RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

HFM501 THRU HFM508

SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 5.0 Amperes

FEATURES

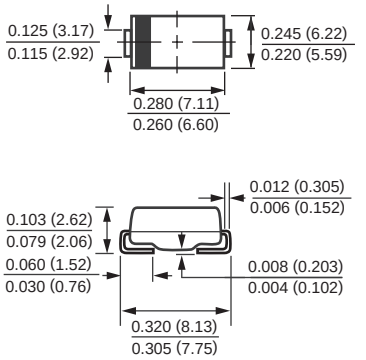
* Glass passivated device
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.24 gram

DATA MECHANICAL

* Epoxy : Device has UL flammability classification 94V-0



DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	HFM501	HFM502	HFM503	HFM504	HFM505	HFM506	HFM507	HFM508	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Volts	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 Current at T_A = 50°C	I_O	5.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200					150			Amps
Typical Junction Capacitance (Note 2)	C_J	70					50			pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175								°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

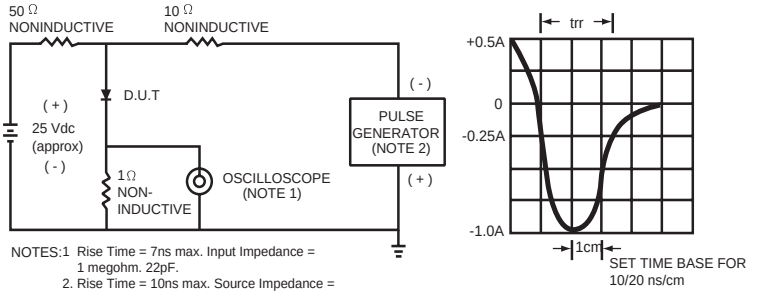
CHARACTERISTICS		SYMBOL	HFM501	HFM502	HFM503	HFM504	HFM505	HFM506	HFM507	HFM508	UNITS
Maximum Forward Voltage at 5.0A DC		V_F	1.0			1.3		1.7			Volts
Maximum Full Load Reverse Current, Full cycle Average T_A = 55°C		I_R	50								uAmps
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C		10								uAmps
	@T_A = 125°C		150								uAmps
Maximum Reverse Recovery Time (Note 1)		trr	50					75			nSec

NOTES : 1. 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 volts.

2002-5

RATING AND CHARACTERISTIC CURVES (HFM501 THRU HFM508)

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



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

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

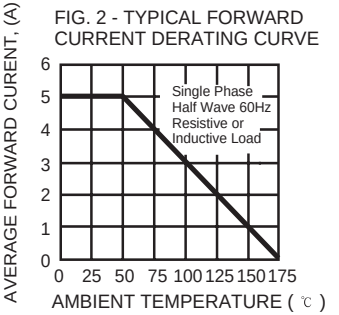


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

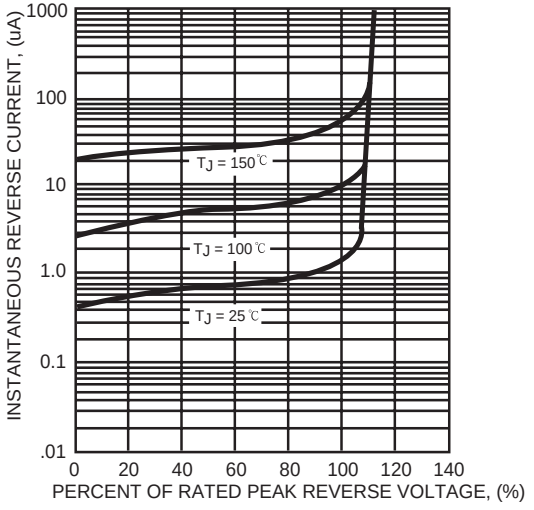


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

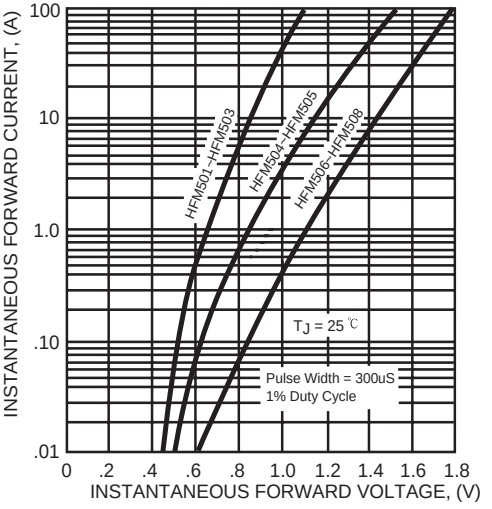


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

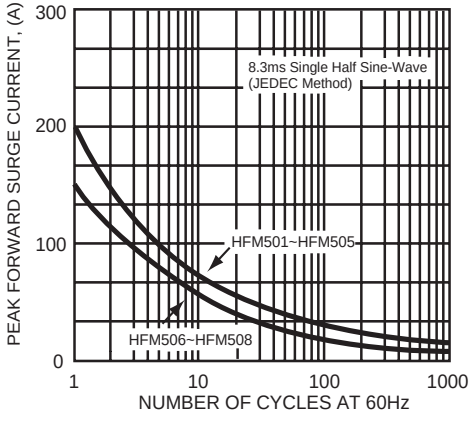
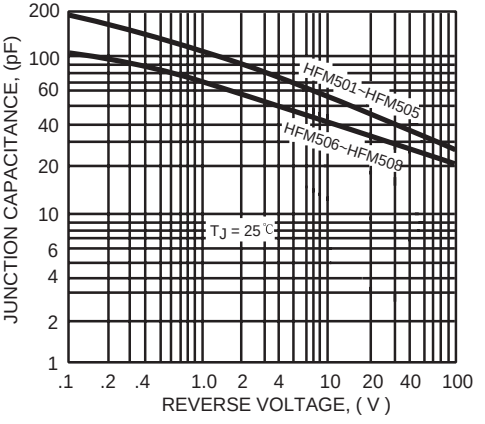
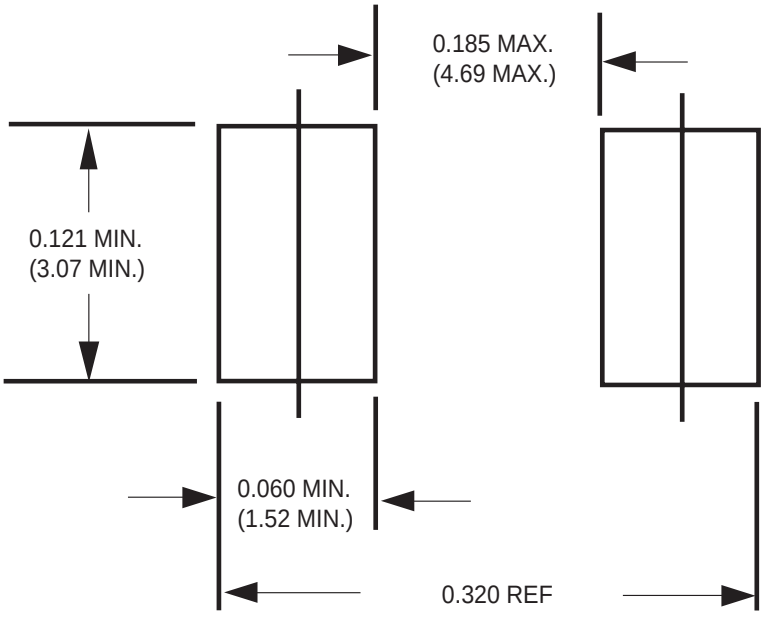


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)