

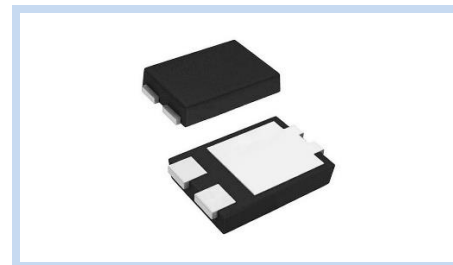
Schottky Barrier Rectifier 45V 10A TO-277B

SL1045T277

MERITEK

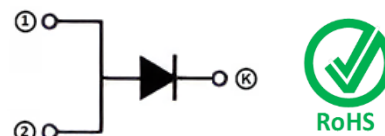
FEATURES

- Ultra-Low Forward Voltage Drop
- Very Low-Profile Type Height of 1.1mm
- Low Power Losses, High Efficiency Operation
- Low Thermal Resistance Package
- Applications: Mobile Charger, Reverse Polarity Protection, Solar Panel



MECHANICAL DATA

- Case: Molded Plastic, TO-277B package
- Epoxy : UL 94V-O rate flame retardant
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026



MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3ms single half-sine-wave, $T_A=25^\circ\text{C}$	I_{FSM}	250	A
Typical Thermal Resistance	From Junction to ambient	$R_{\theta JA}$	80 $^\circ\text{C/W}$
	From Junction to case	$R_{\theta JC}$	15 $^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	$I_R=0.5\text{mA}, T_J=25^\circ\text{C}$	V_{BR}	45	--	--	V
Instantaneous Forward Voltage	$I_F=8\text{A}, T_J=25^\circ\text{C}$	V_F	--	0.4	--	mV
	$I_F=10\text{A}, T_J=25^\circ\text{C}$		--	0.42	0.45	
Reverse Leakage Current	$V_R=45\text{V}, T_J=25^\circ\text{C}$	I_R	--	51	300	μA
	$V_R=45\text{V}, T_J=100^\circ\text{C}$		--	5	15	mA

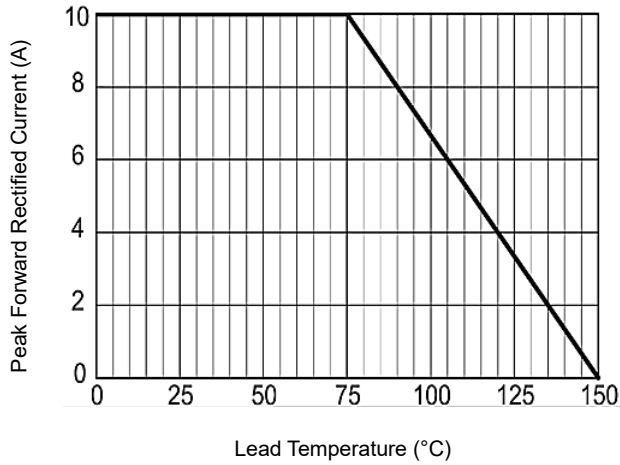
Note:

1. $T_A = 25^\circ\text{C}$ unless otherwise specified.

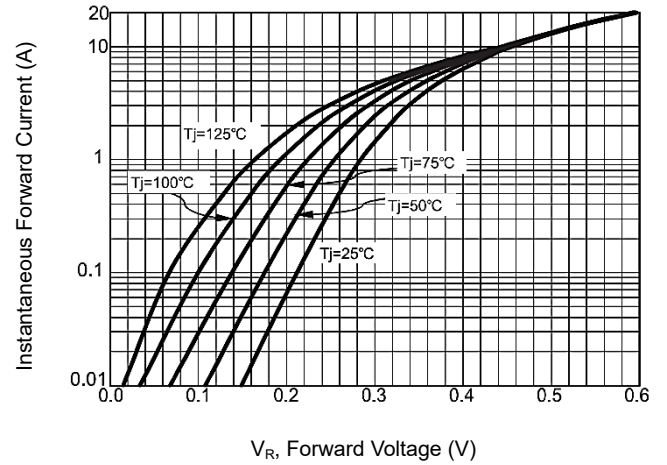
2. Mounted on FR-4 substrate PCB copper pad area. Cathode pad dimensions 4.95x3.4mm², and anode pad dimensions 1.55x5.0mm².

CHARACTERISTIC CURVES

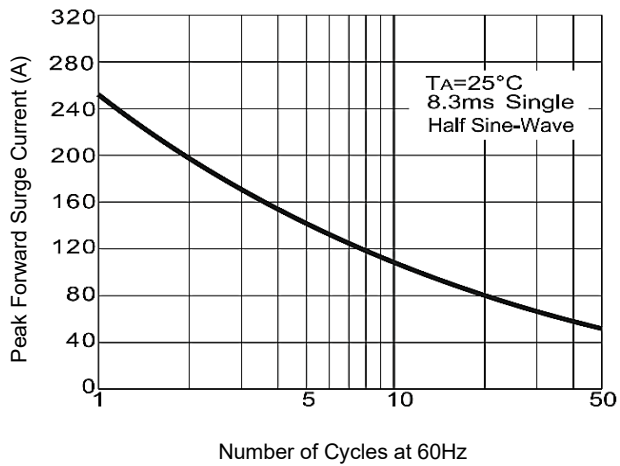
Typical Forward Current Derating Curve



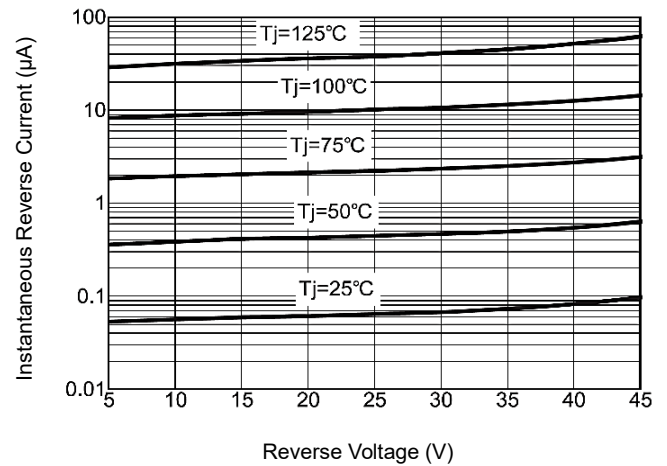
Typical Instantaneous Forward Characteristics



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristics



DIMENSIONS

Item	Min. (mm)	Max. (mm)
A	0.95	1.25
A2	0.20	0.45
b1	0.80	1.00
b2	1.70	1.90
D	4.30	4.80
D2	2.85	3.30
E	6.30	6.70
E1	5.28	5.80
E2	3.25	3.85
e	1.65	1.95
L	0.41	0.71

