

**SURFACE MOUNT GLASS PASSIVATED**  
**HIGH EFFICIENCY SILICON RECTIFIER**  
**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**

**FEATURES**

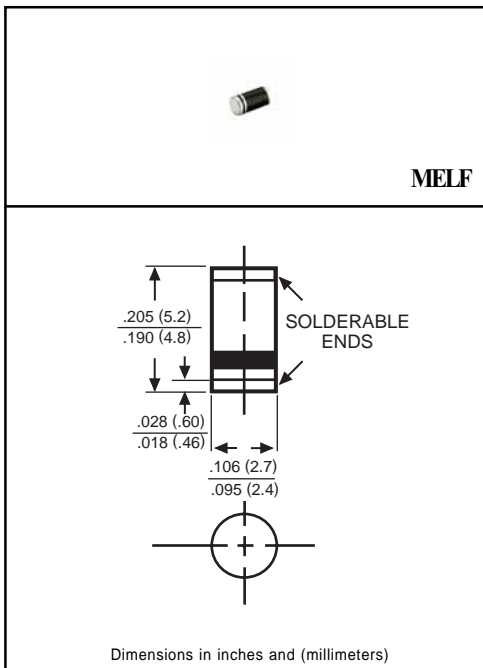
- \* Fast switching
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.015 gram

**MECHANICAL DATA**

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

**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	HSM101	HSM102	HSM103	HSM104	HSM105	HSM106	HSM107	HSM108	UNITS	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS Volts	VRMS	35	70	140	210	280	420	560	700	Volts	
Maximum DC Blocking Voltage	Vdc	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Current at TA = 50°C	Io	1.0									Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30									Amps
Typical Junction Capacitance (Note 2)	CJ	15				12				pF	
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150									°C

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

CHARACTERISTICS	SYMBOL	HSM101	HSM102	HSM103	HSM104	HSM105	HSM106	HSM107	HSM108	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	VF	1.0			1.3		1.70			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	IR	5.0								uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55°C		100								uAmps
Maximum Reverse Recovery Time (Note 1)	trr	50				75				nSec

NOTES : 1. Test Conditions: IF=0.5A, IR=-1.0A, IRR=-0.25A.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES ( HSM101 THRU HSM108 )

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

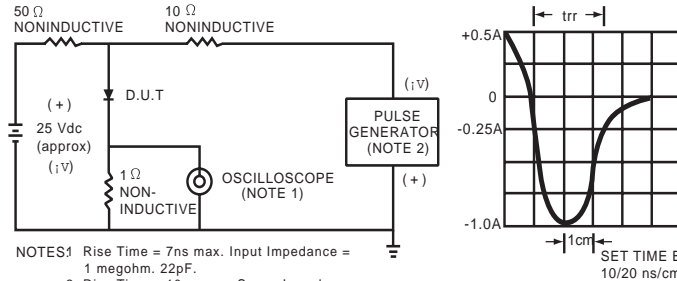


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

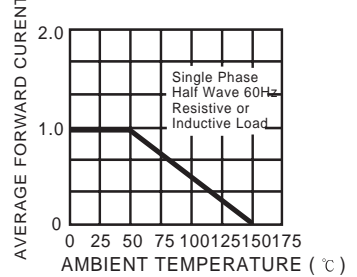


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

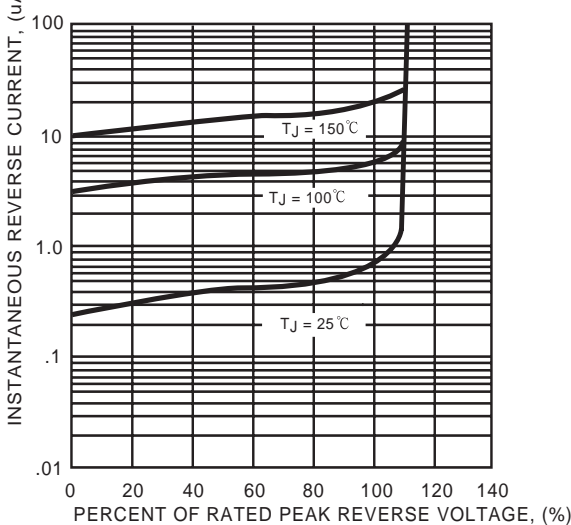


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

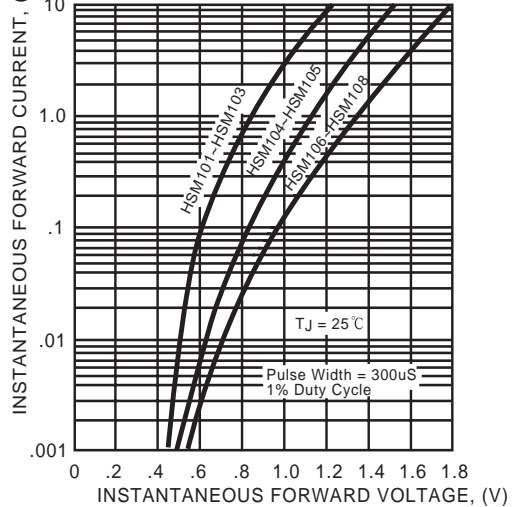


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

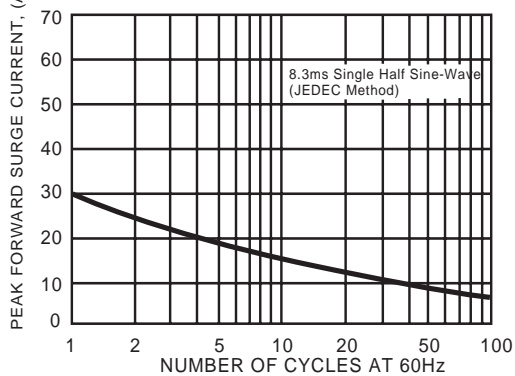
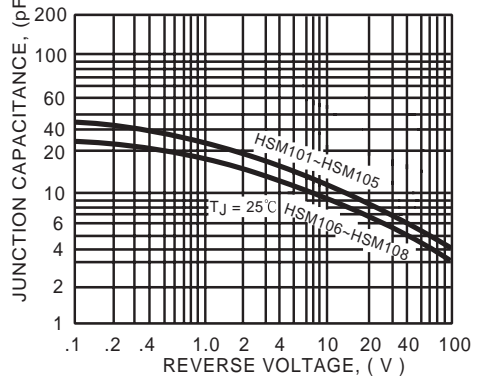
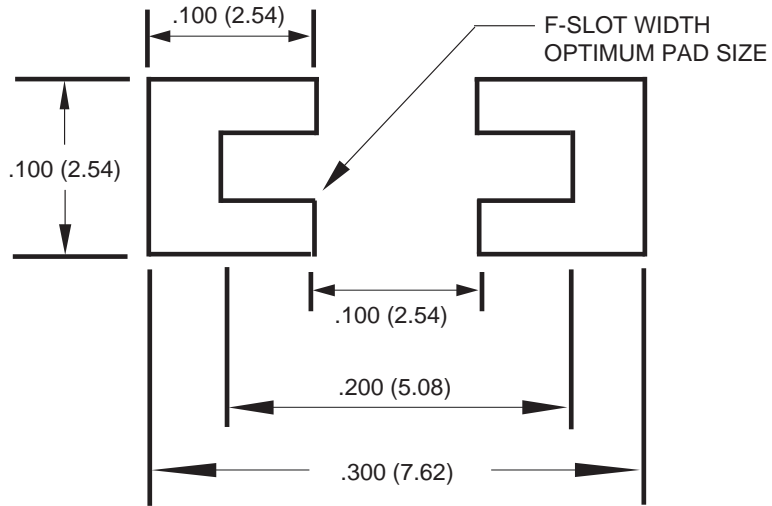


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



## Mounting Pad Layout



Dimensions in inches and (millimeters)