SS32-B-Q1 THRU SS320-B-Q1

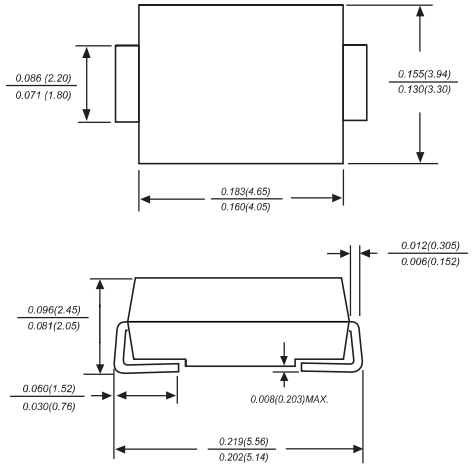
3.0A Surface Mount Schottky Barrier Rectifiers - 20V-200V

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

Package outline

SMB/DO-214AA



Dimensions in inches and (millimeters)

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

Maximum ratings and Electrical Characteristics (AT T_A=25°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°C	V_R = 20V - 60V	I_R			0.5	mA
		V_R = 80V - 200V				0.1	
Reverse current	T_A = 100°C	V_R = 20V - 60V	I_R			10	mA
		V_R = 80V - 200V				5	
Thermal resistance	Junction to ambient NOTE 1		$R_{\theta JA}$		55		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage		C_J		500		pF
Storage temperature			T_{STG}	-65		+150	°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, (°C)
SS32-B-Q1	20	14	20	0.55	-55 to +150
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

FIG. 1- FORWARD CURRENT DERATING CURVE

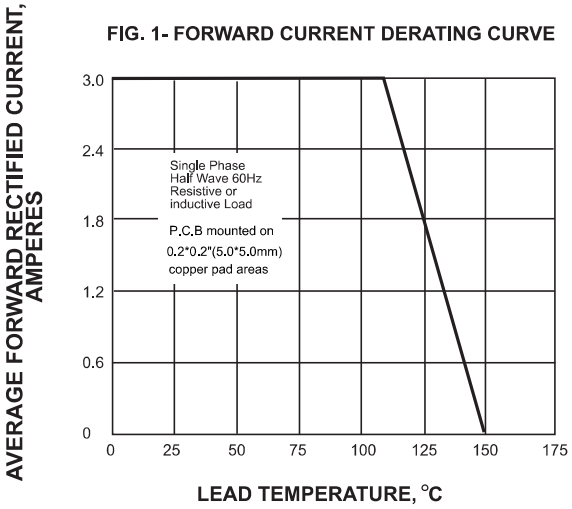


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

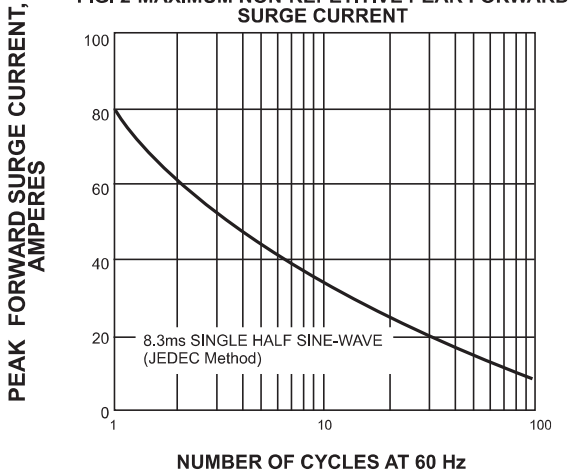


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

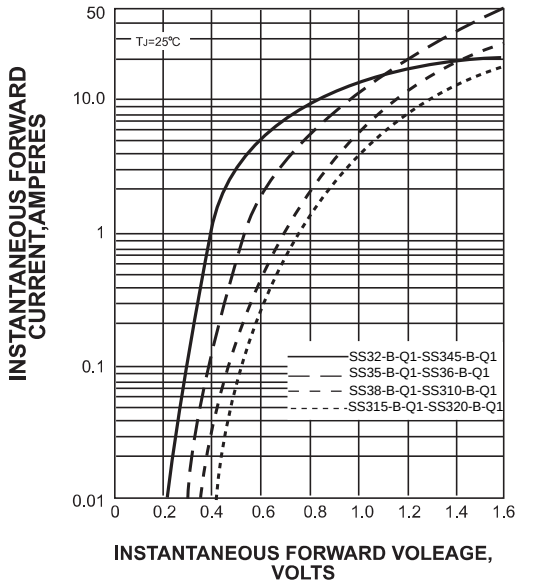


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

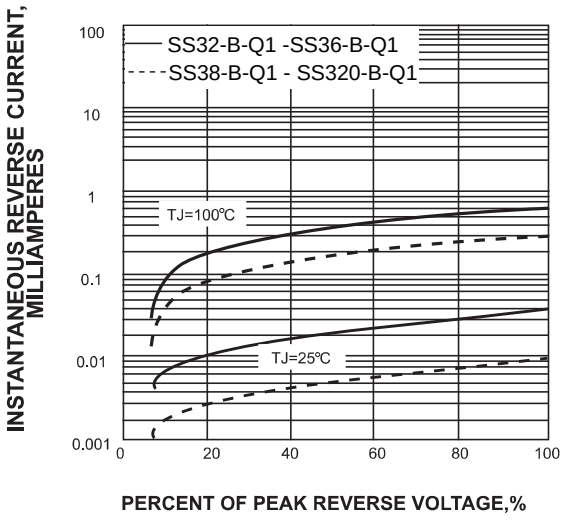


FIG. 5-TYPICAL JUNCTION CAPACITANCE

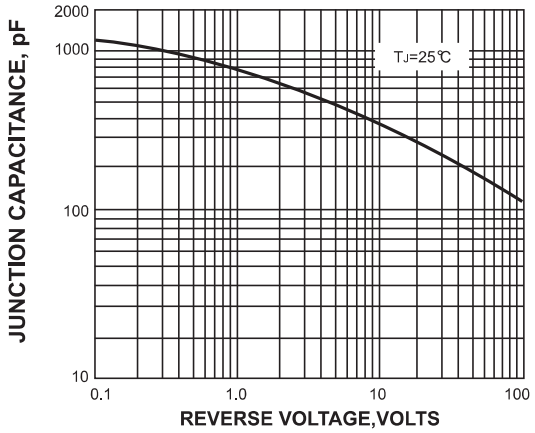
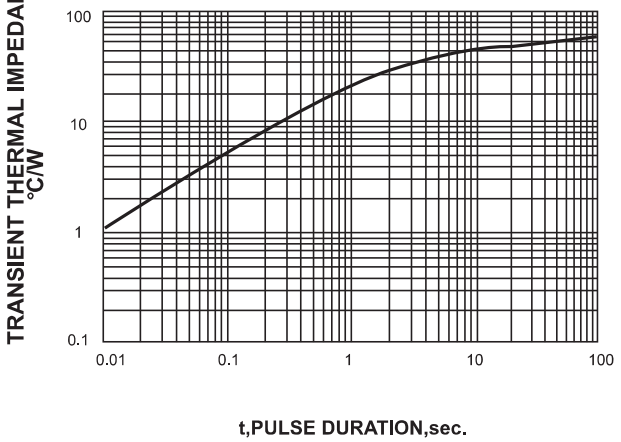


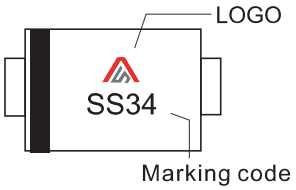
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



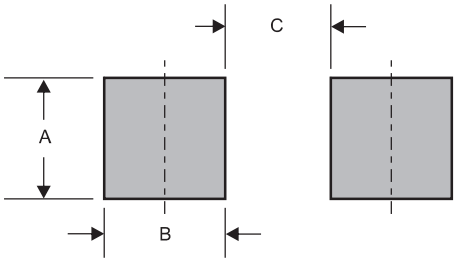
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
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)