

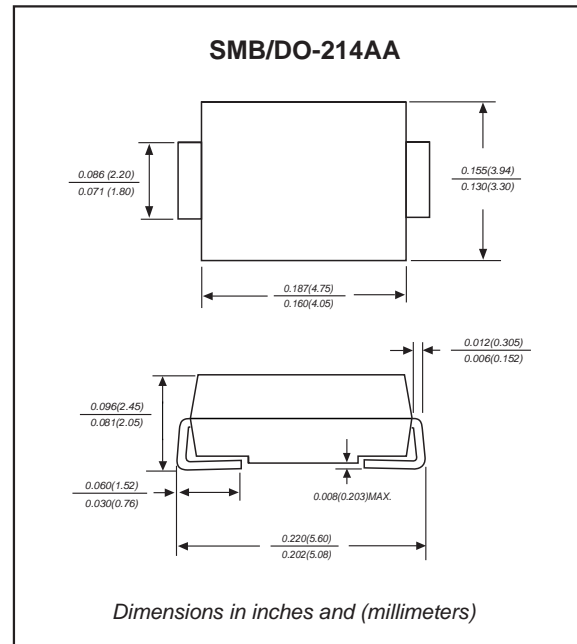
Features

- Low profile package
- Idea for automated placement
- Glass passivated chip junction
- High forward surge current capability
- Fast reverse recovery time
- Compliant to Halogen - free
- Suffix "-Q1" for AEC-Q101

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 methode)	I_{FSM}			120	A
Forward surge current	1ms single half sine-wave (JEDEC methode)	I_{FSM}			240	A
Current squared time	$3ms \leq t \leq 8.3ms$	I^2t			59.7	A ² s
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ C$	I_R			10	μA
	$V_R = V_{RRM} \quad T_A = 125^\circ C$				150	
Thermal resistance, NOTE 1	Junction to ambient	$R_{\theta JA}$		60		$^\circ C/W$
	Junction to Case	$R_{\theta JC}$		20		
	Junction to Lead	$R_{\theta JL}$		15		
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		70		pF
Storage temperature		T_{STG}	-55		+150	$^\circ C$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	Operating temperature T_{JL} ($^\circ C$)
RS5M-B-Q1	1000	700	1000	1.30	500	-55 to +150

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, $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=5.0A$
- *5 Maximum Reverse recovery time, NOTE 2

Rating and characteristic curves

Fig.1 Maximum Average Forward Current Rating

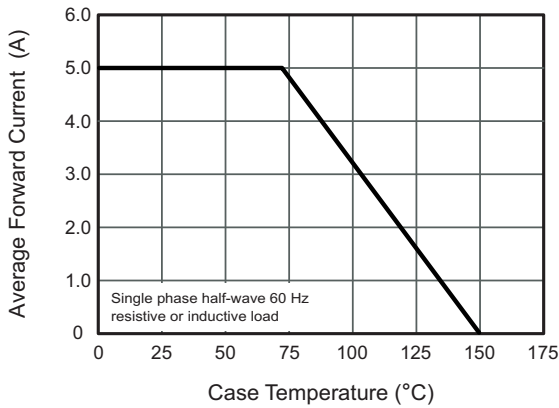


Fig.2 Typical Reverse Characteristics

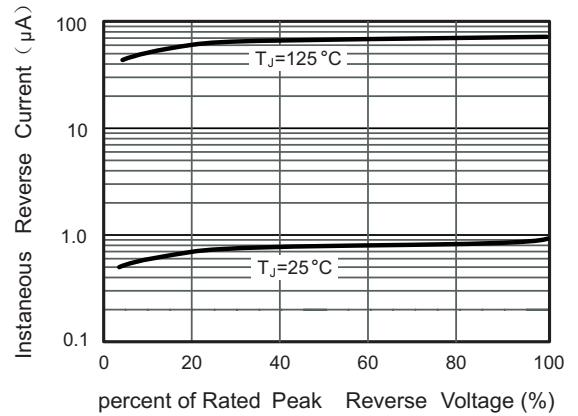


Fig.3 Typical Instantaneous Forward Characteristics

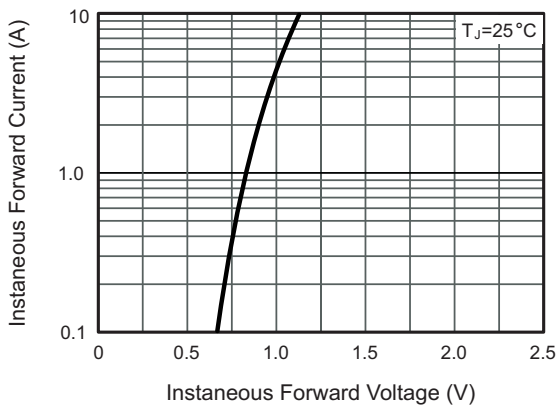


Fig.4 Typical Junction Capacitance

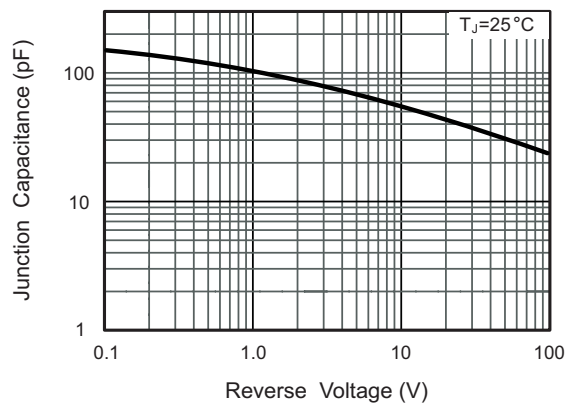
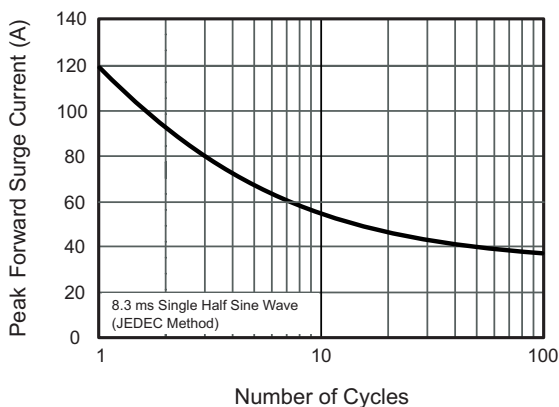




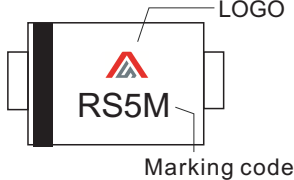
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



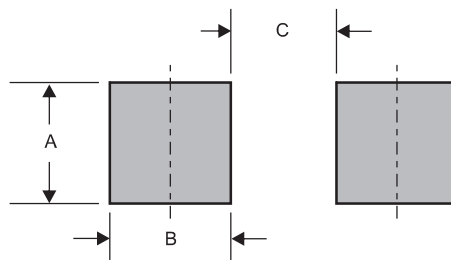
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
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)