

**SURFACE MOUNT GLASS PASSIVATED
HIGH EFFICIENCY SILICON RECTIFIER**
VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere

FEATURES

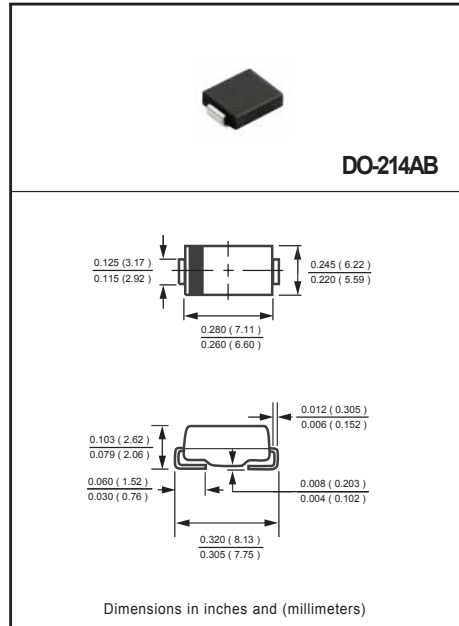
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

MECHANICAL DATA

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

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 (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	HFM301	HFM302	HFM303	HFM304	HFM305	HFM306	HFM307	HFM308	UNITS
Maximum Recurrent 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	490	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _A = 50°C	I _O	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200				150				Amps
Typical Thermal Resistance (Note 1)	R _{θJL}	15								°C/W
Typical Thermal Resistance (Note 1)	R _{θJA}	60								°C/W
Typical Junction Capacitance (Note 2)	C _J	70				50				pF
Operating Temperature Range	T _J	150								°C
Storage Temperature Range	T _{STG}	-55 to + 150								°C

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HFM301	HFM302	HFM303	HFM304	HFM305	HFM306	HFM307	HFM308	UNITS
Maximum Instantaneous Forward Voltage at 3.0A 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								μA
Maximum Average Reverse Current @T _A = 25°C		5								μA
at Rated DC Blocking Voltage @T _A = 125°C		150								μA
Maximum Reverse Recovery Time (Note 4)	t _{rr}	50				75				nSec

- NOTES : 1. Thermal Resistance : Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

2006-11

RATING AND CHARACTERISTICS CURVES (HFM301 THRU HFM308)

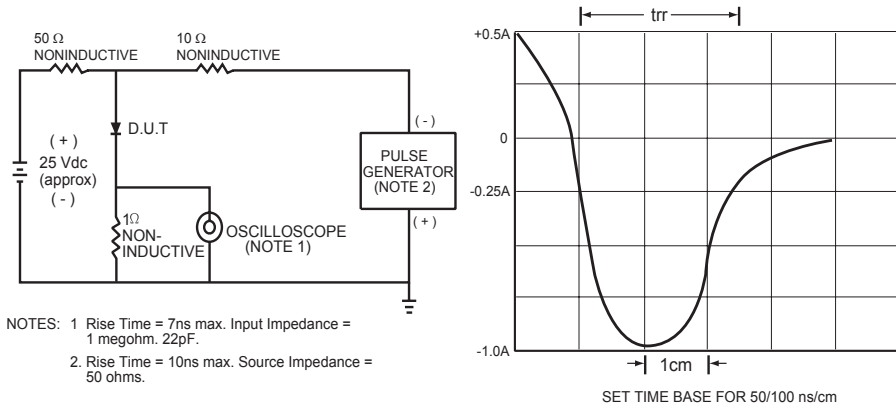


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

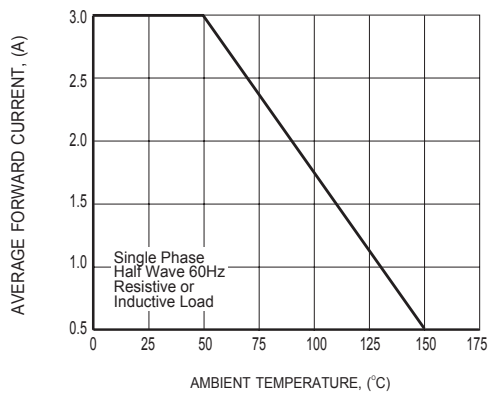


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

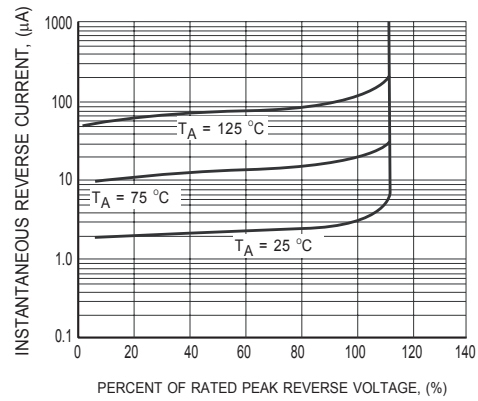


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (HFM301 THRU HFM308)

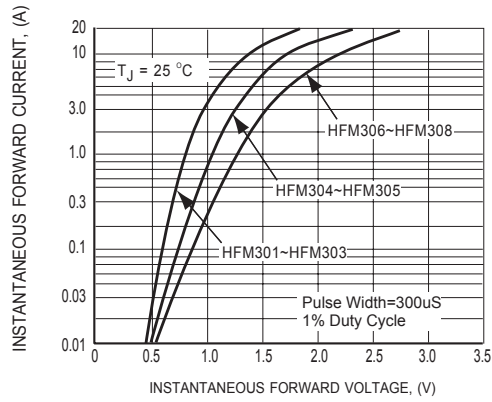


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

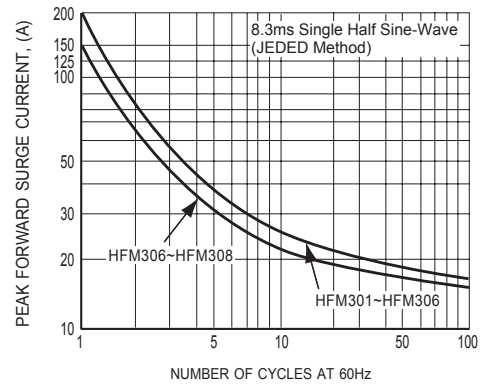


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

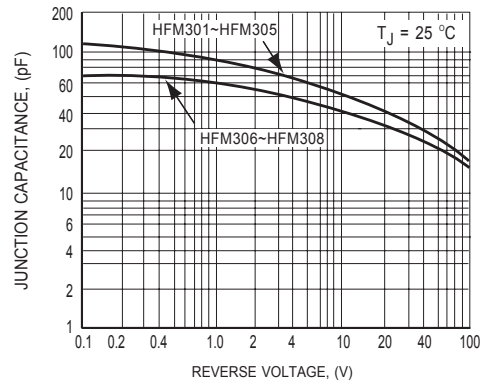
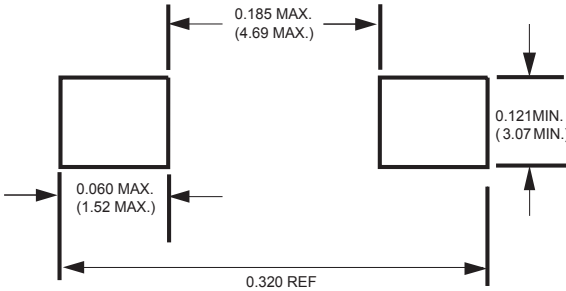


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)



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