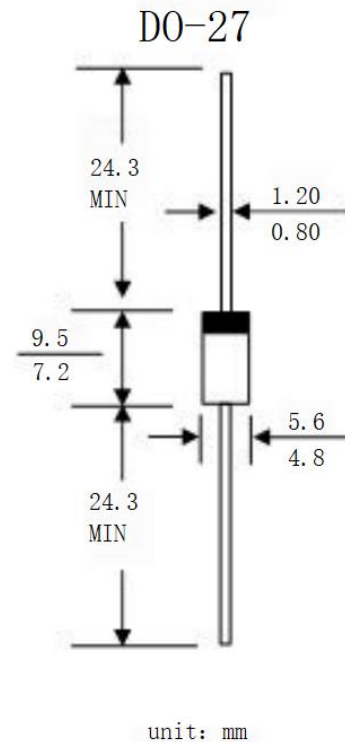


Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- High speed switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375"(9.5mm) lead length 5lbs. (2.3kg) tension

Mechanical data

- Case: JEDEC DO-27 Molded plastic body
- Terminals: Plated axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- 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 current derate by 20%

Parameter	Symbols	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	Unit
Maximum repetitive 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 .375"(9.5mm) Lead length at T _A =50 °C	I _{F(AV)}	3. 0								A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load(JEDEC method)	I _{FSM}	150								A
Maximum Forward Voltage at 3.0A	V _F	1. 0			1. 3		1. 70			V
Maximum DC Reverse Current T _A =25 °C At Rated DC Blocking Voltage T _A =100 °C	I _R	5. 0 150								uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	50					75			ns
Typical Junction capacitance (Note 2)	C _J	30. 0					20. 0			pF
Typical thermal resistance (Note 3)	R _{θJA}	20. 0								°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-65 to +150								°C

Note: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

2. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

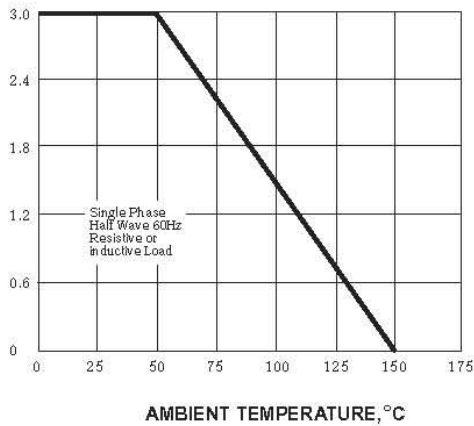
3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B. mounted

Ratings and Characteristic Curves

Ratings at 25°C ambient temperature unless otherwise specified

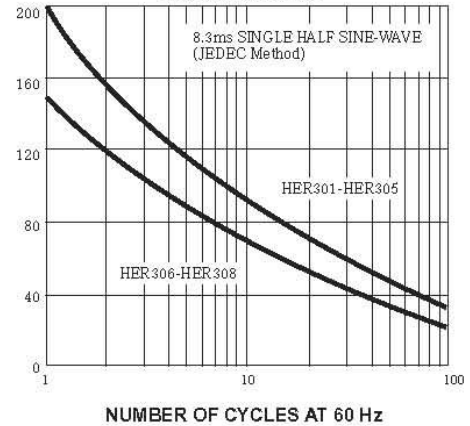
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



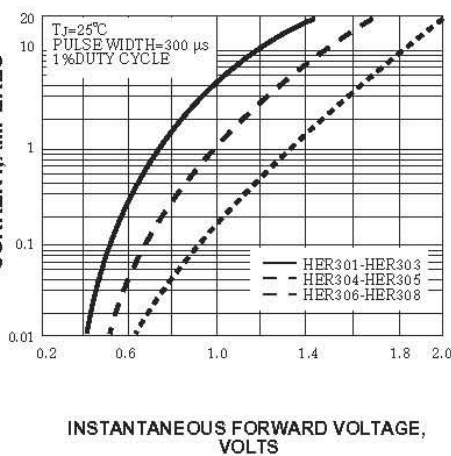
PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



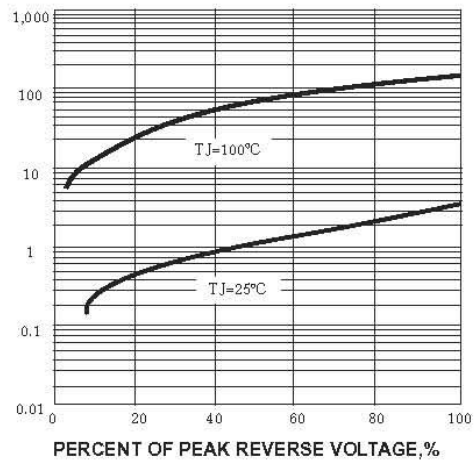
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



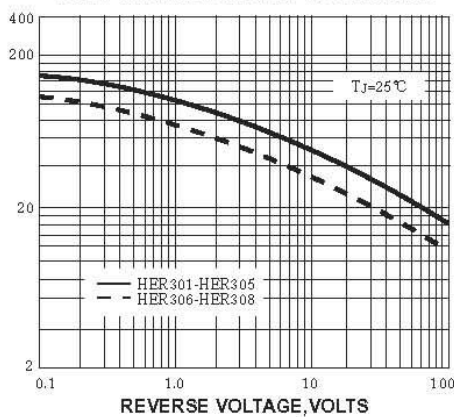
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

