

TO-277 Plastic-Encapsulate Diodes

Schottky Rectifier

Features

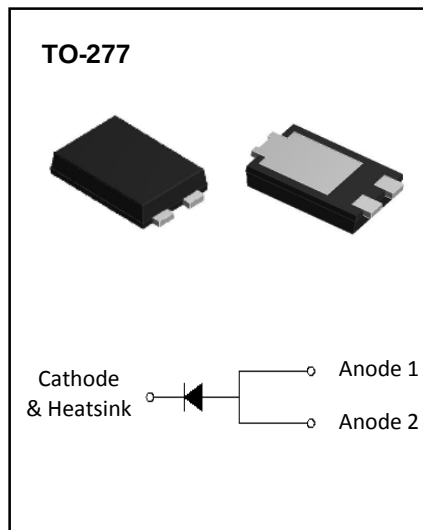
- I_o 10A
- V_{RRM} 45V
- High surge current capability
- Low V_f

Applications

- Rectifier

Marking

- SP10V45L



MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	45	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}	160	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	0.35	0.4	V
	$T_A=125^{\circ}\text{C}$		0.27	-	
Forward Voltage @ $I_F=10\text{A}$	$T_A=25^{\circ}\text{C}$		0.47	0.51	
	$T_A=125^{\circ}\text{C}$		0.44	-	
Reverse Current @ V_{RRM}	$T_A=25^{\circ}\text{C}$	I_R	60	120	μA
	$T_A=125^{\circ}\text{C}$		25	-	mA
Typical Thermal Resistance (junction to ambient)		$R_{\theta JA}$	102		$^{\circ}\text{C/W}$

FIG.1: Forward Output Current Derating Curve

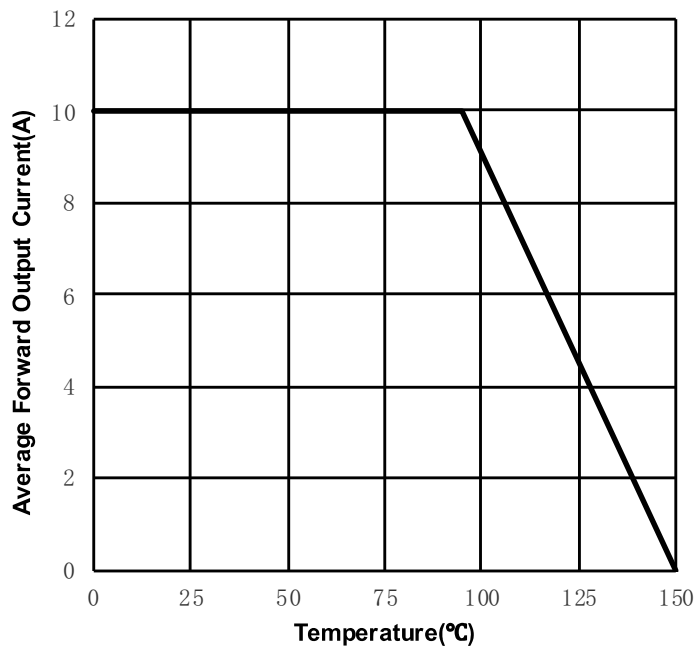


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

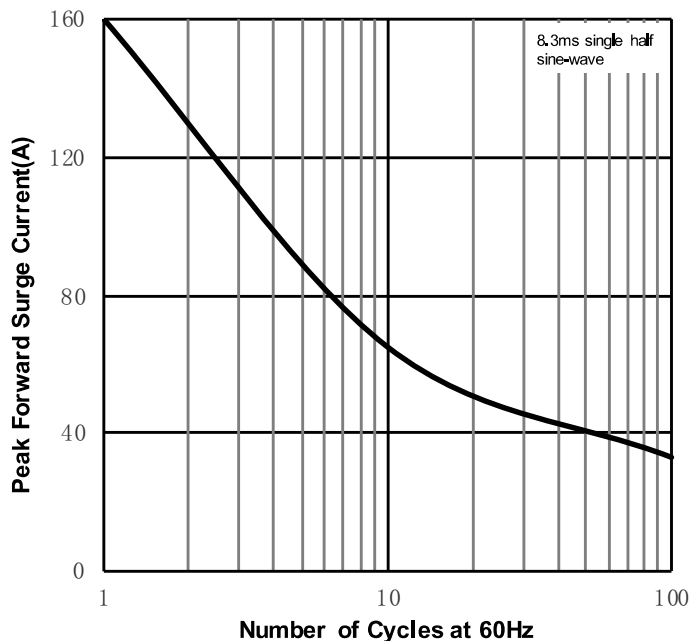


FIG.3: Typical Forward Characteristics

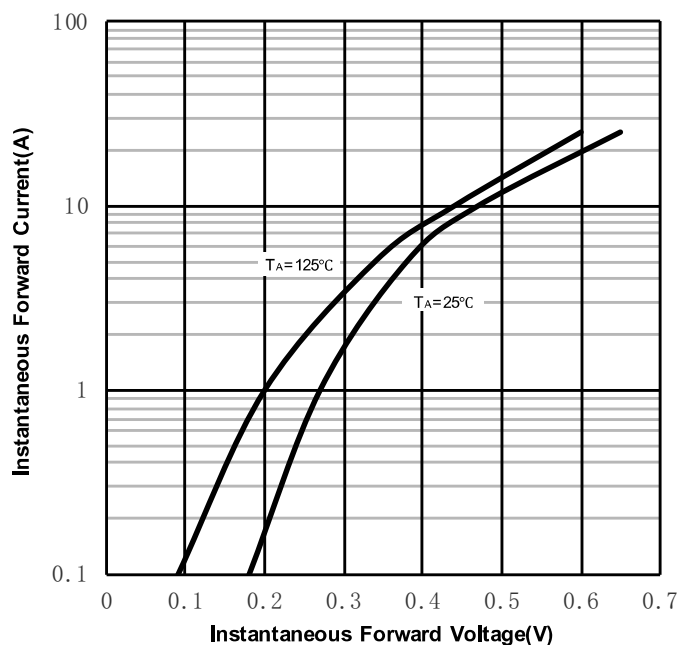
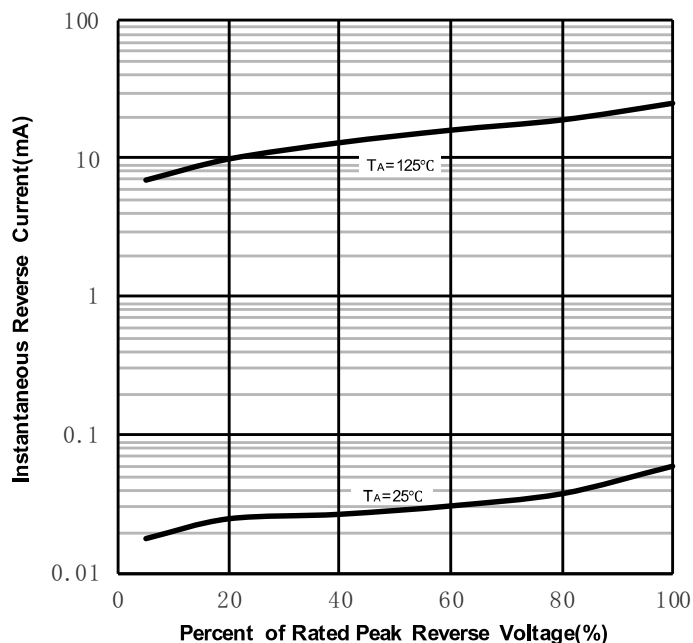
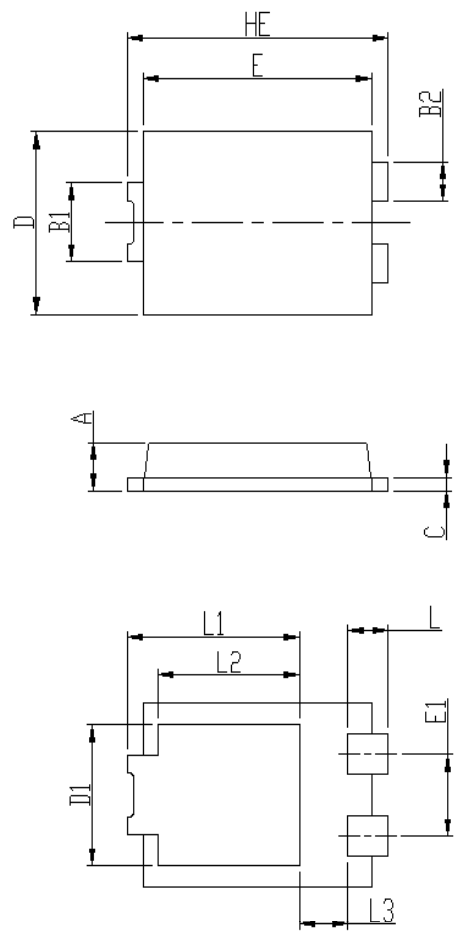


FIG.4: Typical Reverse Characteristics

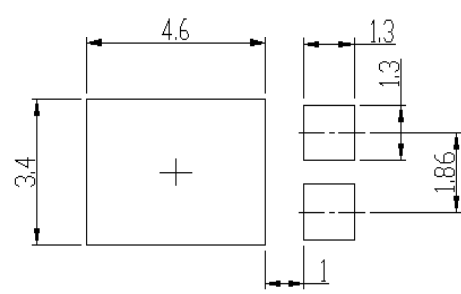


TO- 277 Package Outline Dimensions



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:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

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