MOSPEC

HER306 Thru HER308

ULTRAFAST RECTIFIERS

3.0 AMPERES
600-1000 VOLTS

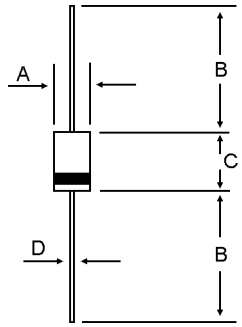
Switchmode Power Rectifiers

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
- ＊High-Switching Speed 100 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:HER306M~HER308M

DO-201AD



DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	
C	8.50	9.50
D	1.20	1.30

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	HER306	HER307	HER308	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{R50}	600	800	1000	V
RMS Reverse Voltage	$VR_{(RMS)}$	420	560	700	V
Average Rectifier Forward Current	I_O	3.0			A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase,60Hz)	I_{FSM}	50			A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +150			℃

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	HER306	HER307	HER308	Unit
Maximum Instantaneous Forward Voltage (I_F=3.0 Amp, T_C = 25℃)	V_F	1.50		1.75	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	5.0 70			uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	100			ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	25		20	pF

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FIG-1 TYPICAL FORWARD CHARACTERISITICS

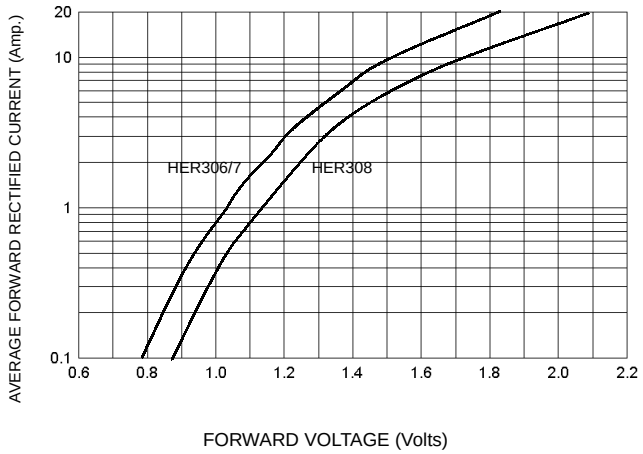


FIG-2 TYPICAL REVERSE CHARACTERISTICS

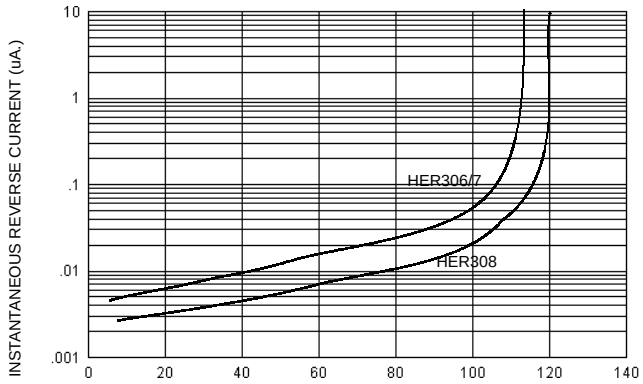


FIG-3 FORWARD CURRENT DERATING CURVE

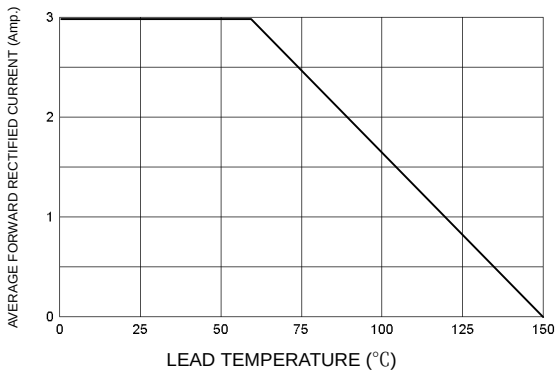


FIG-4TYPICAL JUNCTION CAPACITANCE

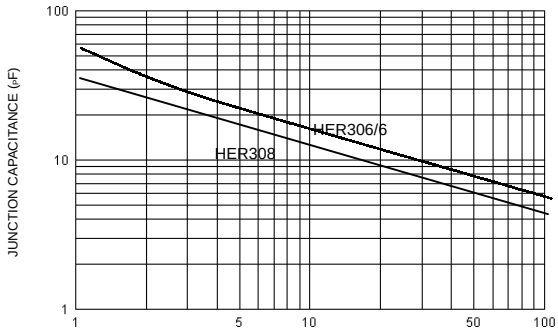
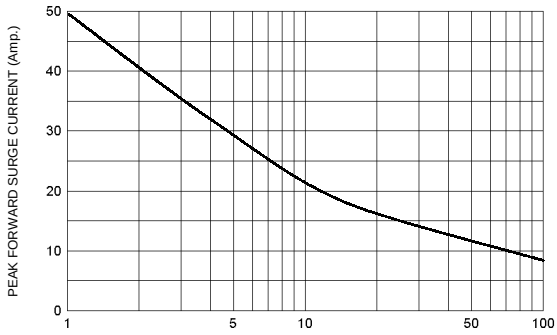
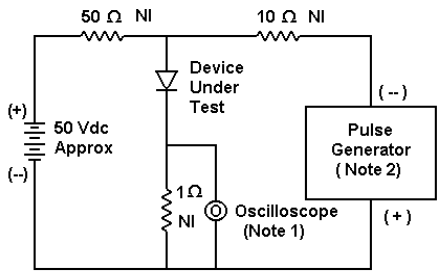
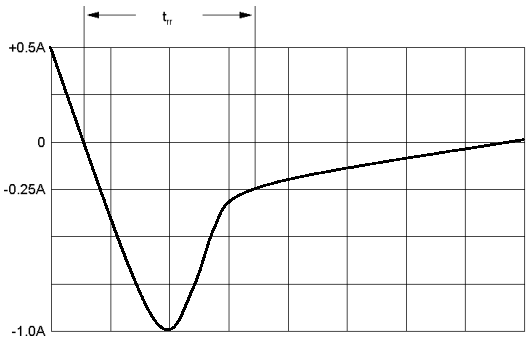


FIG-5PEAK FORWARD SURGE CURRENT





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



Set time base for 20/50 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

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