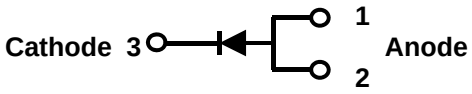
10S45SP TO277

Trench MOS Barrier Schottky Rectifier, Low VF Low IR

TO-277





Features

- Advanced trench technology
- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead Free Finish, RoHS Compliant

Applications

- DC/DC Converters
- AC/DC Adaptors

Maximum ratings and electrical characteristics (TJ = 25°C unless otherwise noted)

Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V_{RRM}	45		V
Maximum average forward rectified current			$I_{F(AV)}$	10		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I_{FSM}	240		A
Operating junction and storage temperature range			T_J, T_{STG}	-40 to +150		°C
Typical thermal resistance per diode (Mounted on FR-4 PCB)			$R_{\theta JA}$	72		°C/W
				TYP.	MAX.	
Instantaneous forward voltage per diode	I_F=2A	T_J=25°C	$V_{F(1)}$	0.34	-	V
	I_F=10A			0.43	0.47	
	I_F=2A	T_J=125°C		0.22	-	
	I_F=10A			0.34	-	
Instantaneous reverse current per diode at rated reverse voltage		T_J=25°C	$I_{R(2)}$	25	100	uA
		T_J=125°C		-	50	mA

Notes:

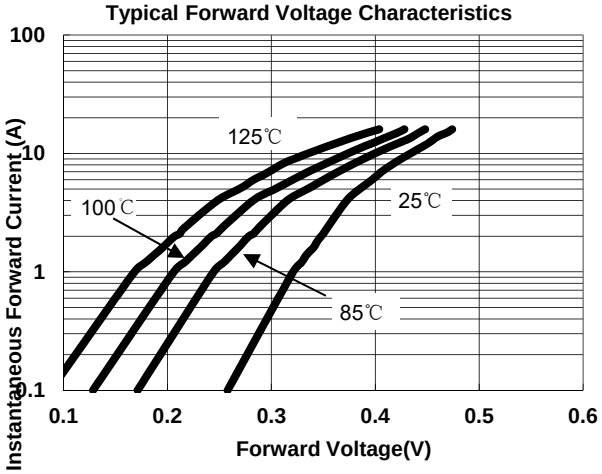
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≦ 40 ms

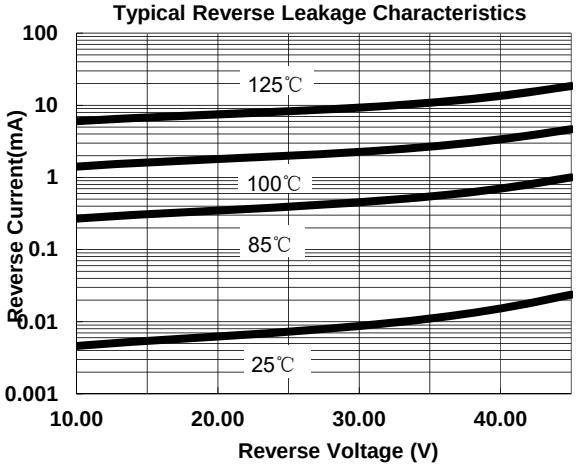
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RATINGS AND CHARACTERISTICS CURVES (TA = 25 ˚C unless otherwise noted)

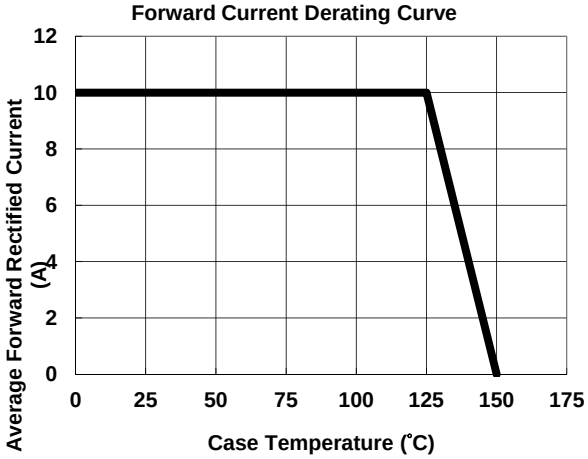
Typical Forward Voltage Characteristics



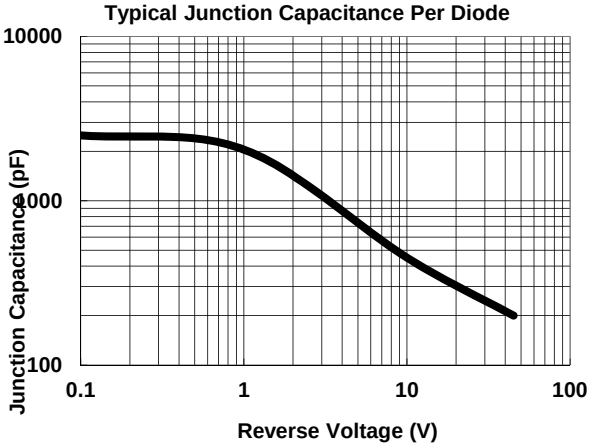
Typical Reverse Leakage Characteristics



Forward Current Derating Curve

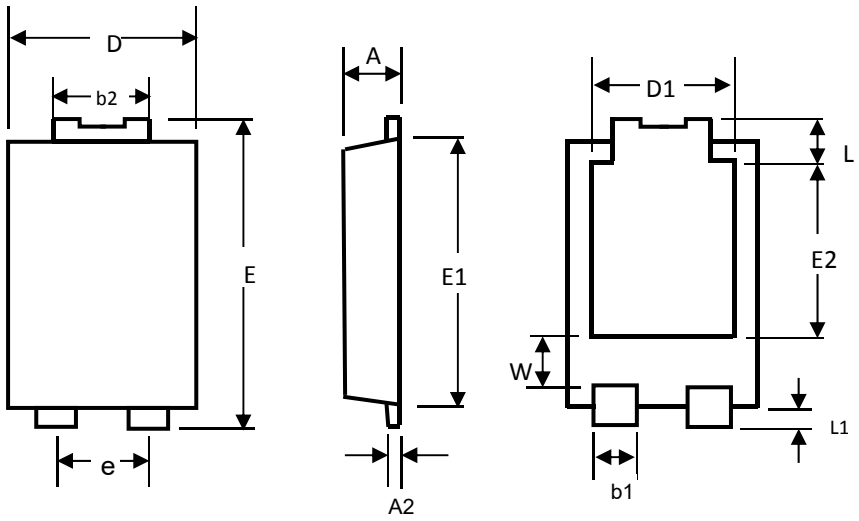


Typical Junction Capacitance Per Diode



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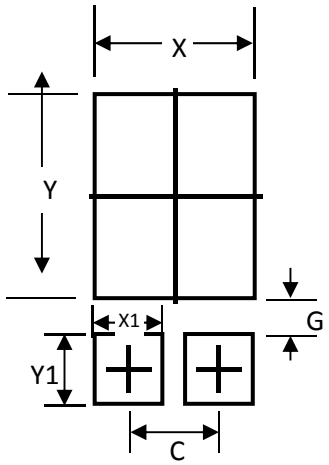
PACKAGE OUTLINE



Dim	Min	Max
A	1.1	1.3
A2	0.3	0.4
b1	0.8	1
b2	1.7	1.9
D	3.9	4.1
D1	3.054	
E	6.4	6.6
e	1.84	
E1	5.3	5.5
E2	3.549	
L	0.8	1
L1	0.5	0.7
W	1.1	1.4

unit:mm

Mounting Pad Layout



Dim	Min
C	1.8
G	0.9
X	3.4
X1	1.4
Y	4.9
Y1	1.4

unit:mm