

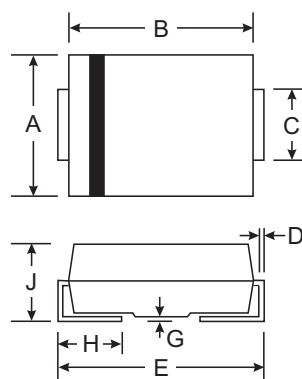
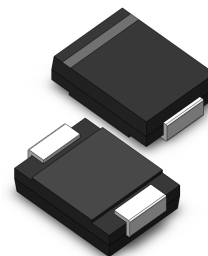
VOLTAGE RANGE: 50 - 1000V
CURRENT: 3.0 A

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-0

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°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 TA=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 TA=25°C at rated DC blocking voltage TA=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 _{θJL}	15.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150							°C

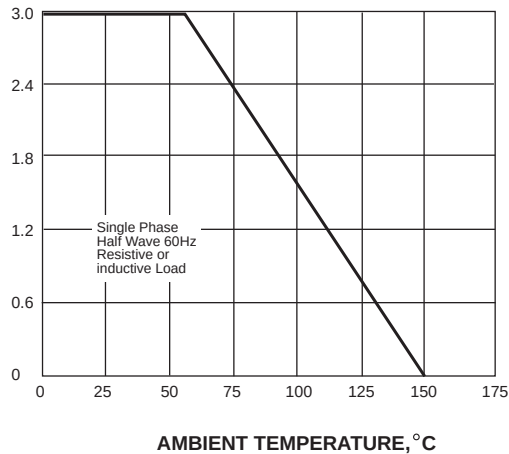
Note: 1.Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. The thermal resistance from junction to lead and from junction to ambient with P.C.B. mounted on 0.3 x 0.3" (8.0 x 8.0 mm) Copper pad area



RATINGS AND CHARACTERISTIC CURVES SMH301C THRU SMH307C

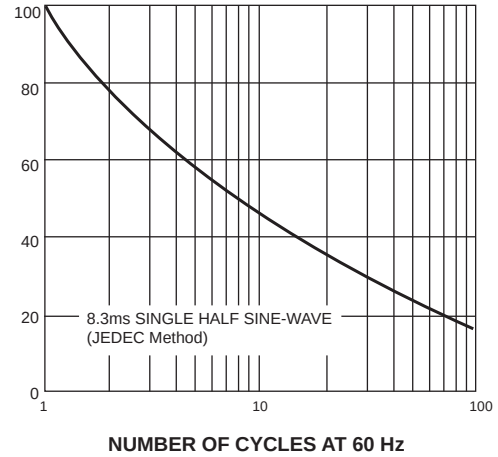
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



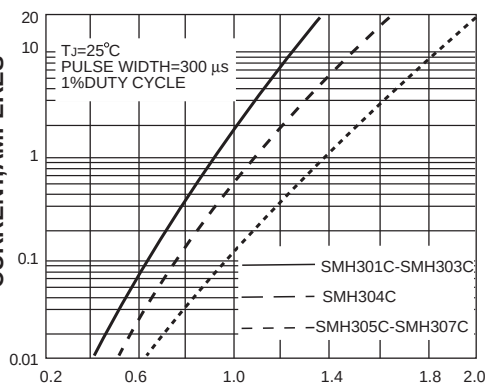
PEAK FORWARD SURGE CURRENT,
AMPERES

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



INSTANTANEOUS FORWARD
CURRENT, AMPERES

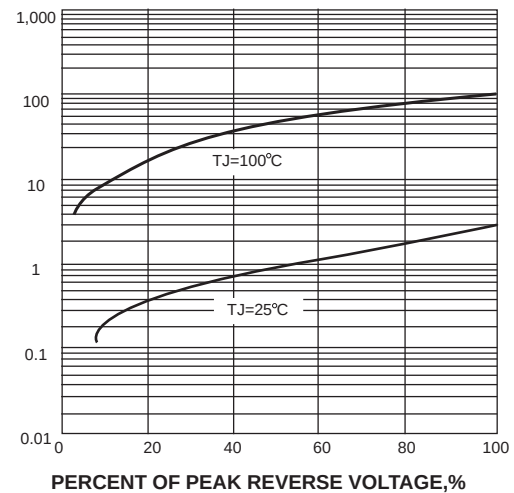
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

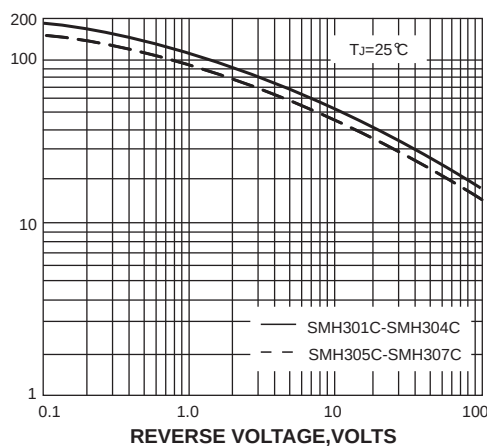
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

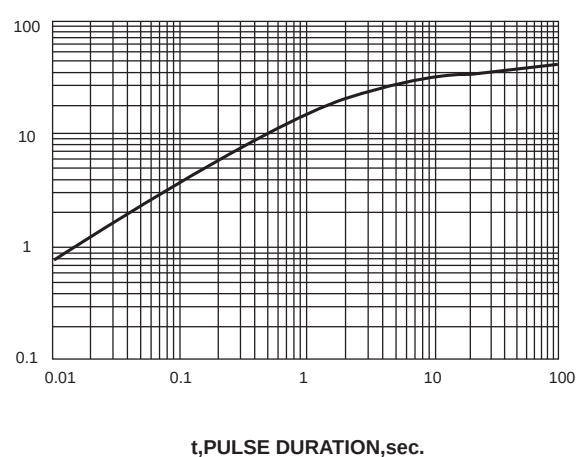
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.