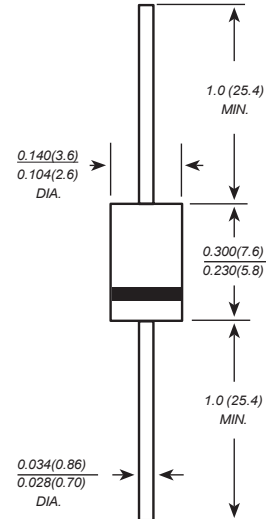


HIGH EFFICIENCY RECTIFIERS

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, 5 lbs. (2.3kg) tension

DO-15



Dimensions in inches and (millimeters)

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	HER151	HER152	HER153	HER154	HER155	HER156	HER157	HER158	UNITS
Marking code										
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 0.375"(9.5mm) lead length at T _A =50°C	I _(AV)	1.5								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	50.0								A
Maximum instantaneous forward voltage at 1.5A	V _F	1.0			1.3		1.7			V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 100.0								μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	50					70			ns
Typical junction capacitance (NOTE 2)	C _J	30.0					20.0			pF
Typical thermal resistance (NOTE 3)	R _{θJA}	50.0								°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150								°C

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

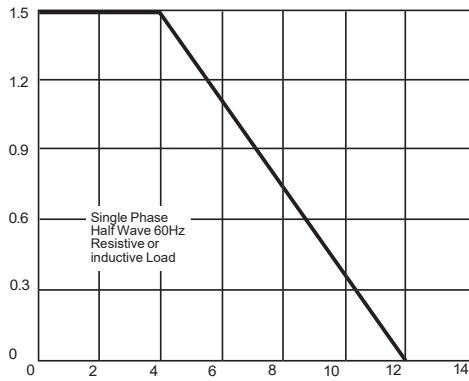
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

Ratings And Characteristic Curves

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

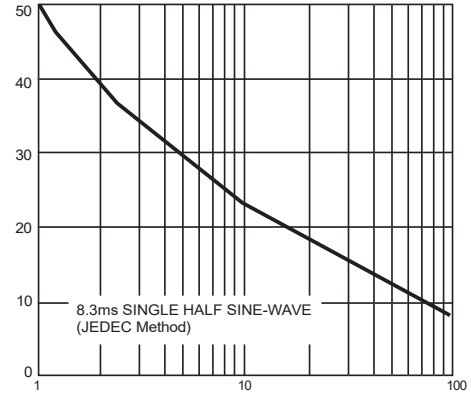
FIG. 1- FORWARD CURRENT DERATING CURVE



AMBIENT TEMPERATURE, °C

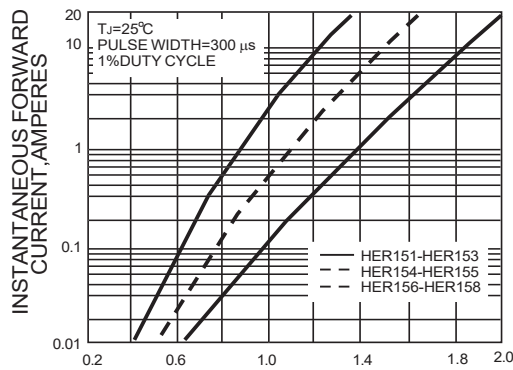
PEAK FORWARD SURGE CURRENT,
AMPERES

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



NUMBER OF CYCLES AT 60 Hz

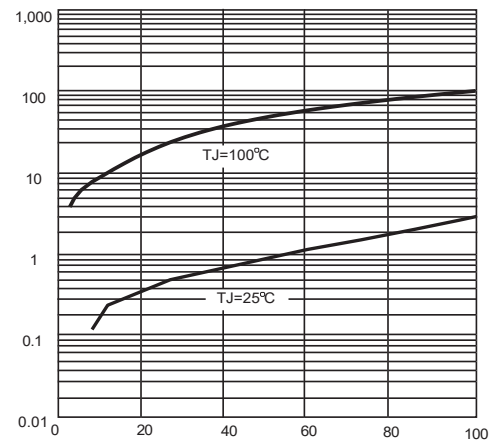
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

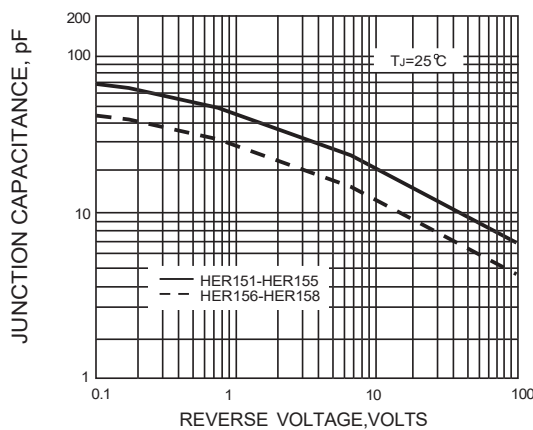
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

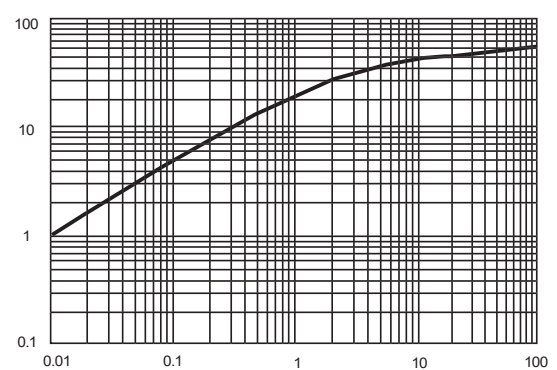
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.

The curve above is for reference only.