MOSPEC

HER201 Thru HER205

ULTRAFAST RECTIFIERS

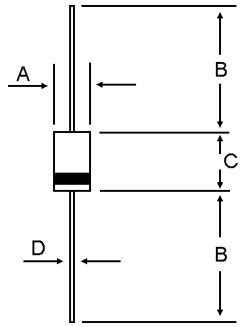
2.0 AMPERES 50-400 VOLTS

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
- ＊Ultrafast 50 & 75 Nanosecond Recovery Time
- ＊Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

DO-41



DIM	MILLIMETERS	
	MIN	MAX
A	2.00	2.70
B	25.40	
C	4.10	5.20
D	0.70	0.90

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	HER					Unit
		201	202	203	204	205	
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	2.0					A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase,60Hz)	I_{FSM}	30					A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +150					℃

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SF					Unit
		201	202	203	204	205	
Maximum Instantaneous Forward Voltage (I_F=2.0 Amp, T_C = 25℃)	V_F	0.95			1.30		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	5.0 50					uA
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	25			20		$_P$F

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FIG-1 TYPICAL FORWARD CHARACTERISITICS

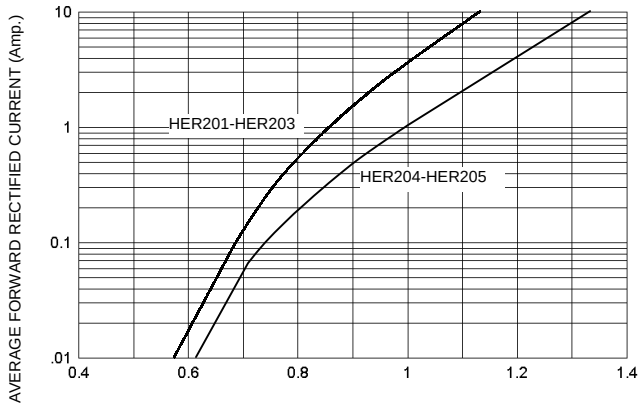


FIG-2 TYPICAL REVERSE CHARACTERISTICS

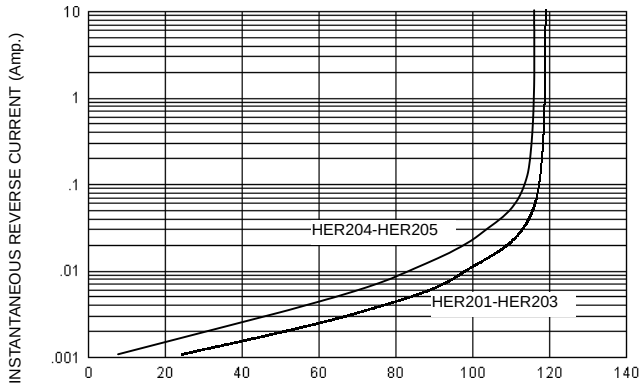


FIG-3 FORWARD CURRENT DERATING CURVE

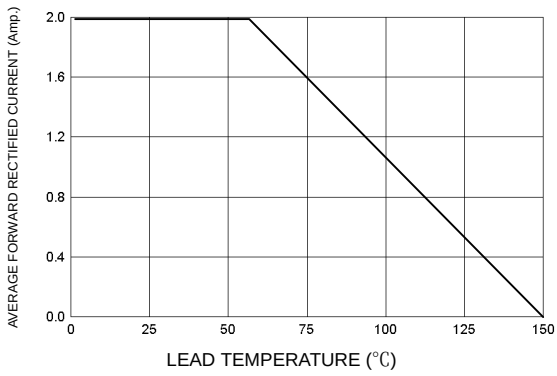


FIG-4TYPICAL JUNCTION CAPACITANCE

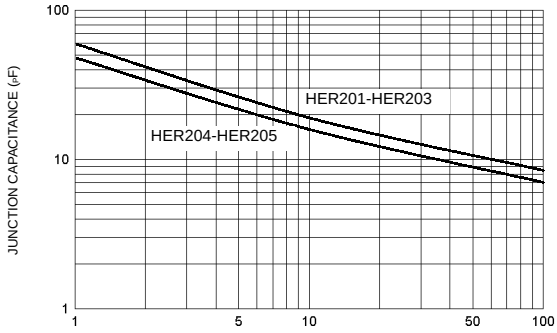
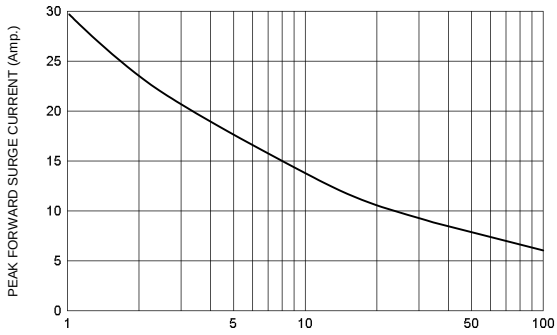
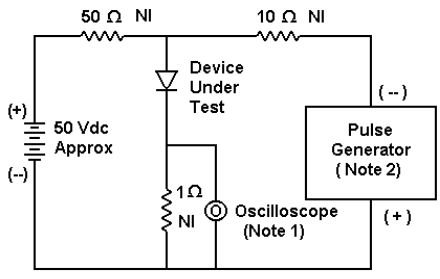
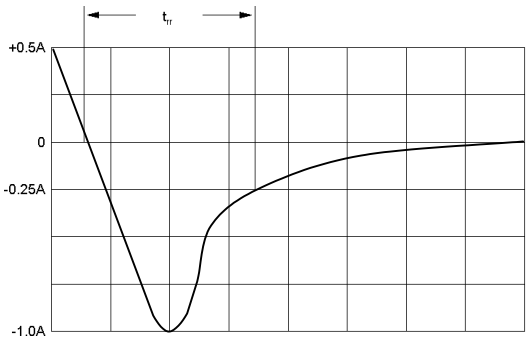


FIG-5PEAK FORWARD SURGE CURRENT





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 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram