



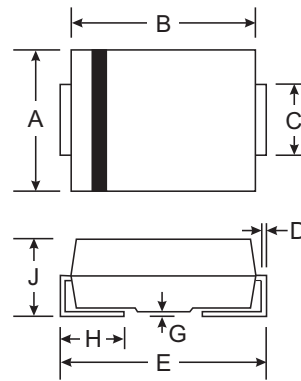
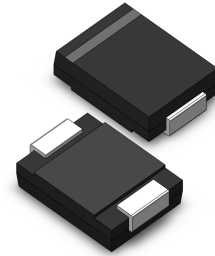
SMH301C - SMH307C

SURFACE MOUNT ULTRA FAST RECTIFIER DIODES

VOLTAGE RANGE: 50 - 1000V
CURRENT: 3.0 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



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		

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.)



Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	SMH301C	SMH302C	SMH303C	SMH304C	SMH305C	SMH306C	SMH307C	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =55°C	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.0		1.30		1.70		V	
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I_R	5.0 250.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	50				75			ns
Typical junction capacitance (NOTE 2)	C_J	75							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JL}$	15.0							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150							°C

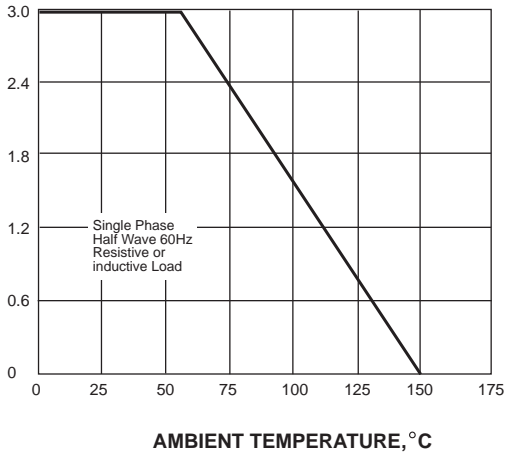
- Note:** 1.Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. The thermal resistance from junction to lead and from junction to ambient with P.C.B mounted on 0.3 x 0.3" (8.0 x 8.0 mm) Copper pad area



RATINGS AND CHARACTERISTIC CURVES SMH301C THRU SMH307C

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

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

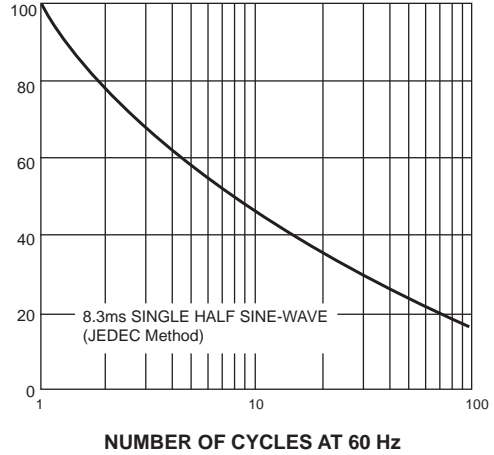


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

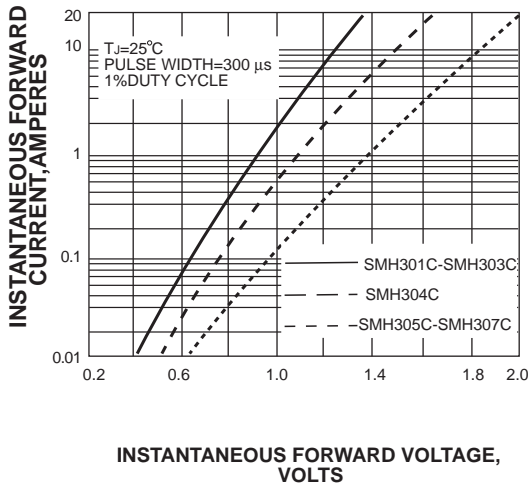


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

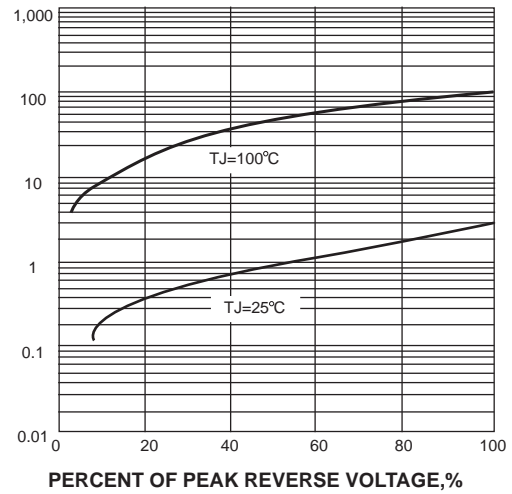


FIG. 5-TYPICAL JUNCTION CAPACITANCE

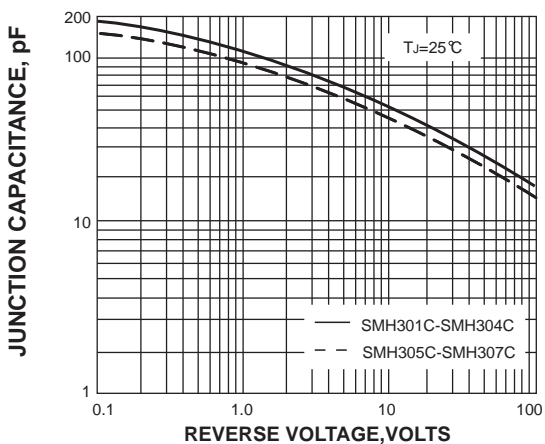


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

TRANSIENT THERMAL IMPEDANCE, °C/W

