

## TO-277 Plastic-Encapsulate Diodes

### Schottky Rectifier

#### Features

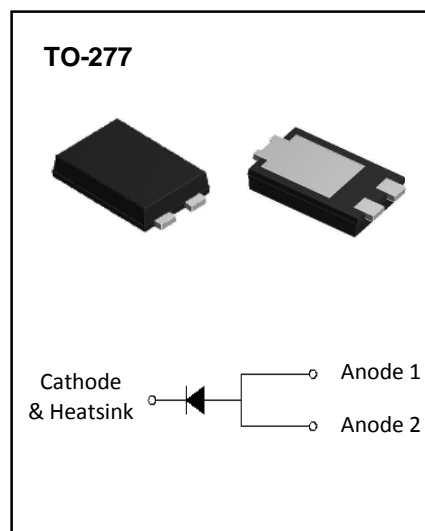
- $I_o$  10A
- $V_{RRM}$  300V
- High surge current capability

#### Applications

- Rectifier

#### Marking

- SP10V300L



#### MAXIMUM RATINGS

$T_A=25^\circ\text{C}$  unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	300	V
Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	120	A
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

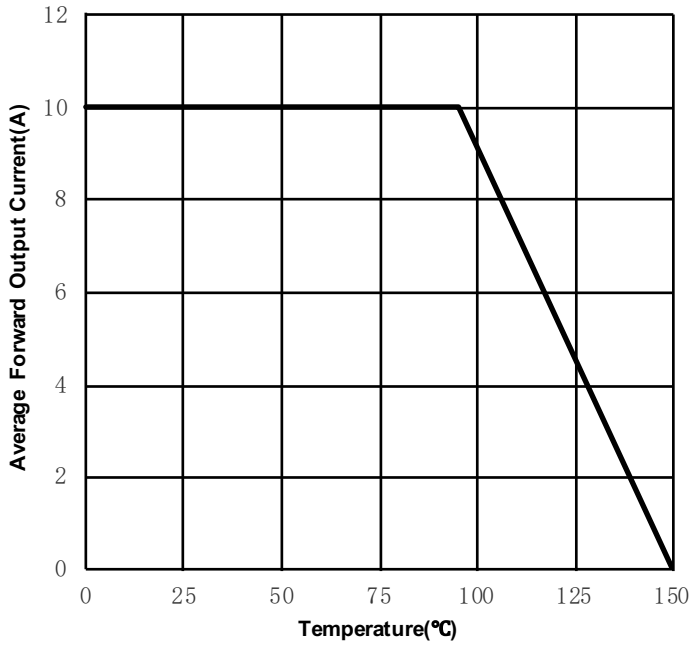
#### ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$  unless otherwise noted

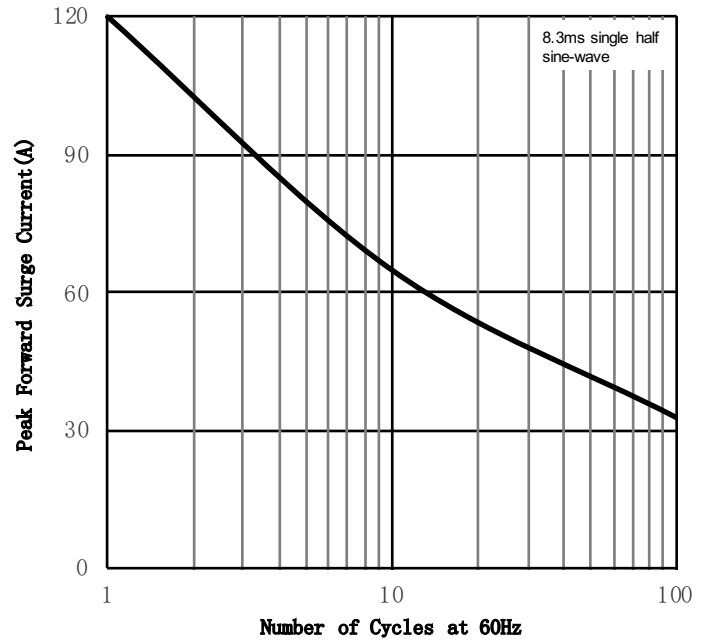
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=3\text{A}$	$T_A=25^\circ\text{C}$	$V_F$	0.79	0.82	V
	$T_A=125^\circ\text{C}$		0.7	0.75	
Forward Voltage@ $I_F=10\text{A}$	$T_A=25^\circ\text{C}$		0.93	0.97	
	$T_A=125^\circ\text{C}$		0.83	0.88	
Reverse Current @ $V_{RRM}$	$T_A=25^\circ\text{C}$	$I_R$	1	10	$\mu\text{A}$
	$T_A=125^\circ\text{C}$		0.6	5	mA
Typical Thermal Resistance		$R_{\theta JA}$	88		$^\circ\text{C}/\text{W}$

# Typical Characteristics

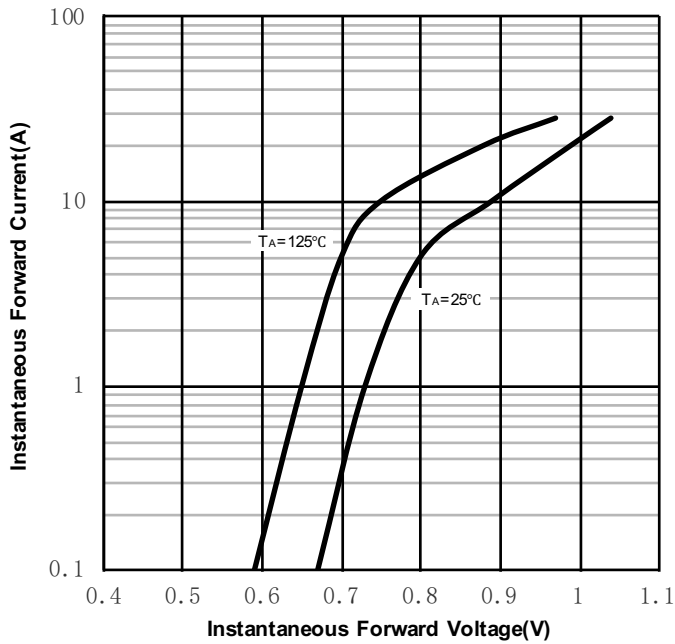
**FIG.1: Forward Output Current Derating Curve**



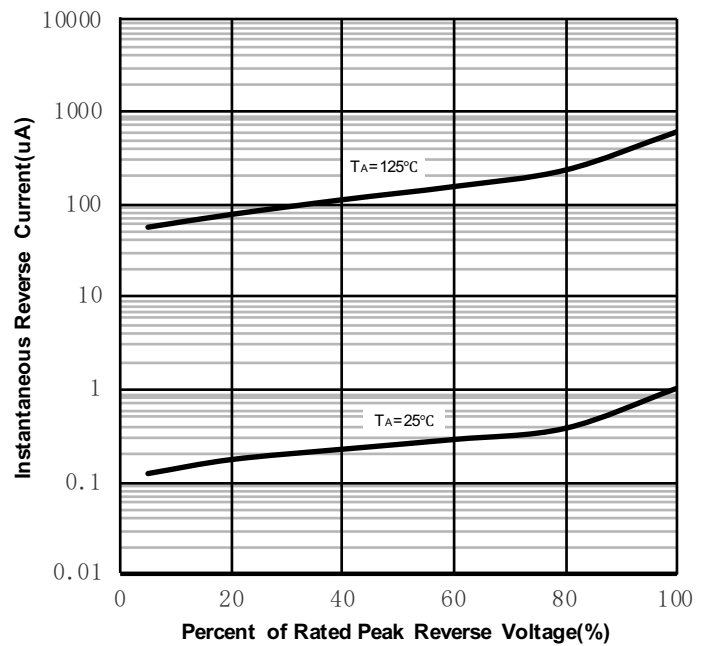
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



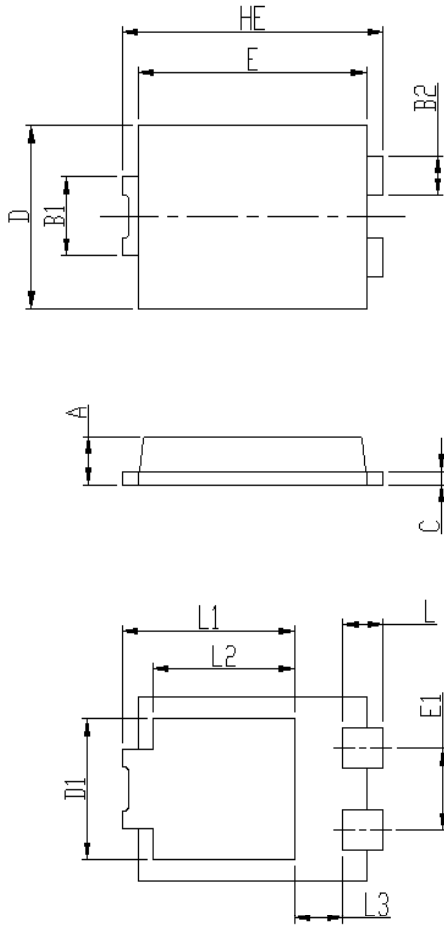
**FIG.3: Typical Forward Characteristics**



**FIG.4: Typical Reverse Characteristics**

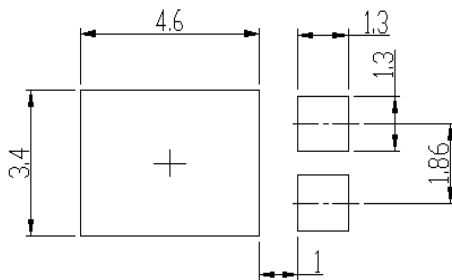


## TO- 277 Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

## TO- 277 Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.

### NOTICE

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