

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	50 V to 1000 V
I_{FSM}	30 A
t_{rr}	50 nS , 75 nS
V_F	1.0 V , 1.3 V , 1.7 V
$T_j \text{ max.}$	150 °C

Features

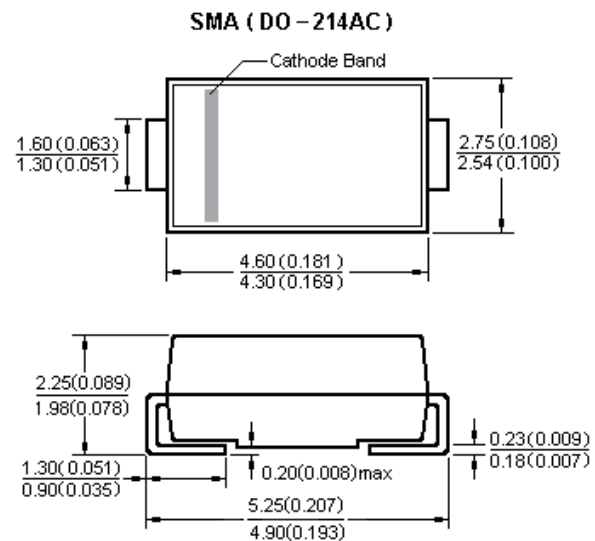
- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Date

- Case: JEDEC DO-214AC molded plastic body over passivated chip
- Terminals: Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Laser band denotes cathode end



SMA (DO-214AC)



Dimensions in millimeters and (inches)

Maximum Ratings & Thermal Characteristics & Electrical Characteristics

(TA = 25 °C unless otherwise noted)

	Symbol	(US1A)	(US1B)	(US1D)	(US1G)	(US1J)	(US1K)	(US1M)	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	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.0		1.3	1.7			V	
Maximum DC reverse current at Rated DC blocking voltage	I_R	5.0							μ A
		50							μ A
Maximum reverse recovery time at $I_F = 0.5$ A , $I_R = 1.0$ A , $I_{rr} = 0.25$ A	t_{rr}	50				75			nS
Typical junction capacitance at 4.0 V , 1MHz	C_J	15				10			pF
Thermal resistance from junction to ambient	$R_{\theta JA}$	75							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

(US1A~US1M) SMA

High Efficiency Recovery rectifiers

Characteristic Curves ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

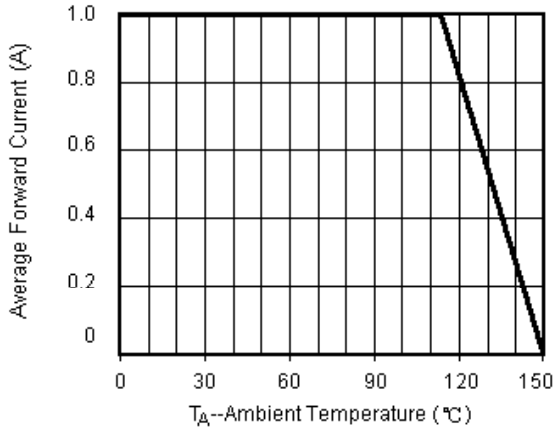


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

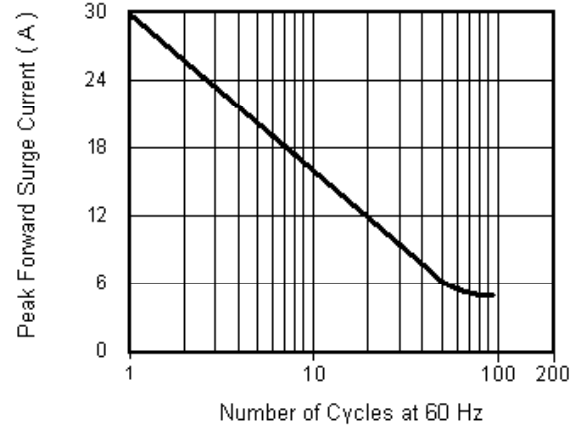


Fig.3 Typical Instantaneous Forward Characteristics

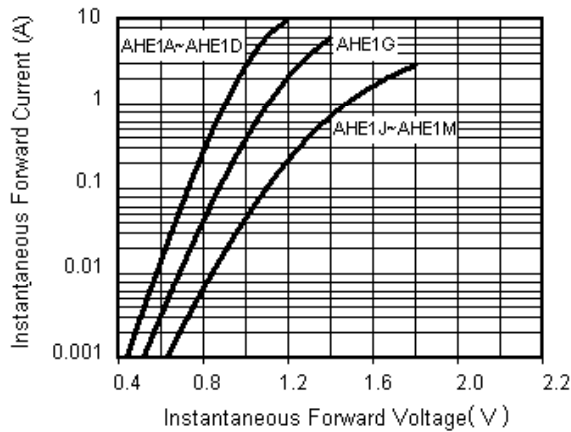


Fig.4 Typical Reverse Leakage Characteristics

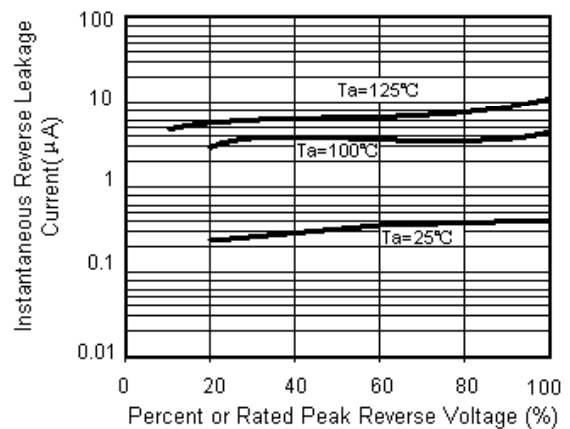


Fig.5 Typical Junction Capacitance

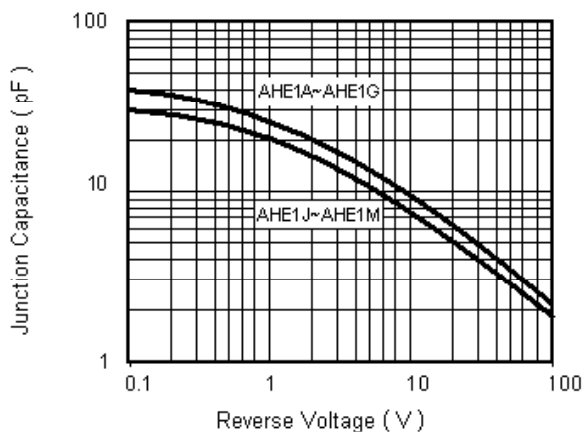


Fig.6 Transient Thermal Impedance

