

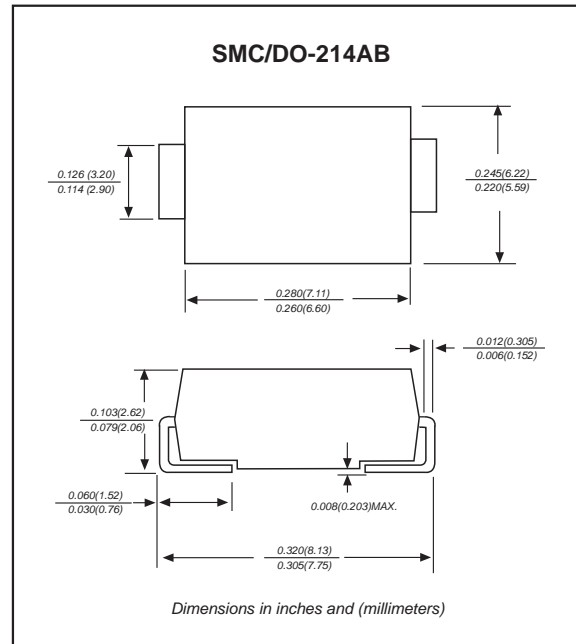
### Features

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

### Mechanical data

- ◆ **Case:** JEDEC DO-214AB 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.2	$I_O$			10.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			250	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$				50	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		10		$^\circ\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		130		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	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_{J,}$ ( $^\circ\text{C}$ )
S10A-C-Q1	50	35	50	1.15	-55 to +150
S10B-C-Q1	100	70	100		
S10D-C-Q1	200	140	200		
S10G-C-Q1	400	280	400		
S10J-C-Q1	600	420	600		
S10K-C-Q1	800	560	800		
S10M-C-Q1	1000	700	1000		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=10.0\text{A}$

### Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

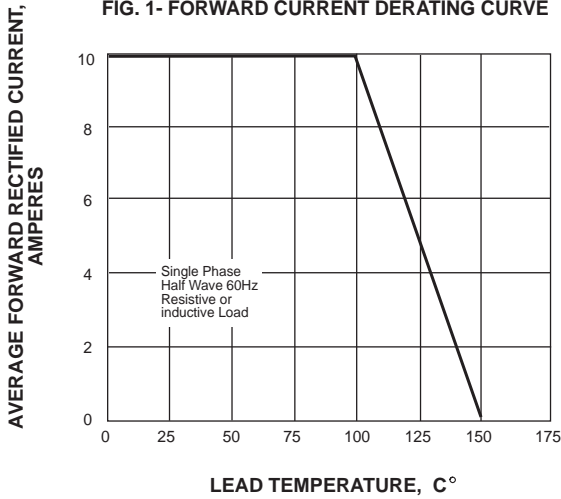


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

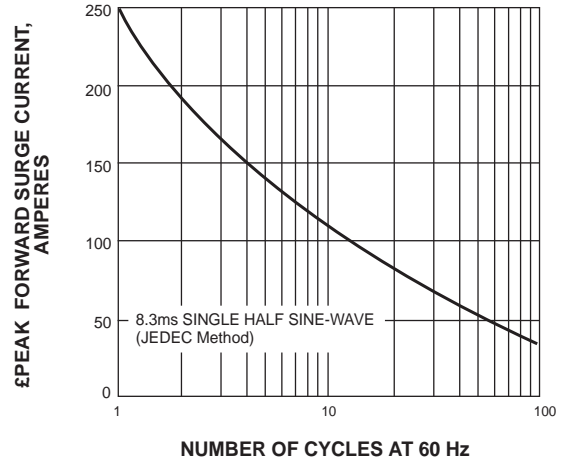


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

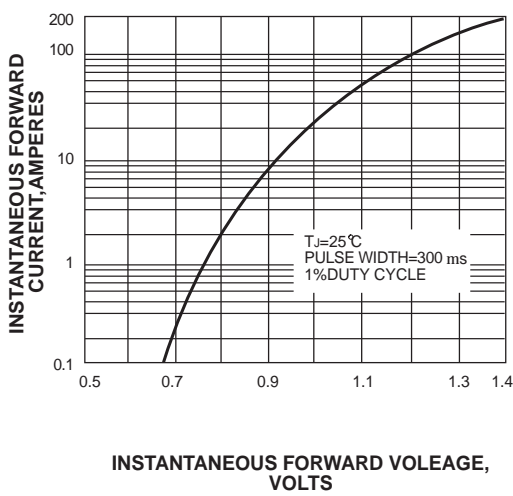


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

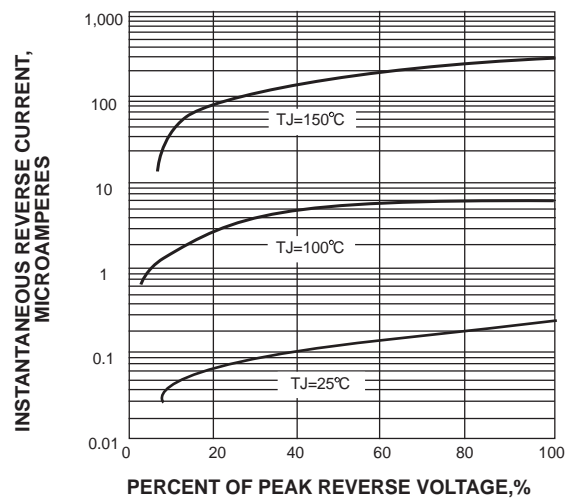


FIG. 5-TYPICAL JUNCTION CAPACITANCE

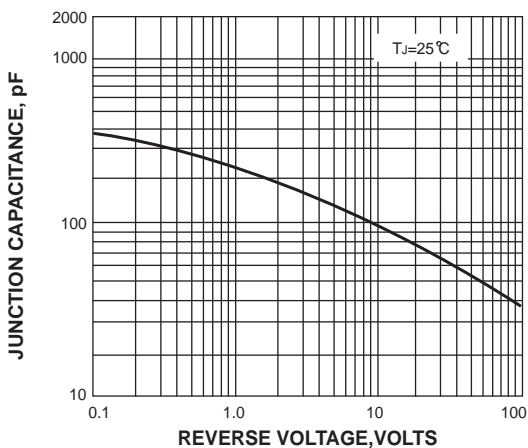
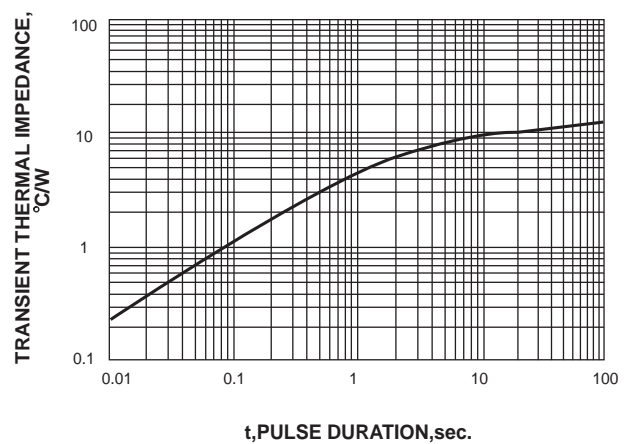




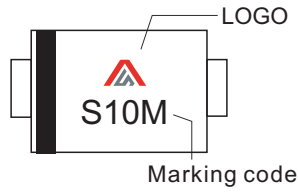
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code	Example
S10A-C-Q1	S10A	
S10B-C-Q1	S10B	
S10D-C-Q1	S10D	
S10G-C-Q1	S10G	
S10J-C-Q1	S10J	
S10K-C-Q1	S10K	
S10M-C-Q1	S10M	

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMC	0.132 (3.30)	0.100 (2.50)	0.176(4.40)