

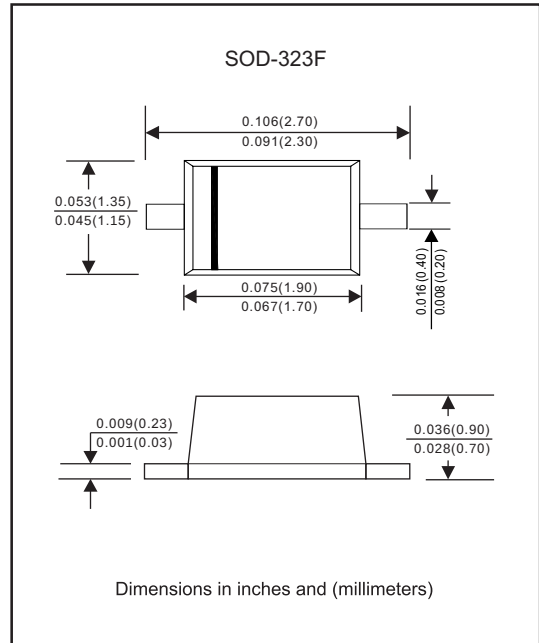
Features

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Mechanical data

- Case : SOD-323F
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- 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		I_O			1	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			10	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$	I_R			1	mA
Diode junction capacitance	$V_R = 4\text{ V}$, $f = 1\text{MHz}$	C_J		120		pF
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_J , ($^{\circ}\text{C}$)
B5819WSF-Q1	40	28	40	0.6	-40 to +125

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

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

Rating and characteristic curves

Fig.1 Forward Current Derating Curve

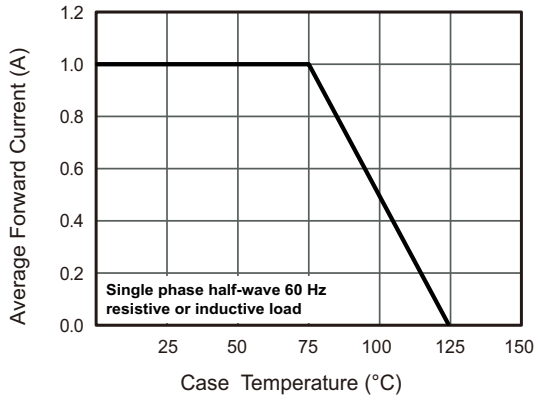


Fig.2 Typical Reverse Characteristics

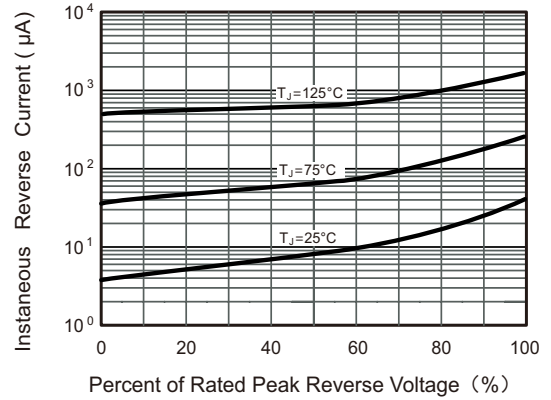


Fig.3 Typical Forward Characteristic

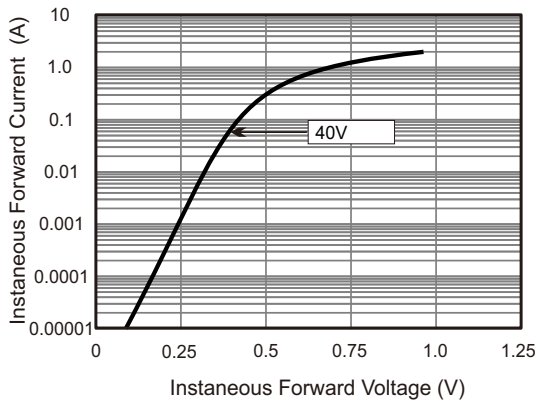


Fig.4 Typical Junction Capacitance

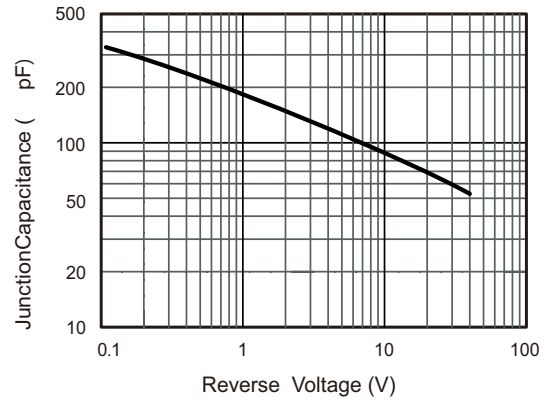
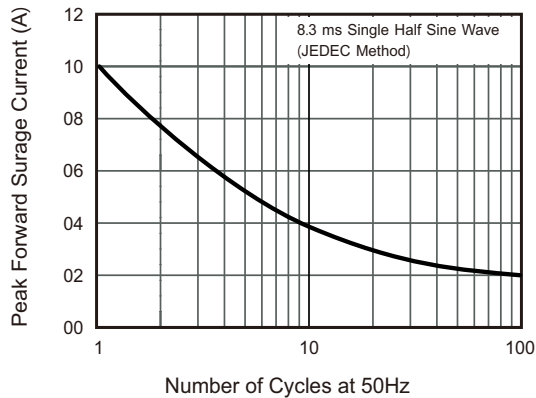


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



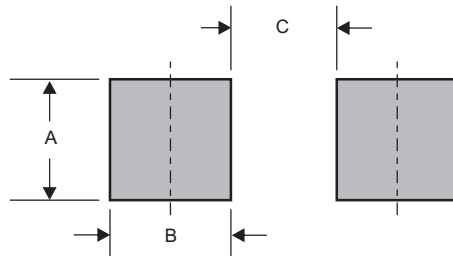
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
B5819WSF-Q1	SL

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323F	0.020 (0.50)	0.027 (0.68)	0.053 (1.34)