

**SURFACE MOUNT GLASS PASSIVATED
 HIGH EFFICIENCY SILICON RECTIFIER**

VOLTAGE RANGE 50 to 1000 Volts CURRENT 5.0 Amperes

FEATURES

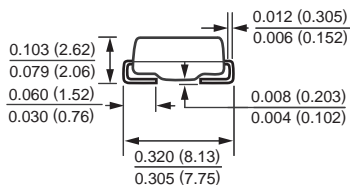
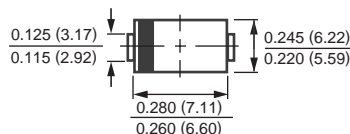
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

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 TA = 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 TA = 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 TA = 25°C unless otherwise noted)

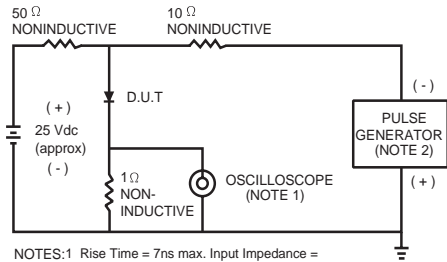
CHARACTERISTICS	SYMBOL	HFM501	HFM502	HFM503	HFM504	HFM505	HFM506	HFM507	HFM508	UNITS
Maximum Forward Voltage at 5.0A DC	V _F	1.0		1.3		1.7				Volts
Maximum Full Load Reverse Current, Full cycle Average TA = 55°C	I _R	50								uAmps
Maximum DC Reverse Current at @ TA = 25°C		10								uAmps
Rated DC Blocking Voltage @ TA = 125°C		150								uAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	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.

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.

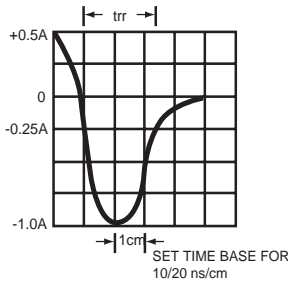


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

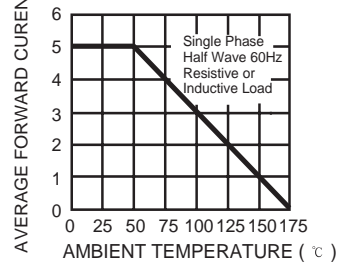


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

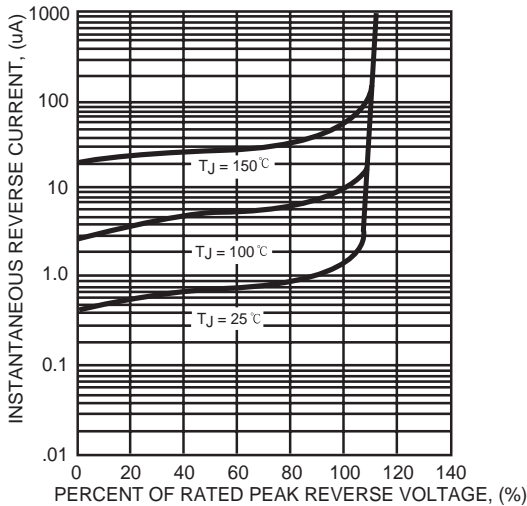


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

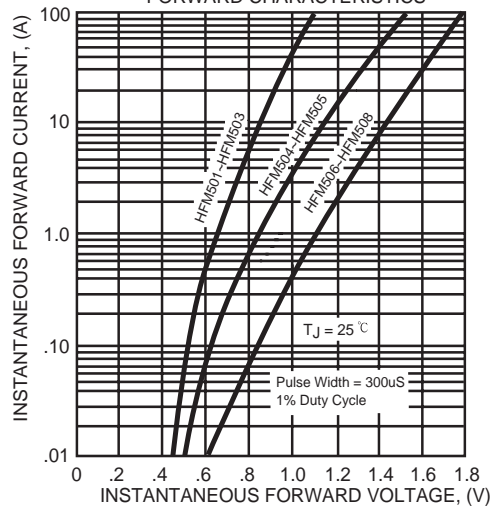


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

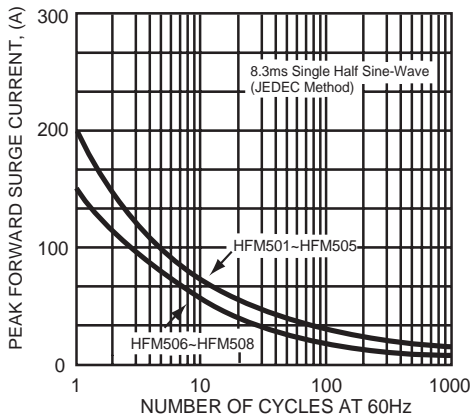
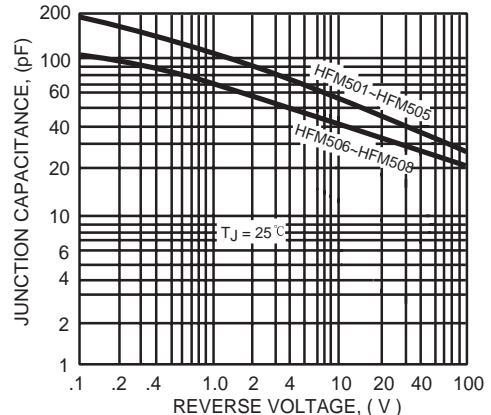
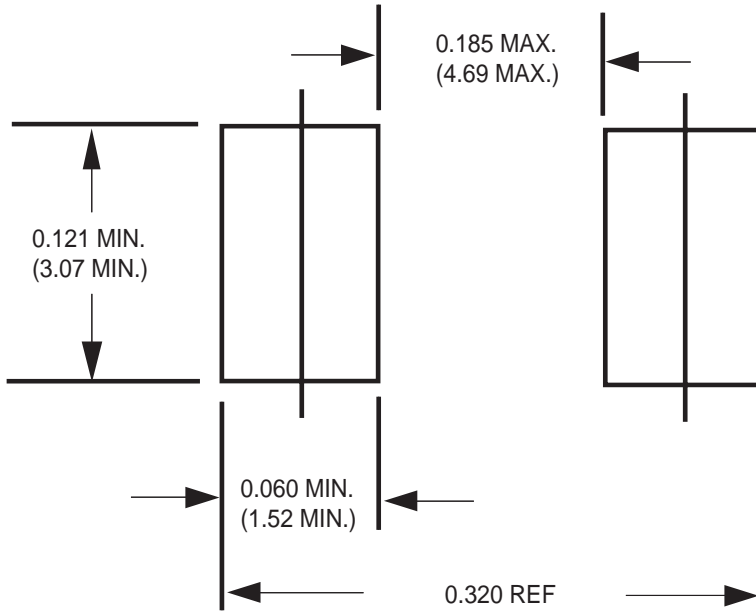


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)