

HIGH EFFICIENCY RECTIFIERS

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Super fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/ 10 seconds at terminals

Mechanical Data

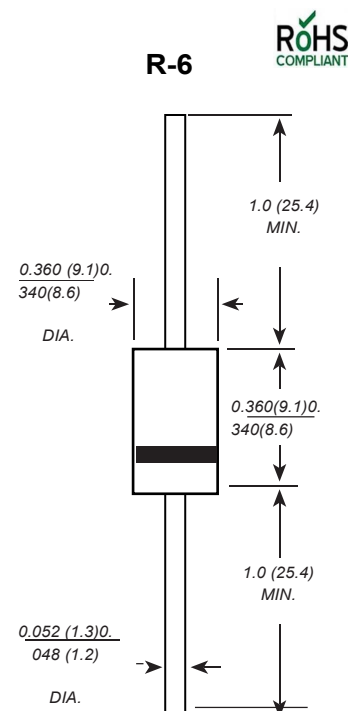
Case : JEDEC R-6 Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.072 ounce, 2.05 grams



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	HER601	HER602	HER603	HER604	HER605	HER606	HER607	HER608	UNITS
Marking Code		RCD HER601	RCD HER602	RCD HER603	RCD HER604	RCD HER605	RCD HER606	RCD HER607	RCD HER608	
Maximum repetitive peak reverse voltage		V _{RRM}	50	100	200	300	400	600	800	
Maximum RMS voltage	V _{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	300	300	600	800	1000	V
Maximum average forward rectified current at T _A =55°C	I _(AV)	6.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	200.0								A
Maximum instantaneous forward voltage at 6.0A	V _F	1.0			1.3			1.70		V
Maximum DC reverse current at rated DC blocking voltage	I _R	10.0 200.0								µA
Maximum reverse recovery time (NOTE 1)	t _{rr}	50					70.0			ns
Typical junction capacitance (NOTE 2)	C _J	100.0					65.0			pF
Typical thermal resistance (NOTE 3)	R _{θJA}	10.0								°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-50 to +150								°C

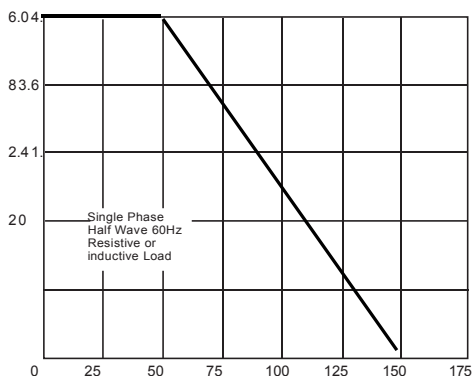
Note: 1.Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

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

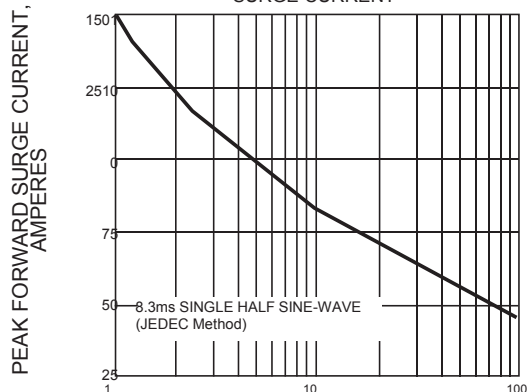
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



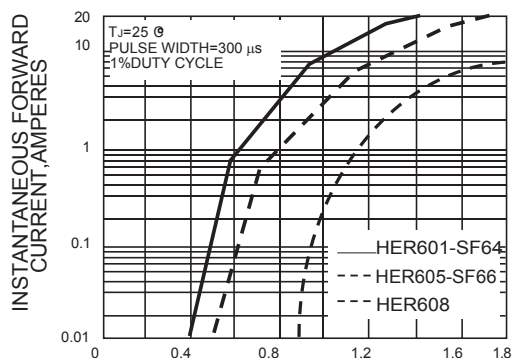
AMBIENT TEMPERATURE, °C

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



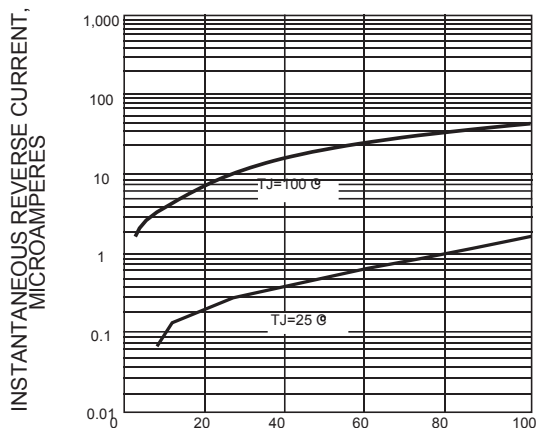
NUMBER OF CYCLES AT 60 Hz

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



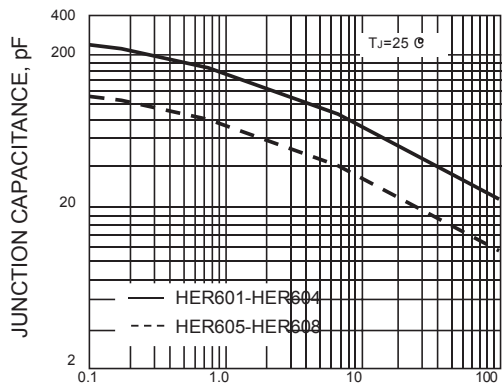
INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



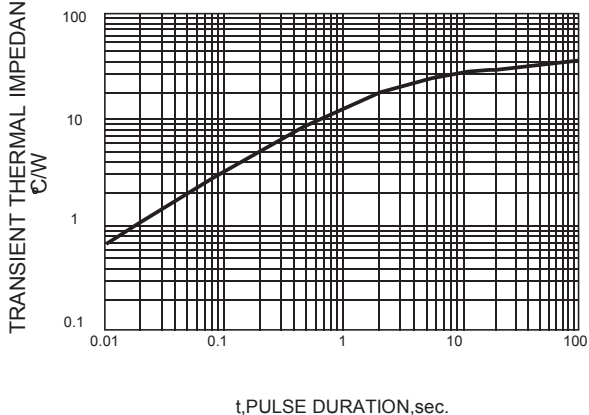
PERCENT OF PEAK REVERSE VOLTAGE, %

FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.