

**SURFACE MOUNT GLASS PASSIVATED  
HIGH EFFICIENCY SILICON RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 2.0 Ampere

**FEATURES**

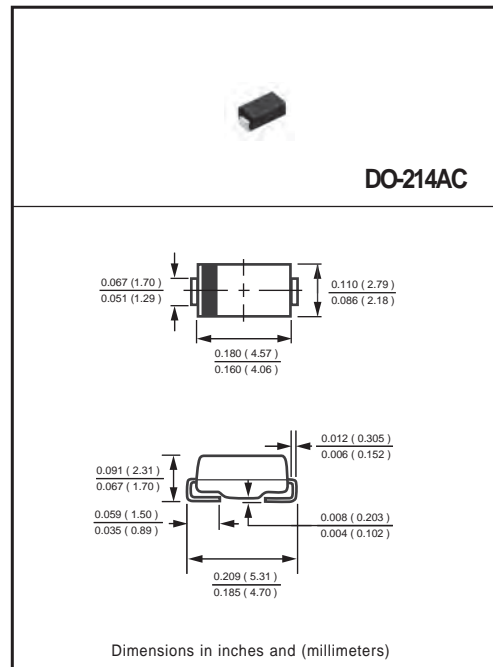
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any

**MECHANICAL DATA**

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

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	HFM201A	HFM202A	HFM203A	HFM204A	HFM205A	HFM206A	HFM207A	HFM208A	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 $T_A = 55^\circ\text{C}$	$I_O$	2.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	60								Amps
Current Squared Time	$I^2t$	14.9								$\text{A}^2\text{S}$
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	20								$^\circ\text{C}/\text{W}$
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75								$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	$C_J$	30				20				pF
Operating Temperature Range	$T_J$	-55 to + 150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 150								$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	HFM201A	HFM202A	HFM203A	HFM204A	HFM205A	HFM206A	HFM207A	HFM208A	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC	$V_F$	1.0		1.3		1.7				Volts
Maximum Full Load Reverse Current, Full cycle Average $T_A = 55^\circ\text{C}$	$I_R$	50								$\mu\text{A}$
Maximum Average Reverse Current @ $T_A = 25^\circ\text{C}$		2								$\mu\text{A}$
at Rated DC Blocking Voltage @ $T_A = 150^\circ\text{C}$		1.2								mA
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. " ROHS compliant".  
4. Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = -1.0\text{A}$ ,  $I_{RR} = -0.25\text{A}$ .  
5. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

## RATING AND CHARACTERISTICS CURVES ( HFM201A THRU HFM208A )

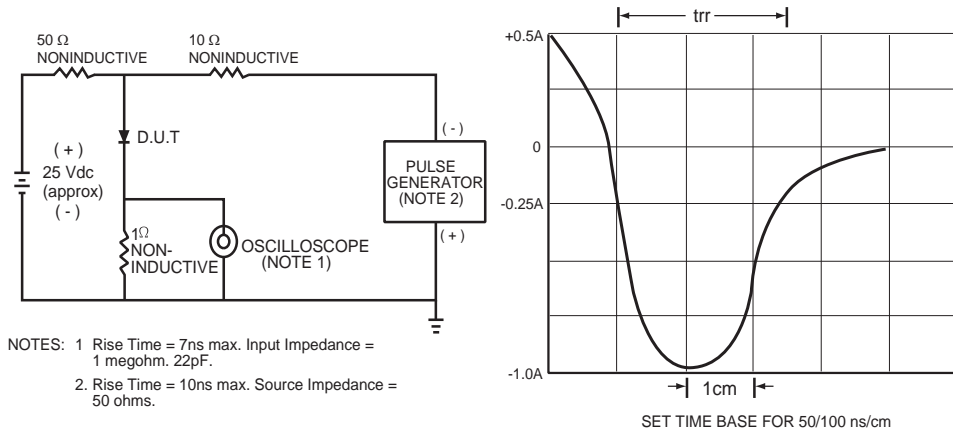


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

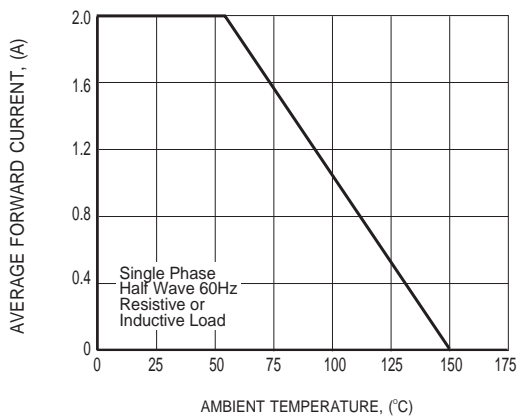


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

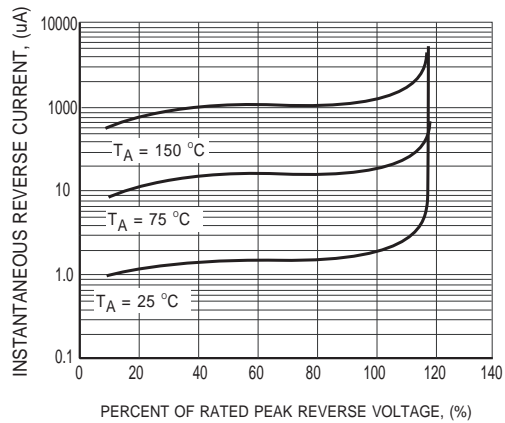
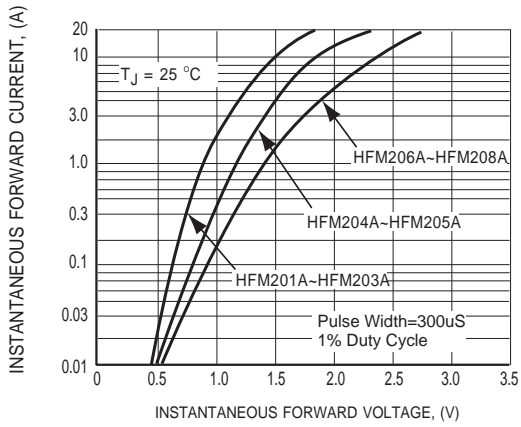
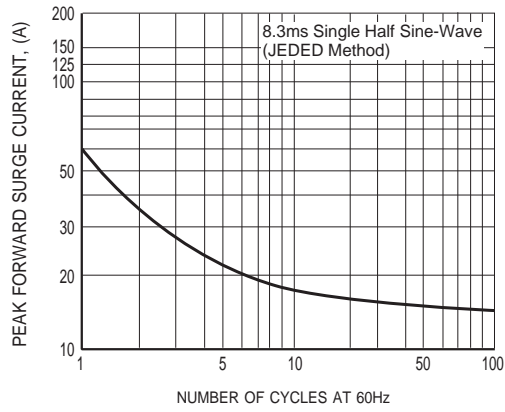


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

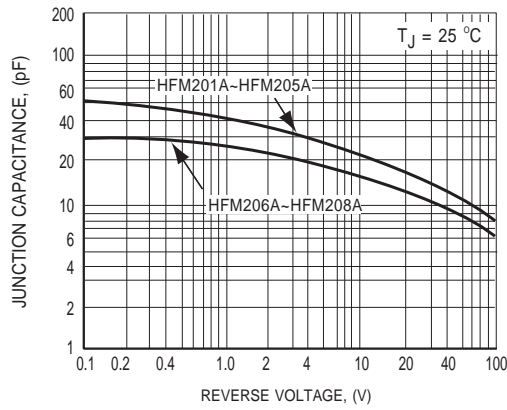
## RATING AND CHARACTERISTICS CURVES ( HFM201A THRU HFM208A )



**FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

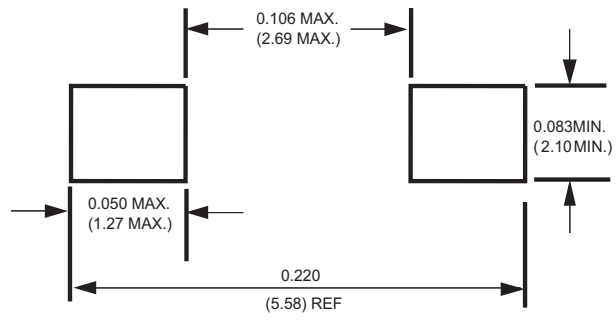


**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



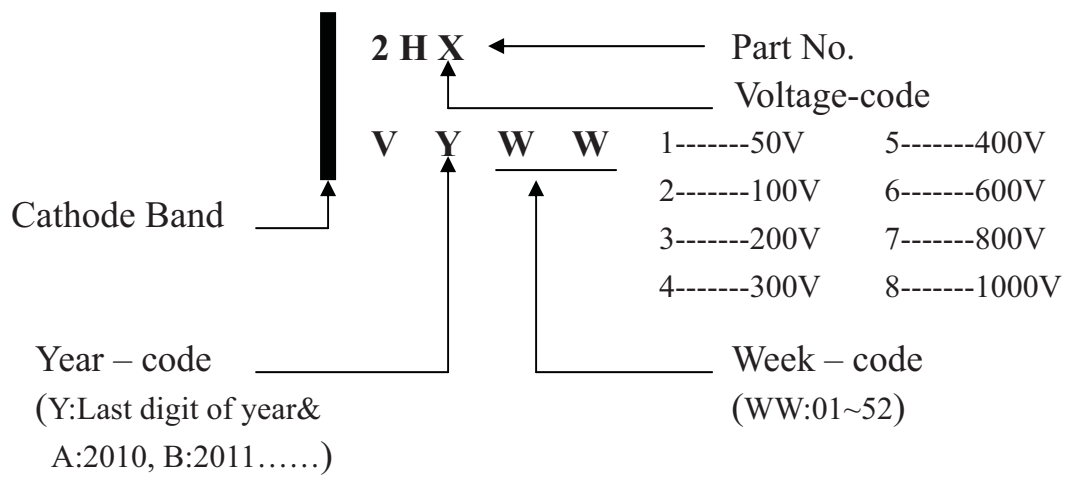
**FIG.6 TYPICAL JUNCTION CAPACITANCE**

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMA	-W	7,500	15,000	---	---	330	360*355*360	120,000	15.2

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMA	-T	2,000	8,000	---	---	178	390*205*310	64,000	7.8

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