

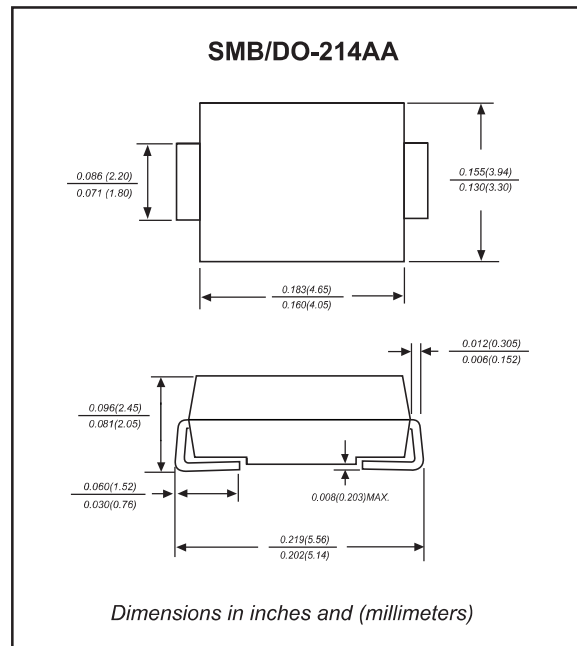
### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Compliant to RoHS Directive 2011/65/EU
- ◆ Compliant to Halogen-free
- ◆ Suffix "-Q1" for AEC-Q101

### Mechanical data

- ◆ **Case:** JEDEC DO-214AA molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	$I_O$			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			80	A
Reverse current	$T_A = 25^\circ\text{C}$	$I_R$	$V_R = 20V - 60V$		0.5	mA
			$V_R = 80V - 200V$		0.1	
Reverse current	$T_A = 100^\circ\text{C}$	$I_R$	$V_R = 20V - 60V$		10	mA
			$V_R = 80V - 200V$		5	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		55		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		500		pF
Storage temperature		$T_{STG}$	-65		+150	$^\circ\text{C}$

**Note:** 1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

SYMBOLS	$V_{RM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J$ , ( $^\circ\text{C}$ )
SS32-B-Q1	20	14	20	0.55	
SS34-B-Q1	40	28	40		
SS345-B-Q1	45	32	45		
SS35-B-Q1	50	35	50	0.70	
SS36-B-Q1	60	42	60		
SS38-B-Q1	80	56	80	0.85	
SS310-B-Q1	100	70	100		
SS315-B-Q1	150	105	150	0.92	
SS320-B-Q1	200	140	200		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

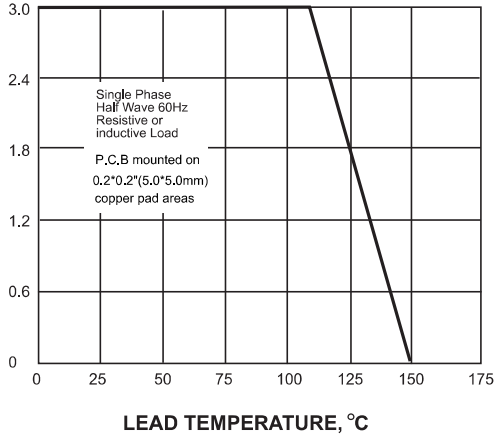
\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=3.0A$

### Rating and characteristic curves

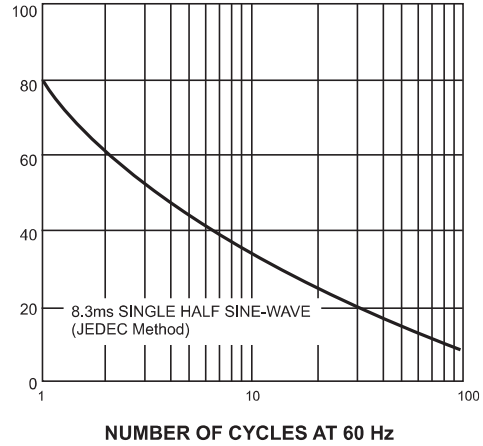
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



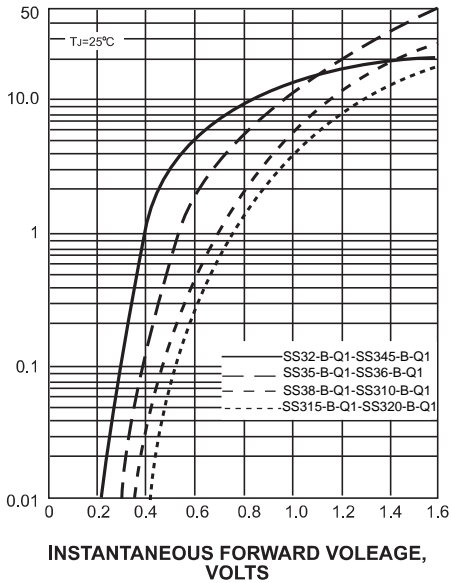
PEAK FORWARD SURGE CURRENT, AMPERES

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



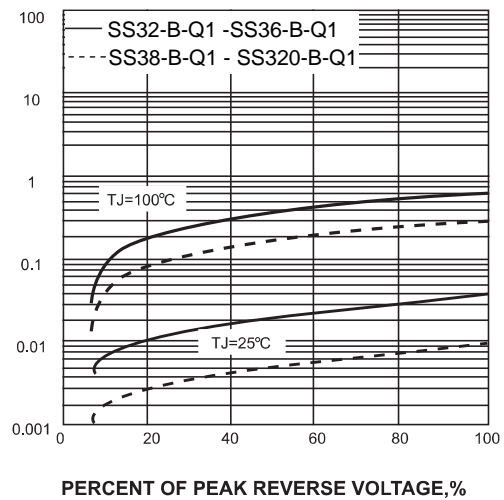
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



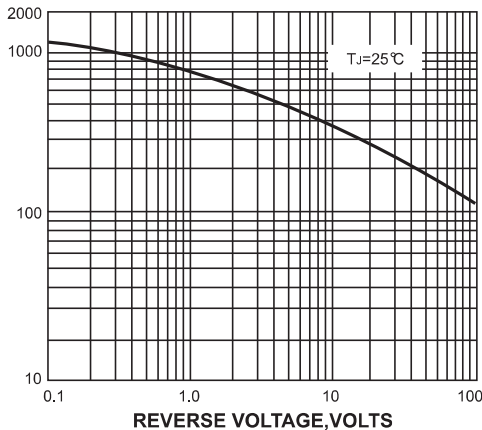
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



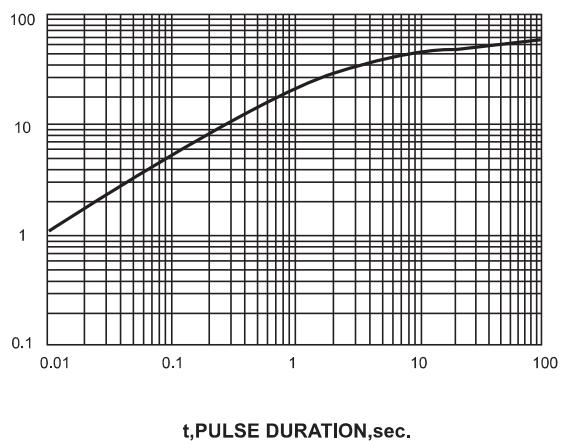
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE





TRANSIENT THERMAL IMPEDANCE, °C/W

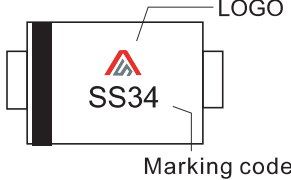
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



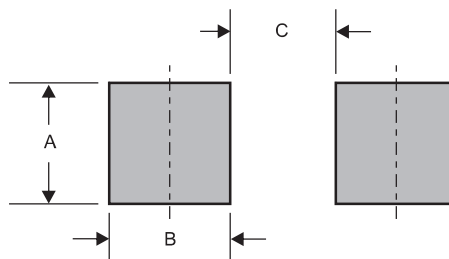
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code	Example
SS32-B-Q1	SS32	
SS34-B-Q1	SS34	
SS345-B-Q1	SS345	
SS35-B-Q1	SS35	
SS36-B-Q1	SS36	
SS38-B-Q1	SS38	
SS310-B-Q1	SS310	
SS315-B-Q1	SS315	
SS320-B-Q1	SS320	

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.090(2.30)	0.098(2.50)	0.070(1.80)