

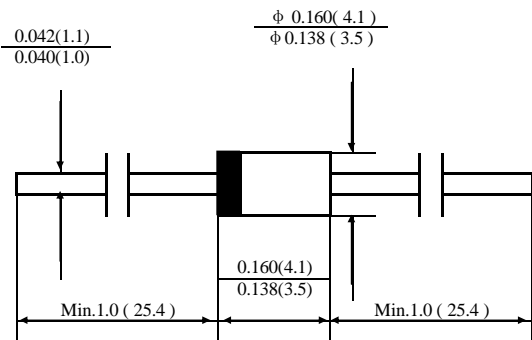


HER251 THRU HER258

HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 2.5 Amperes

R-3



Dimensions in inches and (millimeters)

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

MECHANICAL DATA

Case: JEDEC R-3 molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.58 grams

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%.

MDD Catalog Number	SYMBOLS	HER 251	HER 252	HER 253	HER 254	HER 255	HER 256	HER 257	HER 258	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	VOLTS	
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	VOLTS	
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	VOLTS	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	2.5								Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60.0								Amps	
Maximum instantaneous forward voltage at 2.5A	V_F	1.0			1.3		1.70			Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	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)	$R_{\theta JA}$	50.0								$^\circ\text{C/W}$	
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150								$^\circ\text{C}$	

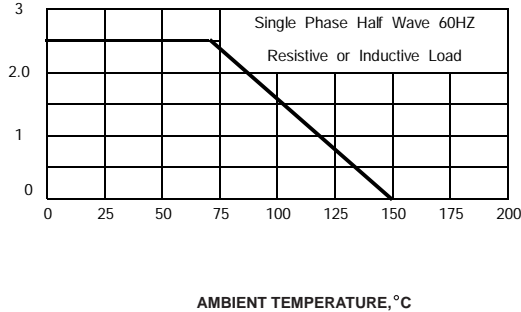
- Note:** 1.Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3.Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES HER251 THRU HER258

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

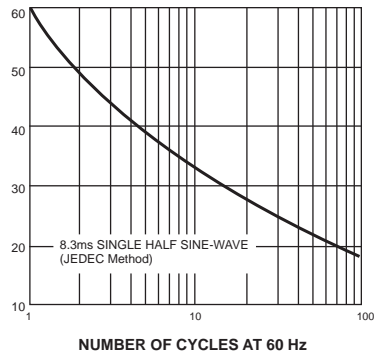


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

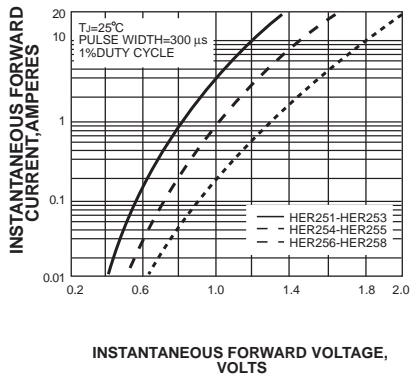


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

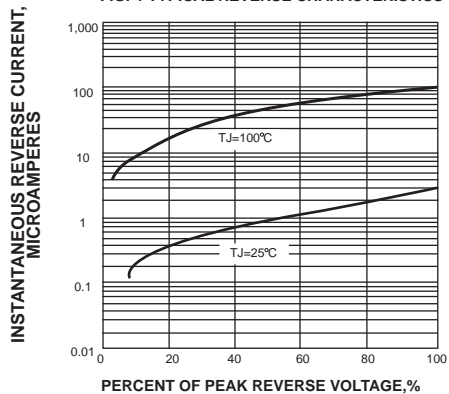


FIG. 5-TYPICAL JUNCTION CAPACITANCE

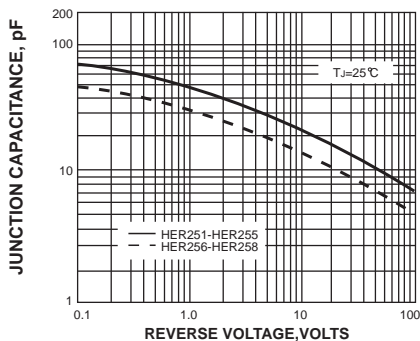


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

