

Features

- V_{RRM} 40V
- I_{FAV} 1A
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

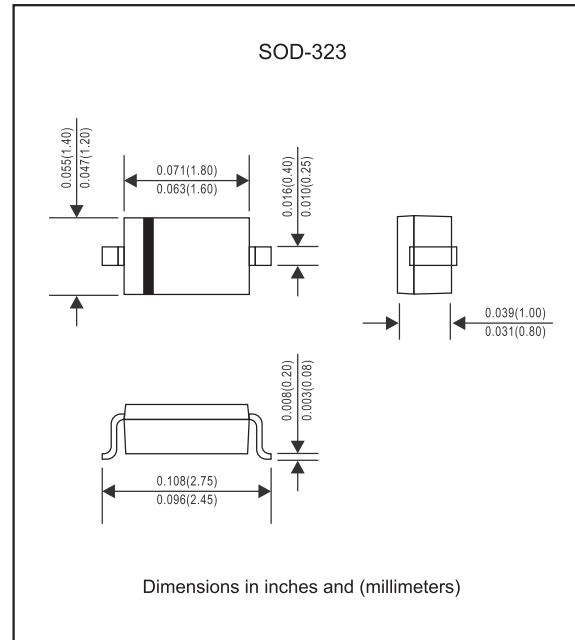
Applications

- Use as rectifiers in low-voltage,high-frequency inverters

Mechanical Data

- **Epoxy:** UL94-V0 rated flame retardant
- **Case:** SOD-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	MAX.	UNIT
Forward rectified current		I_O		1	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}		20	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R		40	μA
Power Dissipation		P_{tot}		250	mW
Thermal Resistance	Junction to Ambient	$R_{\theta JA}$		400	$^\circ\text{C/W}$
Diode junction capacitance	$V_R = 4\text{ V}$, $f = 1\text{ MHz}$	C_J		120	pF
Reverse Recovery Time	$I_F = I_R = 10\text{ mA}$, $I_{rr} = 1\text{ mA}$, $R_L = 100\Omega$	t_{rr}		40	ns
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)	Operating temperature T_{J1} ($^\circ\text{C}$)
B5819WS-T-Q1	40	28	40	0.6	-55 to +150

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage, $I_R = 1\text{ mA}$

*4 Maximum forward voltage@ $I_F = 1.0\text{ A}$

Characteristics (Typical)

Fig.1: $P_D - T_A$

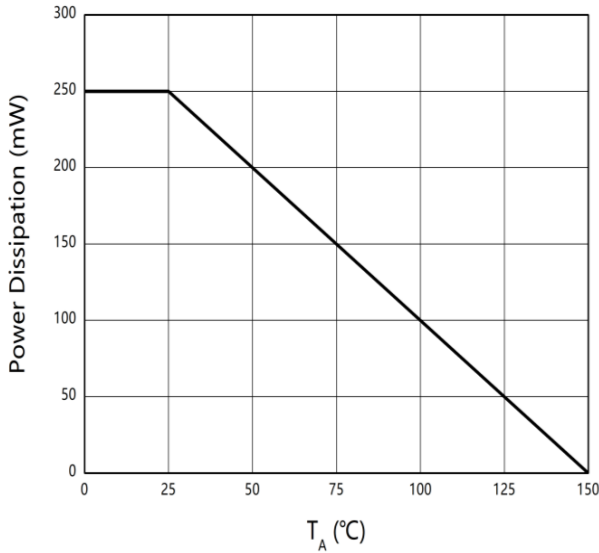


Fig.2: Junction Capacitance

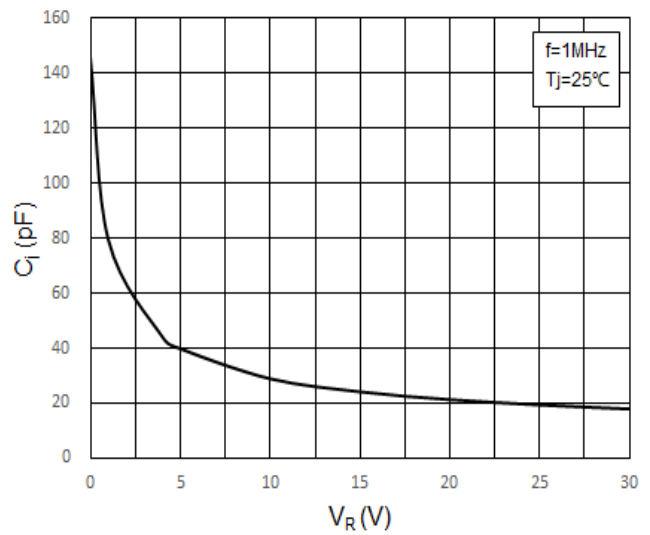


Fig.3: Forward characteristics

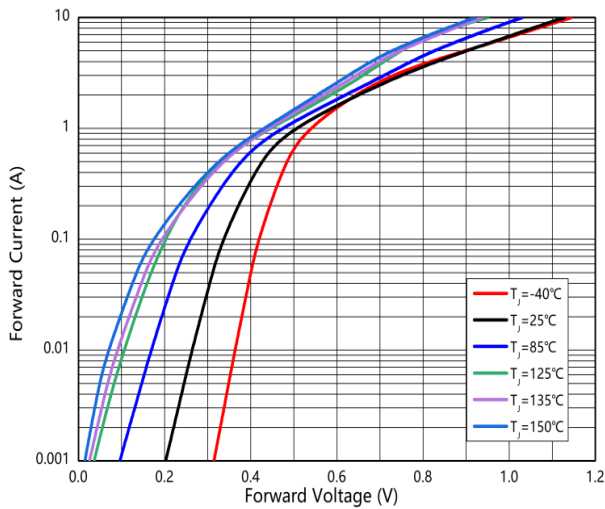
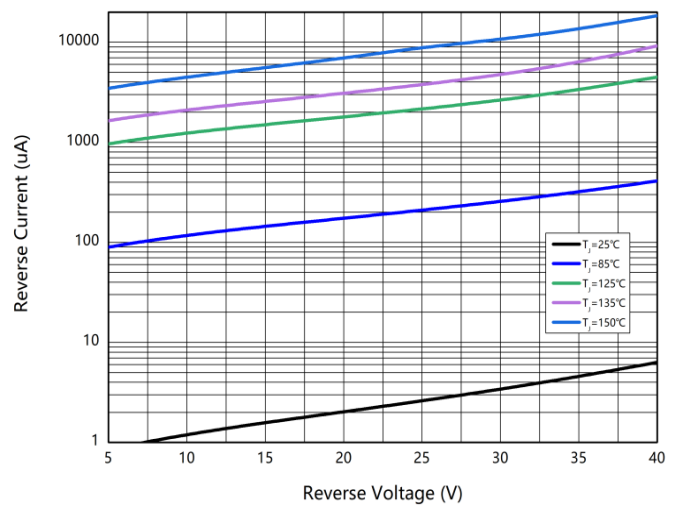
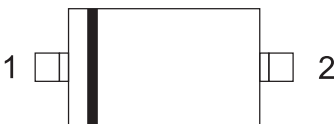



Fig.4: Reverse characteristics



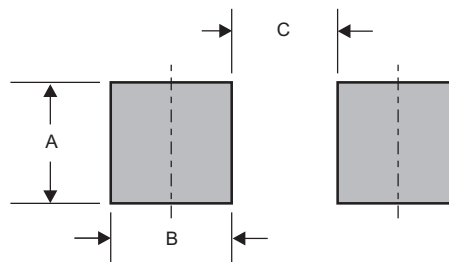
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
B5819WS-T-Q1	SL

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.027 (0.686)	0.024 (0.599)	0.074 (1.88)