

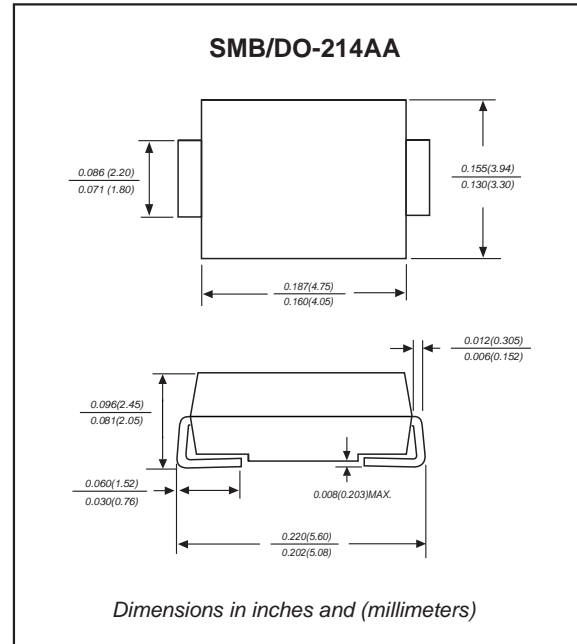
Features

- Low profile package
- Idea for automated placement
- Glass passivated chip junction
- High forward surge current capability
- Fast reverse recovery time
- Compliant to Halogen - free

Mechanical data

- **Case:** SMB/DO-214AA
- **Terminals:** Solder plated, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color line denotes the cathode end
- **Mounting Position:** Any

Package outline



Maximum ratings and Electrical Characteristics (Ta = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			5.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I_{FSM}			120	A
Forward surge current	1ms single half sine-wave (JEDEC method)	I_{FSM}			240	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			10	μA
	$V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$				150	
Thermal resistance, NOTE 1	Junction to ambient	$R_{\theta JA}$		60		$^\circ\text{C}/\text{W}$
Storage temperature		T_{STG}	-55		+150	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	C_J^{*6} (pF)	Operating temperature T_J ($^\circ\text{C}$)
RS5A-B-Q1	50	35	50	1.30	150	57	-55 to +150
RS5B-B-Q1	100	70	100				
RS5D-B-Q1	200	140	200				
RS5G-B-Q1	400	280	400		250	39	
RS5J-B-Q1	600	420	600				
RS5K-B-Q1	800	560	800				
RS5M-B-Q1	1000	700	1000	500	70		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=5.0\text{A}$

*5 Maximum Reverse recovery time, NOTE 2

*6 Diode Junction Capacitance, NOTE 3

Note: 1.P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas
 2. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 3. Measured at 1MHz and applied 4V DC reverse voltage

Rating and characteristic curves

Fig.1 Maximum Average Forward Current Rating

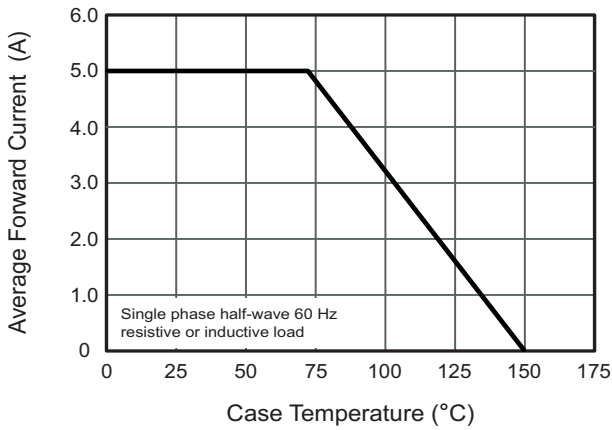


Fig.2 Typical Reverse Characteristics

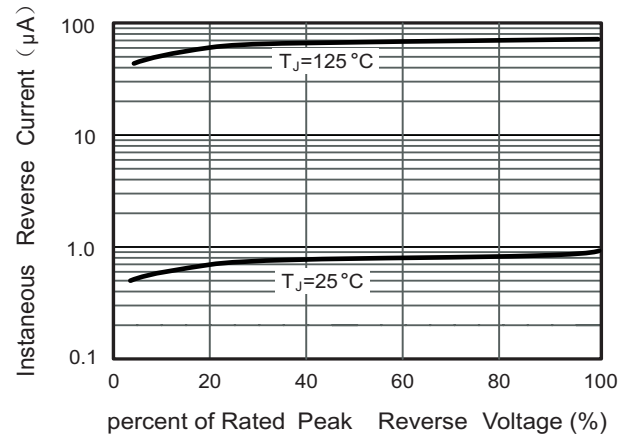


Fig.3 Typical Instantaneous Forward Characteristics

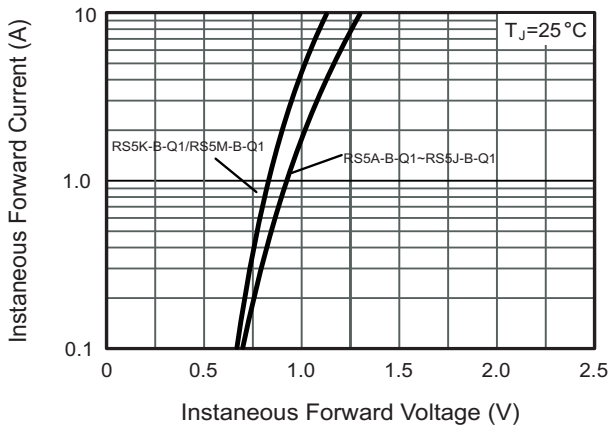


Fig.4 Typical Junction Capacitance

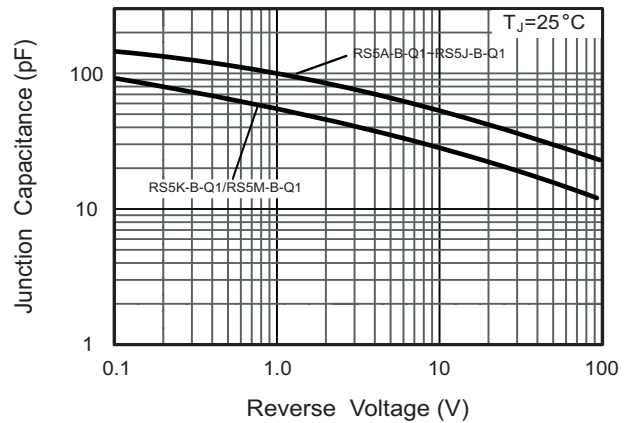
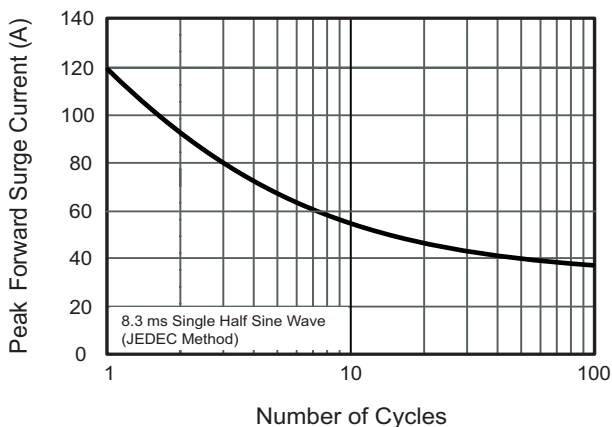




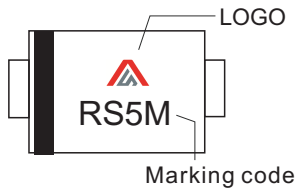
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



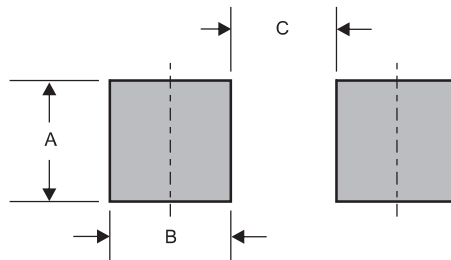
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
RS5A-B-Q1	RS5A	
RS5B-B-Q1	RS5B	
RS5D-B-Q1	RS5D	
RS5G-B-Q1	RS5G	
RS5J-B-Q1	RS5J	
RS5K-B-Q1	RS5K	
RS5M-B-Q1	RS5M	

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)