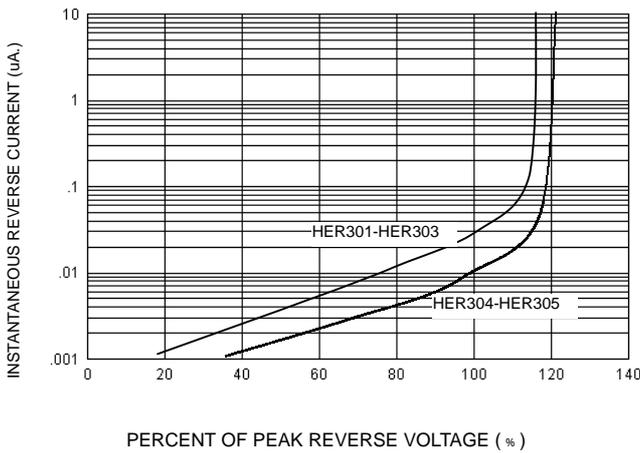


FIG-4 TYPICAL JUNCTION CAPACITANCE

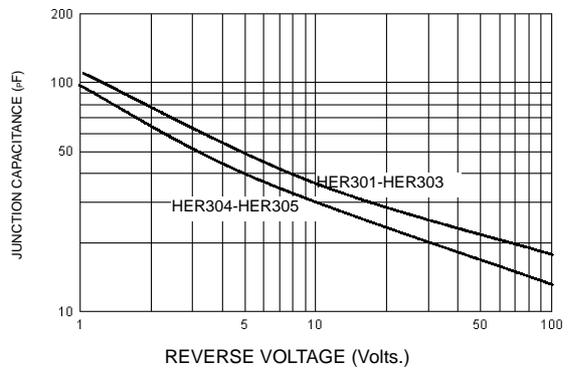
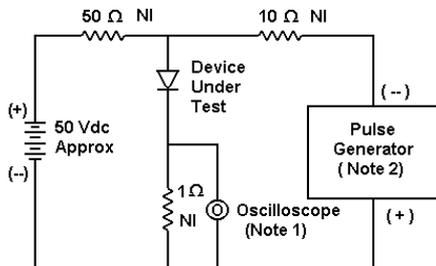
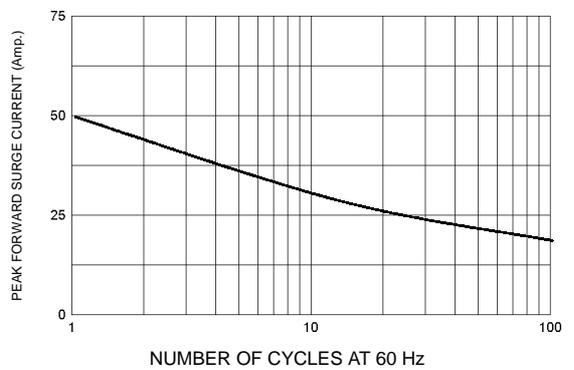
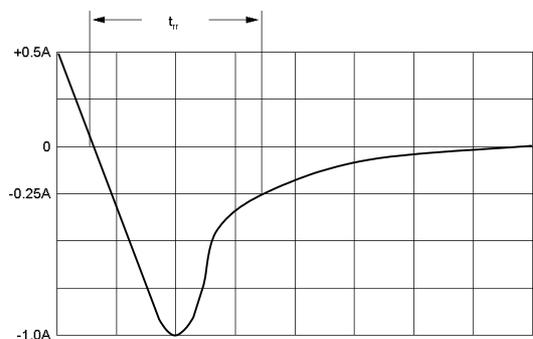


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
 1. Rise Time = 7 ns max. Input Impedance = 1 M Ohm, 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ohm



Set time base for 20/50 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram