

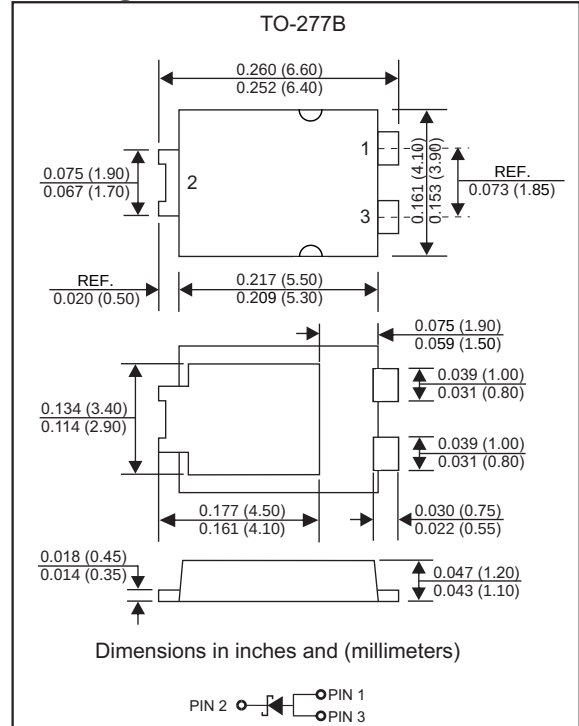
Features

- Ideal for automated placement
- Low power losses
- High forward surge capability
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : TO-277B ,molded Plastic
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking:SL1045

Package outline



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

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Average Rectified Output Current @ 60Hz -sine wave, R- load	I_O	10	A
Forward Surge Current (Non-repetitive) @ 60Hz Half-sine wave, 1 cycle, $T_A=25^{\circ}\text{C}$	I_{FSM}	200	A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_J=25^{\circ}\text{C}$	I^2t	166	A^2s
Storage Temperature	T_{stg}	-55 ~ +150	$^{\circ}\text{C}$
Operating Junction Temperature	T_J	-55 ~ +150	$^{\circ}\text{C}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	Min	Typ	Max	UNIT
Peak Forward Voltage	V_{FM}	$I_{FM}=10.0\text{A}, T_J=25^{\circ}\text{C}$	-	0.43	0.47	V
		$I_{FM}=10.0\text{A}, T_J=125^{\circ}\text{C}$	-	0.37	0.40	
Reverse Breakdown Voltage	V_{BR}	$I_R=0.5\text{mA}$	45	-	-	V
Leakage Current	I_R	$V_R=45\text{V}, T_J=25^{\circ}\text{C}$	-	-	0.3	mA
		$V_R=45\text{V}, T_J=100^{\circ}\text{C}$	-	-	50	

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS

Thermal Characteristics

PARAMETER	SYMBOL	VALUE	UNIT
Thermal Resistance Junction to Ambient	$R_{\theta J-A}$	30	$^{\circ}\text{C/W}$
Thermal Resistance Junction to Case	$R_{\theta J-C}$	8	$^{\circ}\text{C/W}$

Rating and characteristic curves

FIG.1: I_o - T_c Curve

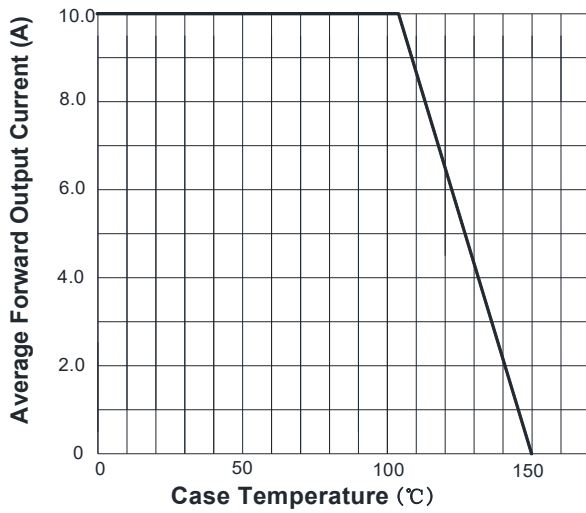


FIG.2: Forward Surge Current Capability

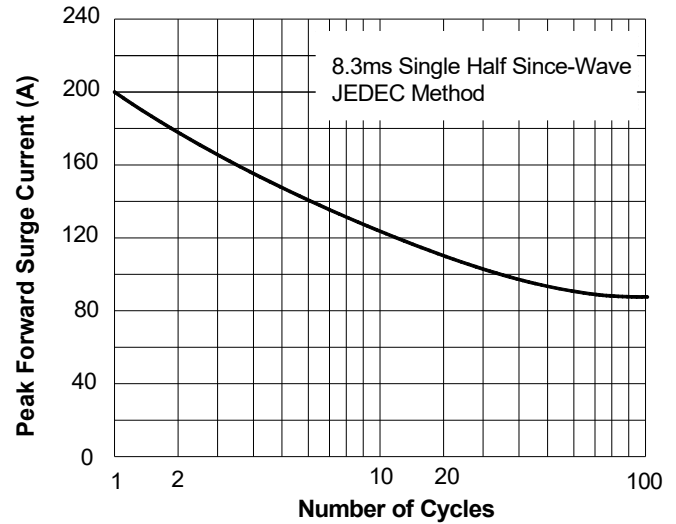


FIG.3: Forward Voltage

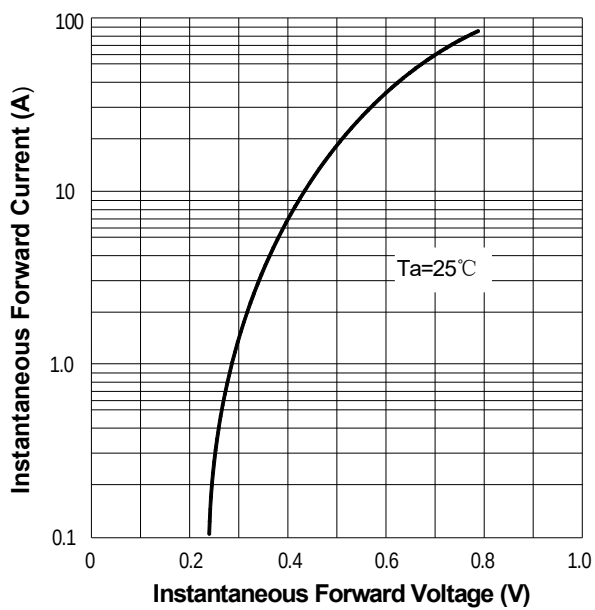
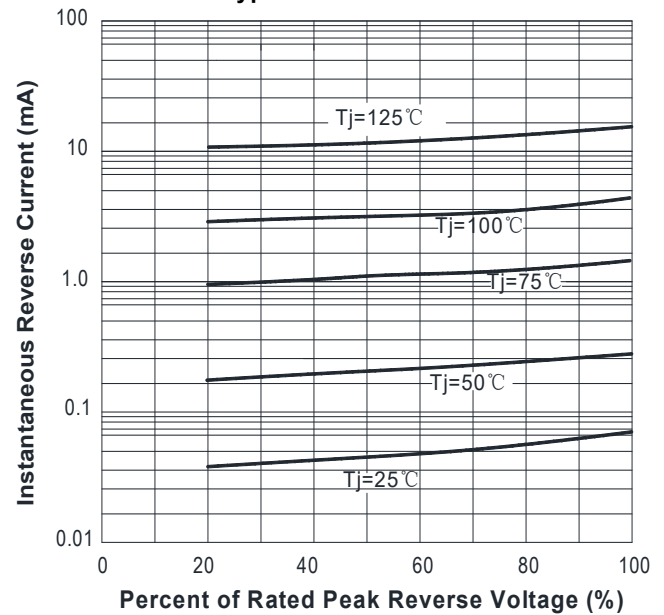
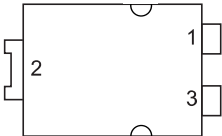


FIG.4: Typical Reverse Characteristics



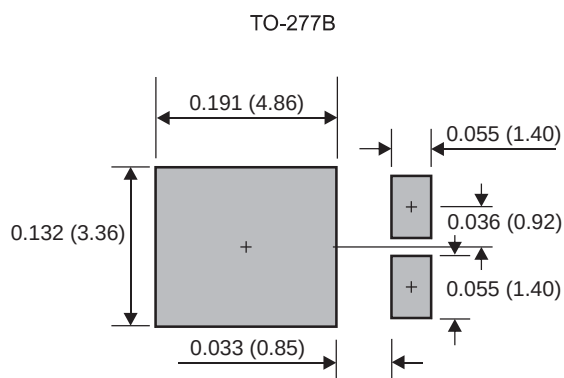
Pinning information

Pin	Simplified outline	Symbol
Pin2 cathode Pin1 anode Pin3 anode		

Marking

Type number	Marking code
SL1045Y-T-Q1	SL1045

Suggested solder pad layout



Dimensions in inches and (millimeters)