

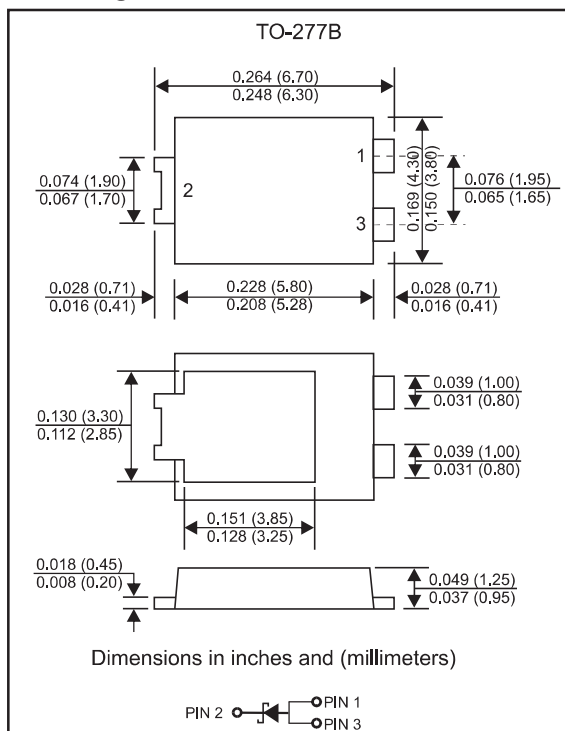
Features

- ◆ 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
- ◆ 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

Mechanical data

- ◆ Epoxy: UL94-V0 rated flame retardant
- ◆ Case : TO-277B , molded Plastic
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026

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	See Fig.2	I_O			10.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			175	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				50	
Thermal resistance	Junction to ambient NOTE 1	R_{BJC}		80		$^\circ\text{C}/\text{W}$
Storage temperature		T_{STG}	-55		+150	$^\circ\text{C}$

Note: 1.P.C.B. mounted with 0.6x0.6" (16x16mm) 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)
SS1020-T-Q1	20	14	20	0.55	-55 to +150
SS1040-T-Q1	40	28	40		
SS1060-T-Q1	60	42	60	0.70	
SS1080-T-Q1	80	56	80	0.85	
SS10100-T-Q1	100	70	100		
SS10150-T-Q1	150	105	150	0.95	
SS10200-T-Q1	200	140	200		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage @ $I_F=10.0\text{A}$

Rating and characteristic curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

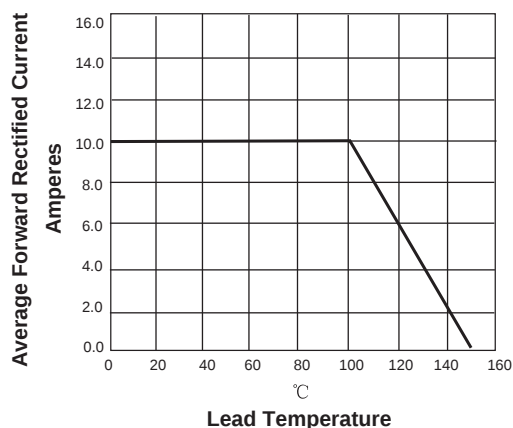


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

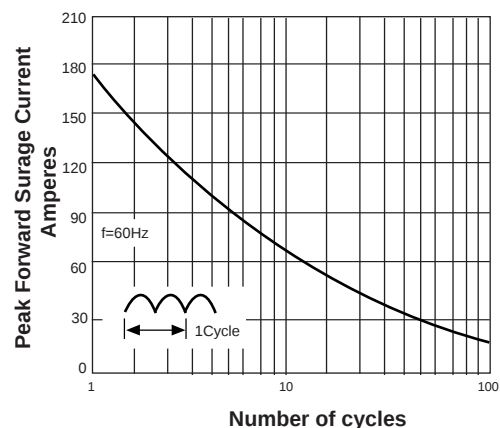


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

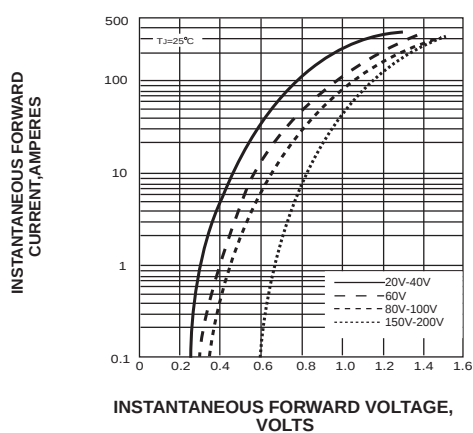
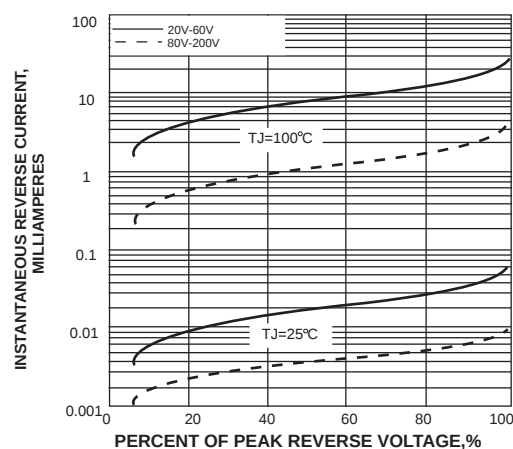
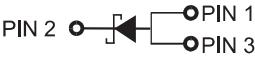


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Pinning information

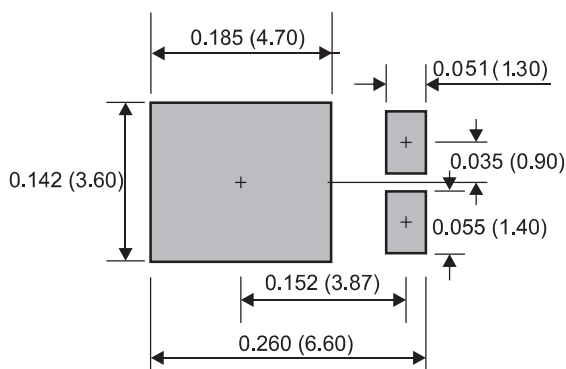
Pin	Simplified outline	Symbol
Pin2 cathode Pin1 anode Pin3 anode		

Marking

Type number	Marking code
SS1020-T-Q1	SS1020
SS1040-T-Q1	SS1040
SS1060-T-Q1	SS1060
SS1080-T-Q1	SS1080
SS10100-T-Q1	SS10100
SS10150-T-Q1	SS10150
SS10200-T-Q1	SS10200

Suggested solder pad layout

TO-277B



Dimensions in inches and (millimeters)