HEM101 THRU HEM108

1.0 AMP. High Efficient Surface Mount Rectifiers

Features

For surface mounted application

Low forward voltage drop

Low profile package

Built-in stain relief, ideal for automatic placement

Fast switching for high efficiency

High temperature soldering:250℃/10 seconds at terminals

Plastic material used carries Underwrites Laboratory Classification 94V-O

Mechanical Data

Cases: SMA/DO-214AC Molded Plastic.

Terminals: Solder plated

Polarity: Indicated by cathode band

Packaging:12mm tape per EIA STD RS-481

Weight: 0.064 gram

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

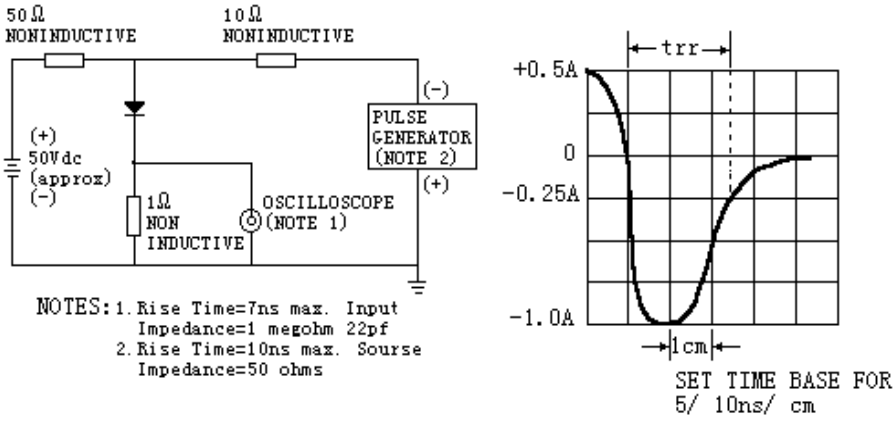
Type Number	**HEM 101**	**HEM 102**	**HEM 103**	**HEM 104**	**HEM 105**	**HEM 106**	**HEM 107**	**HEM 108**	**Units**
Maximum Recurrent peak Reverse Voltage	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead length @T_A=55℃	1.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30								A
Maximum Instantaneous Forward Voltage @1.0A	1.0				1.3	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0 (@T_A=25℃) 100 (@T_A=100℃)								μA μA
Maximum Reverse Recovery Time (Note 1)	50					75			nS
Typical Junction Capacitance (Note 2)	20					15			pF
Operating Temperature Range T_J	-55 to +125								℃
Storage Temperature Range T_{STG}	-55 to +150								℃

Notes: 1.Reverse Recovery Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

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

RATINGS AND CHARACTERISTIC CURVES (HEM101 THRU HEM108)

FIG.1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance=50 ohms

FIG. 2-MAXIMUM AVERAGE FORWARD CURRENT DERATING

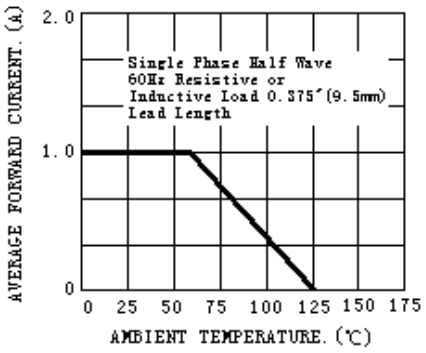


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

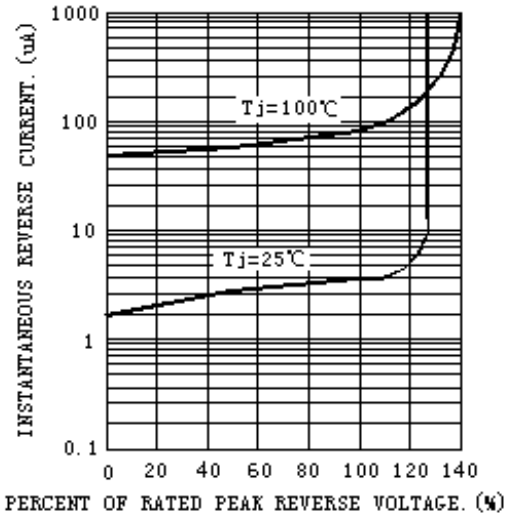


FIG.4-TYPICAL FORWARD CHARACTERISTICS

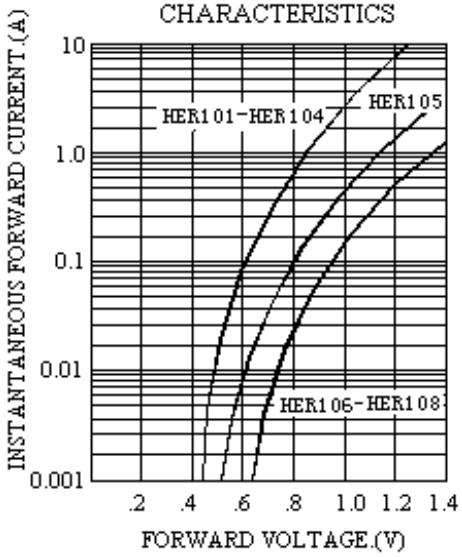


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

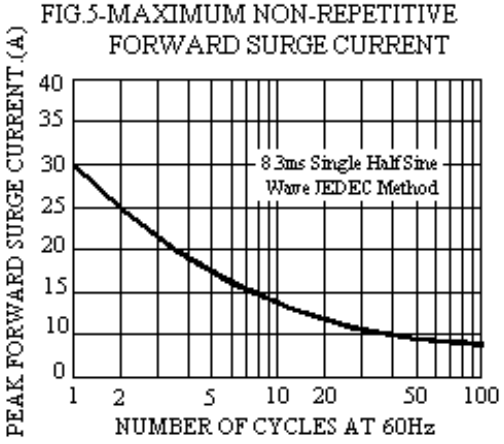


FIG.6-TYPICAL JUNCTION CAPACITANCE