

## HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 50V to 1000V

Forward Current - 10 A

### FEATURES

- Low cost
- Diffused junction
- Low Leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon. Alcohol. Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0

### MECHANICAL DATA

- Case: JEDEC DO - 27. molded plastic
- Terminals: Axial leads. Solderable per MIL-STD-202. Method 208
- Polarity: Color band denotes cathode
- Weight: 0.04 ounce. 1.10 grams
- Mounting position: Any

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	SYMBOL	HER1001	HER1003	HER1004	HER1005	HER1006	HER1007	HER1008	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	200	300	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current 9.5mm Lead Length. TA = 75°C	I(AV)	10.0							A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated Tj = 125°C	IFSM	250							A
Maximum Forward Voltage at 10.0A DC	VF	1.0	1.3		1.7			V	
Maximum Reverse Current TA = 25°C at Rated DC Blocking Voltage TA = 100°C	IR	5.0							μA
		100.0							
Maximum reverse recovery time (Note1)	trr	50				75			ns
Typical Junction Capacitance ( Note 2 )	Cj	30				20			pF
Typical Thermal Resistance ( Note 3 )	RQJA	20							°C/W
Operating Junction Temperature Range	Tj	65 to 150							°C
Storage Temperature Range	TSTG	65 to 150							°C

- NOTE:**
1. Reverse recovery condition IF=0.5A IR=1.0 Irr=0.25A
  2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.
  3. Thermal resistance junction to ambient.

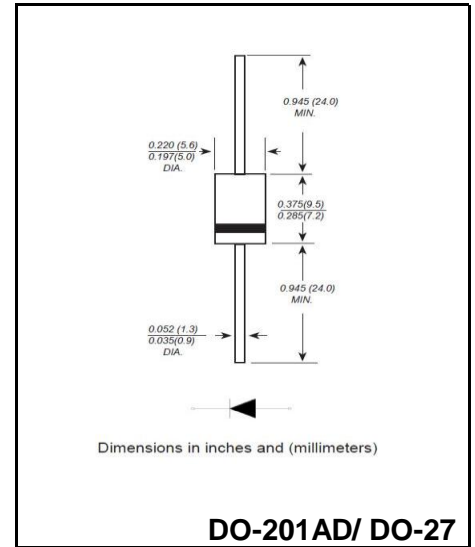


FIG.1 - TYPICAL FORWARD CHARACTERISTIC

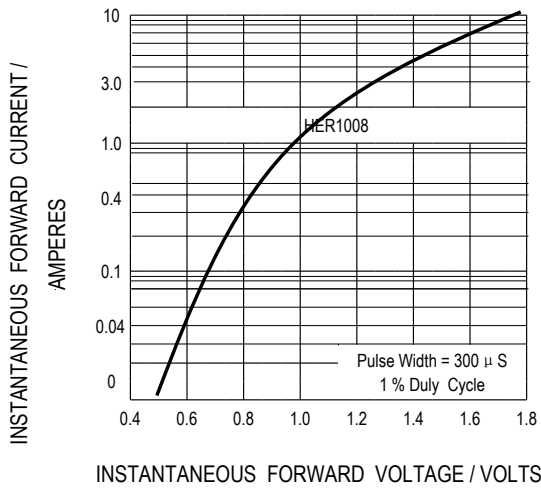


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

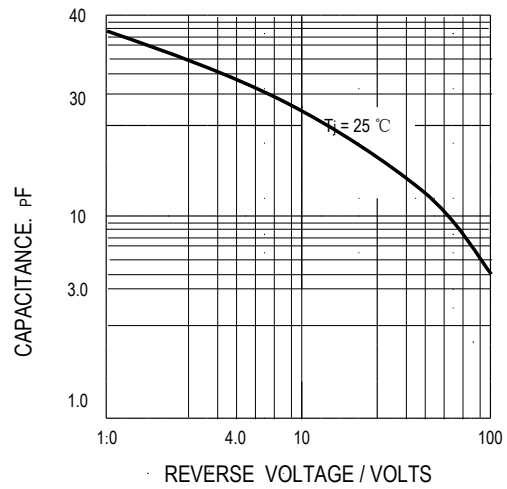


FIG.3 - FORWARD CURRENT DERATING CURVE

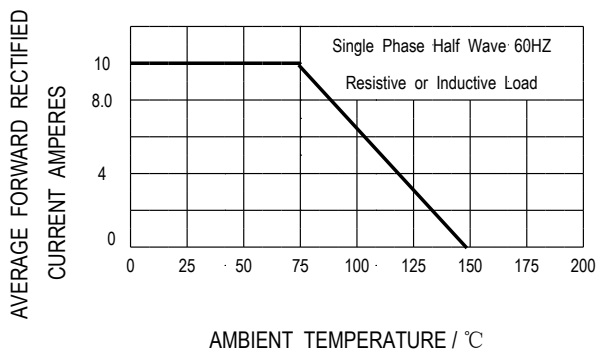


FIG. 4 -- PEAK FORWARD SURGE CURRENT

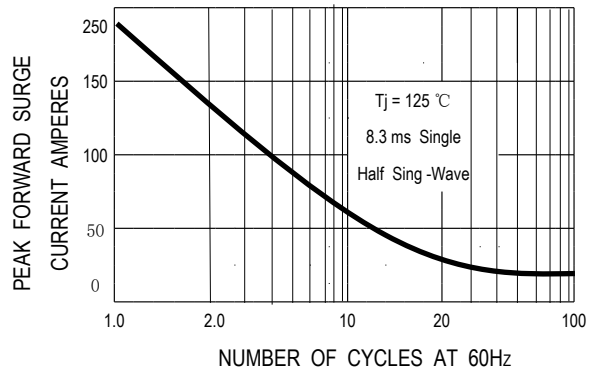
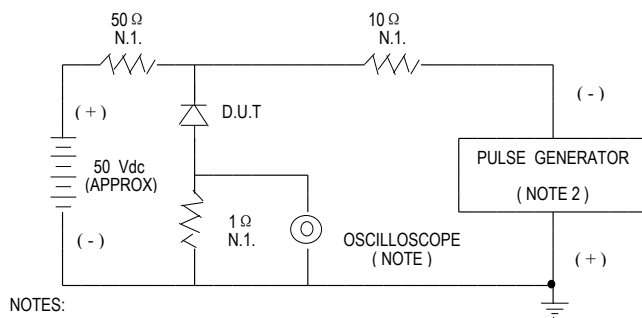
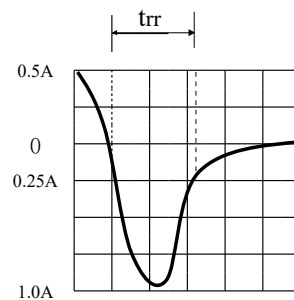


FIG. 5 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

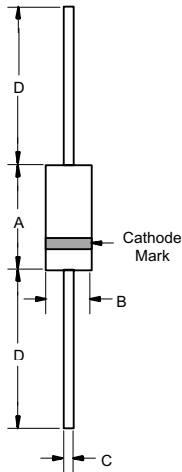


1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM. 22PF
2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM.



SET TIME BASE FOR 15 ns / cm

Package Outline DO-201AD(DO-27)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-201AD(DO-27)	BOX	250/1000/1250	EIA-481-1