

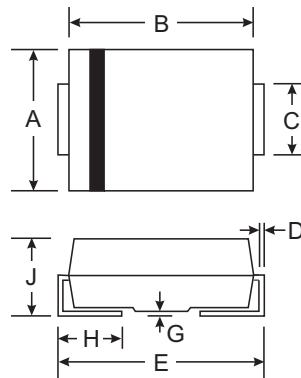
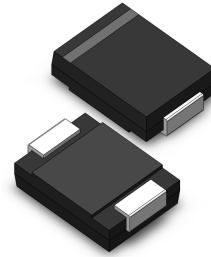
VOLTAGE RANGE: 50 - 1000V
CURRENT: 5.0 A

Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	HFM501	HFM502	HFM503	HFM504	HFM505	HFM506	HFM507	HFM508	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V	
Working Peak Reverse Voltage	V_{RWM}										
DC Blocking Voltage	V_R										
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	210	280	420	560	700	V	
Average Rectified Output Current @ $T_L = 55^\circ\text{C}$	I_o	5.0								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100								A	
Forward Voltage @ $I_F = 5.0\text{A}$	V_{FM}	1.0			1.4		1.7			V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	10					300				μA
Reverse Recovery Time (Note 1)	t_{rr}	50					75				nS
Typical Junction Capacitance (Note 2)	j_c	15					12				pF
Typical Thermal Resistance (Note 3)	R_{jL}	15								$^\circ\text{C/W}$	
Operating and Storage Temperature Range	T_j, T_{STG}	-50 to +150								$^\circ\text{C}$	

- Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$. See figure 5.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES HFM501 THRU HFM508

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

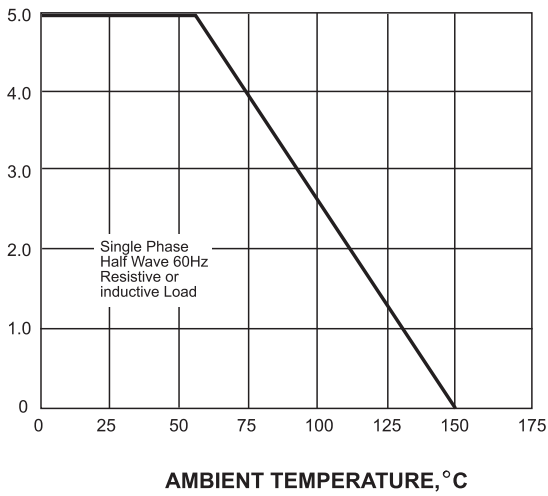


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

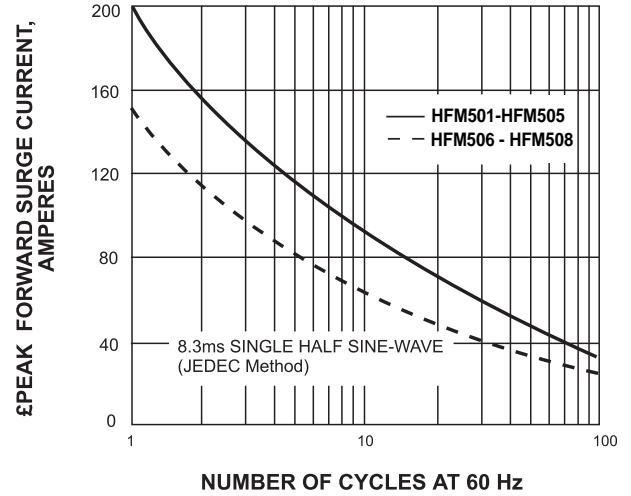


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

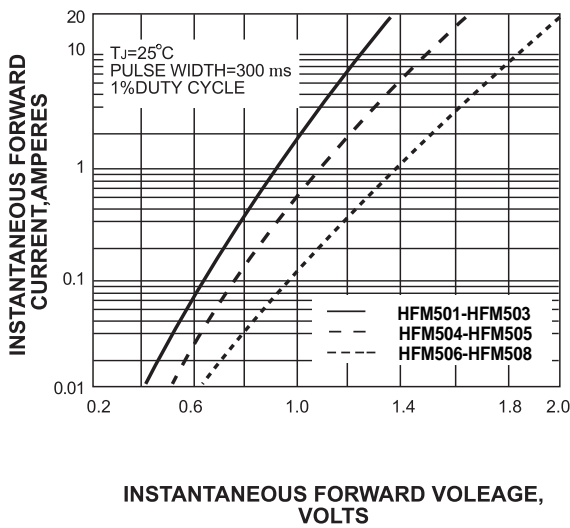


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

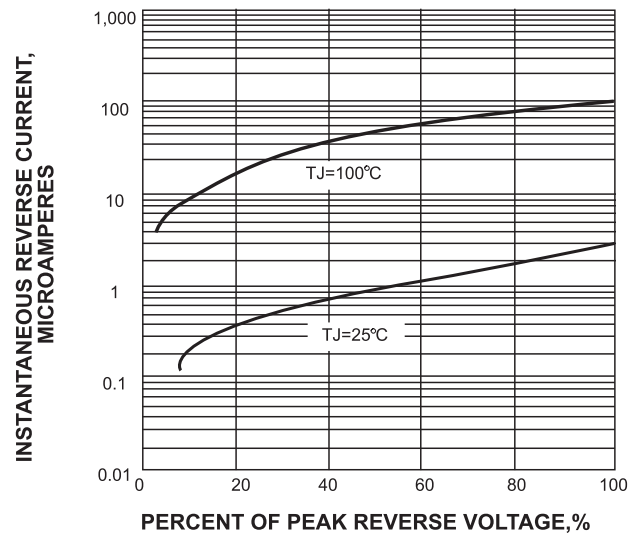


FIG. 5-TYPICAL JUNCTION CAPACITANCE

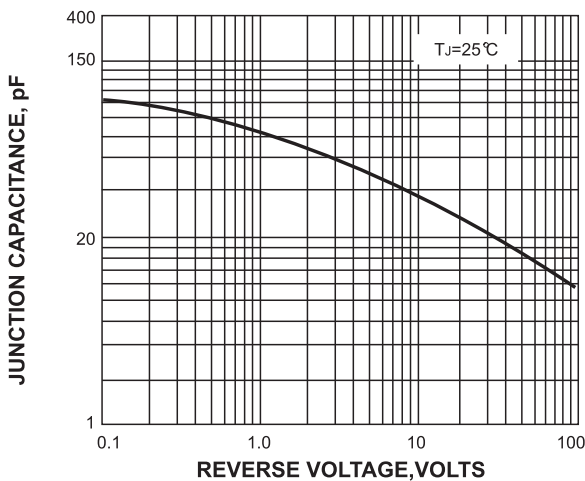


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

