

HIGH EFFICIENCY RECTIFIERS

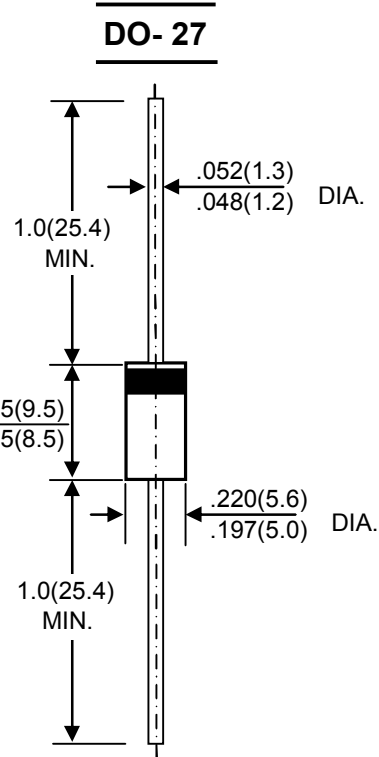
REVERSE VOLTAGE - 50 to 1000 Volts
FORWARD CURRENT - 5.0 Amperes

FEATURES

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

MECHANICAL DATA

- Case: JEDEC DO-27 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.04 ounces , 1.1 grams
- Mounting position: Any



Dimensions in inches and (millimeters)

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%

CHARACTERISTICS	SYMBOL	HER501	HER502	HER503	HER504	HER505	HER506	HER507	HER508	UNIT	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V	
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	V	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	V	
Maximum Average Forward Rectified Current @T _A =55 °C	I _(AV)	5.0								A	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I _{FSM}	200								A	
Peak Forward Voltage at 5.0A DC	V _F	1.0		1.3		1.7				V	
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C / @T _J =100°C	I _R	5.0 / 100								μA	
Maximum Reverse Recovery Time (Note1)	T _{RR}	50					75				nS
Typical Junction Capacitance (Note2)	C _J	75					50				pF
Typical Thermal Resistance (Note3)	R _{θJA}	20								°C/W	
Operating Temperature Range	T _J	-55 to +125								°C	
Storage Temperature Range	T _{STG}	-55 to +150								°C	

NOTES: 1.Measured with I_F=0.5A, I_R=1A , I_{RR}=0.25A

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3.Thermal resistance junction to ambient



FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

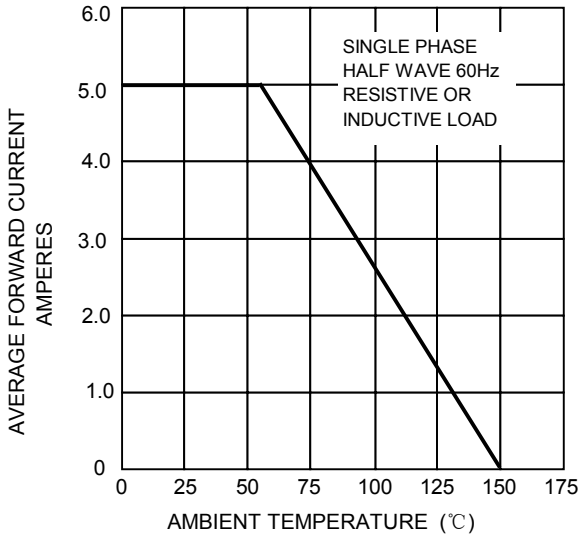


FIG. 2 – TYPICAL REVERSE CHARACTERISTICS

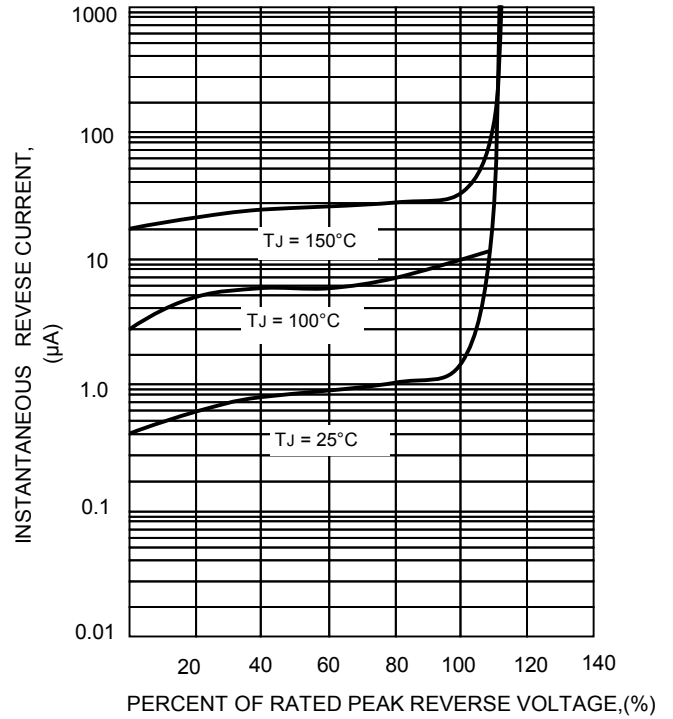


FIG. 4 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

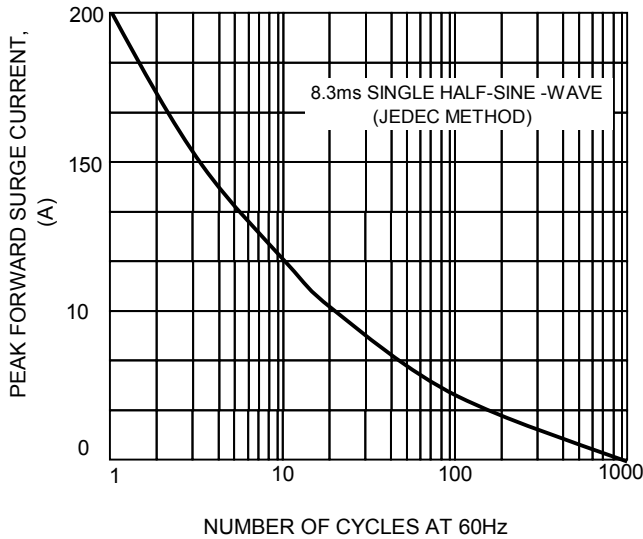


FIG. 3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

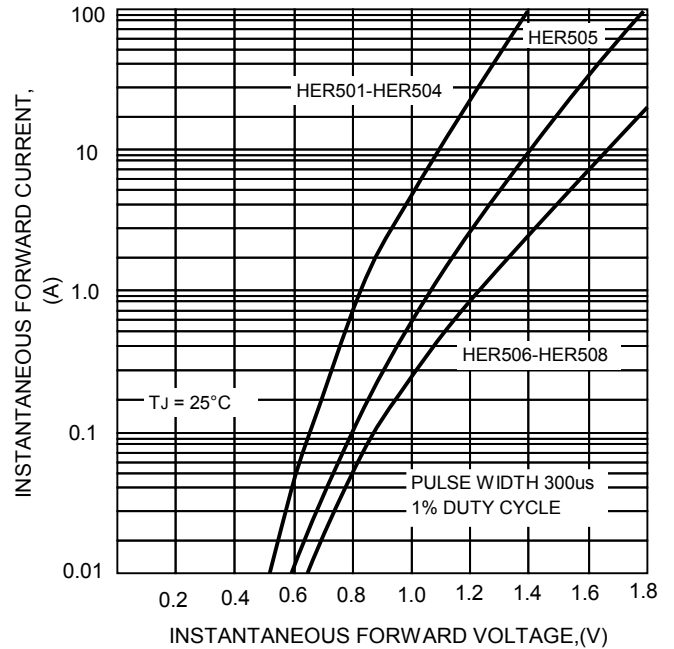


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

