

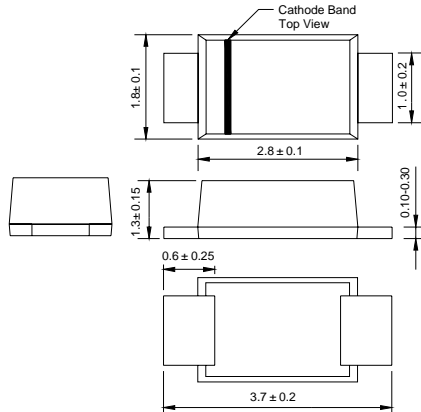


# HFM101-M THRU HFM107-M

## SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

### SOD-123FL



### FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mounted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC SOD-123FL molded plastic body over passivated chip  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0007 ounce, 0.02 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	HFM101-M U1A	HFM102-M U1B	HFM103-M U1D	HFM104-M U1G	HFM105-M U1J	HFM106-M U1K	HFM107-M U1M	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS	
Maximum average forward rectified current	$I_{AV}$	1.0							Amp	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25.0							Amps	
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.0		1.3		1.7			Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0 100.0							$\mu\text{A}$	
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	50				75			ns	
Typical thermal resistance	$R_{\theta JA}$	180							K/W	
Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150								$^\circ\text{C}$

**Note:** 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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# RATINGS AND CHARACTERISTIC CURVES HFM101-M THRU HFM107-M

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

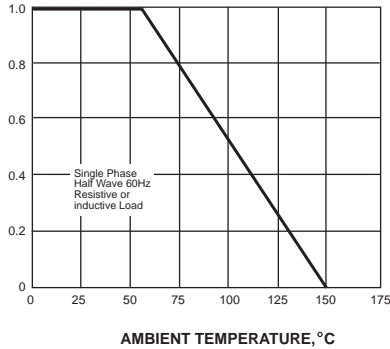


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT,  
AMPERES

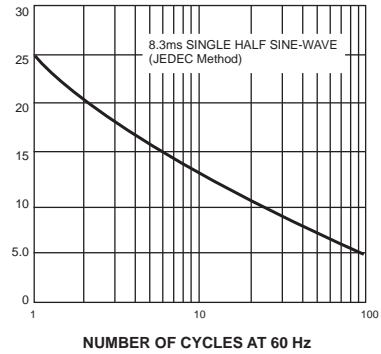


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

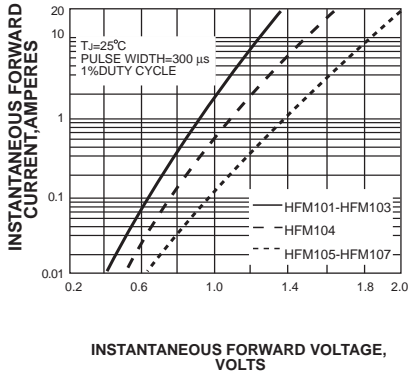
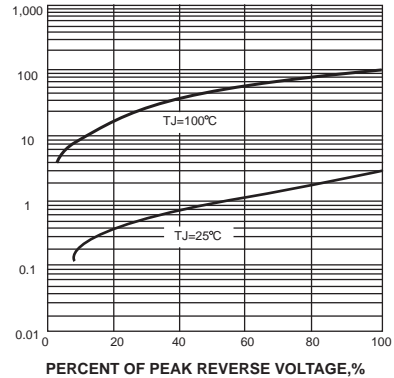


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES



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