



HIGH EFFICIENCY RECTIFIER

HER251 THRU HER258

VOLTAGE RANGE
CURRENT

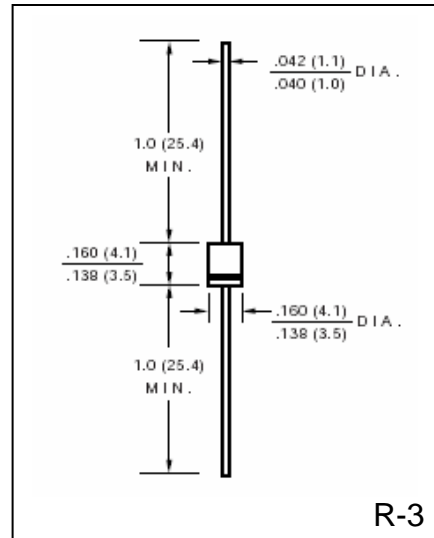
50 to 1000 Volts
2.5 Ampere

FEATURES

- Low power loss, high efficiency
- Low Leakage
- High speed switching
- High Surge Capacity
- High Temperature soldering guaranteed:
260°C / 10 second, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color Band denotes cathode end
- Lead: Plated axial lead, solderable per MIL – STD-202E Method 208C
- Mounting Position: Any
- Weight: 0.020 ounce, 0.56 gram



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 derate current by 20%

	SYMBOLS	HER 251	HER 252	HER 253	HER 254	HER 255	HER 256	HER 257	HER 258	UNIT
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}	150								Amps
Maximum Instantaneous Forward Voltage @ 2.5A	V_F	1.0		1.3		1.5		1.7		Volts
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$	I_R	5.0								μA
DC Blocking Voltage per element $T_A = 125^\circ\text{C}$		250								
Maximum Full Load Reverse Current, Full Cycle average 0.375" (9.5mm) lead length at $T_L = 55^\circ\text{C}$	$I_{R(AV)}$	100								μA
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	t_{rr}	50						70		nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	30						35		pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	35								$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	(-55 to +150)								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)								$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted



RATINGS AND CHARACTERISTIC CURVES HER251 THRU HER258

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

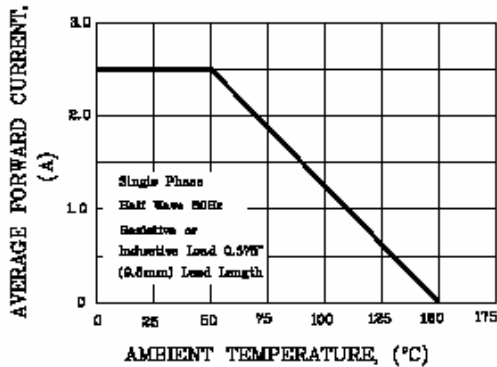


FIG.2-MAXIMUM NON-REPETTIVE PEAK FORWARD SURGE CURRENT

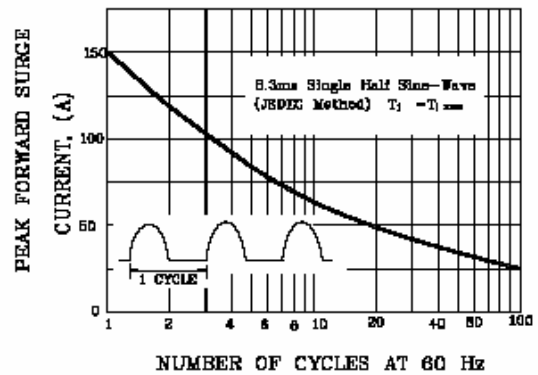


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

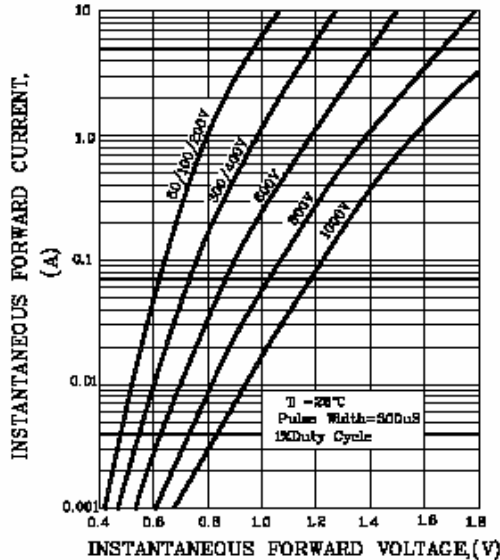


FIG.4-TYPICAL REVERSE CHARACTERISTICS

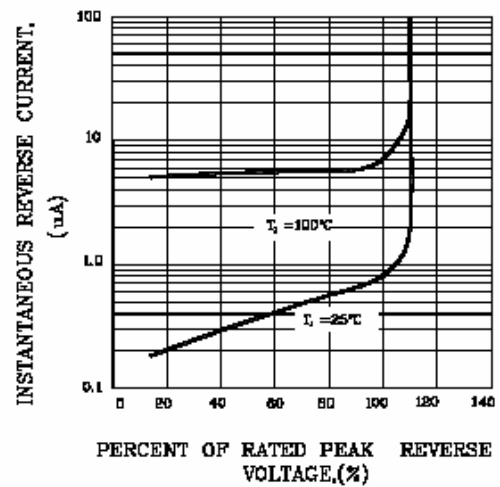


FIG.5-TYPICAL JUNCTION CAPACITANCE

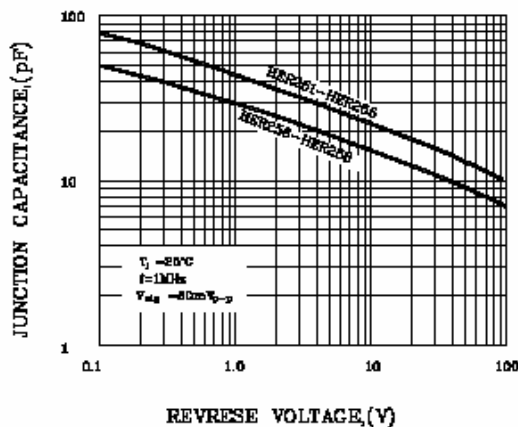


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

