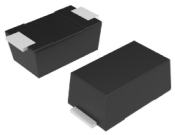
5L45AS
5L45SB
5L45SP

Trench MOS Barrier Schottky Rectifier

SMA
5L45AS



SMB-FL
5L45SB

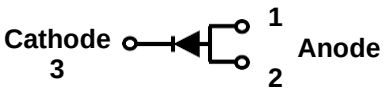


TO-277
5L45SP



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



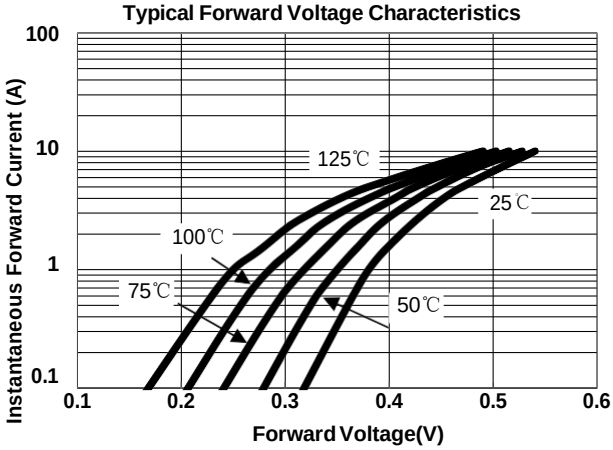
Maximum ratings and electrical characteristics (TJ = 25°C unless otherwise noted)

Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V_{RRM}	45		V
Maximum average forward rectified current			$I_{F(AV)}$	5		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I_{FSM}	150		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)	SMA/SMB-FL		$R_{\Theta JL}$	20		°C/W
	TO-277			72		
Instantaneous forward voltage			$V_{F(1)}$	TYP.	MAX.	
	I_F=5A	TJ=25°C		0.46	0.49	
	I_F=5A	TJ=125°C		0.38	-	
Instantaneous reverse current per diode at rated reverse voltage		T_J=25°C	$I_{R(2)}$	7	50	uA
		T_J=125°C		-	10	mA

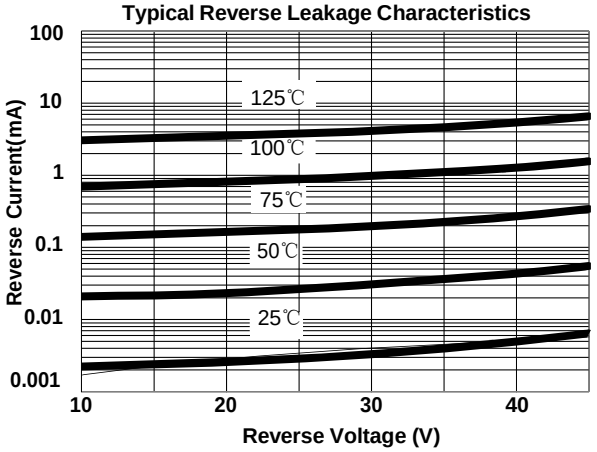
Notes:
(1) Pulse test: 300 μs pulse width, 1 % duty cycle
(2) Pulse test: Pulse width ≦ 40 ms

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

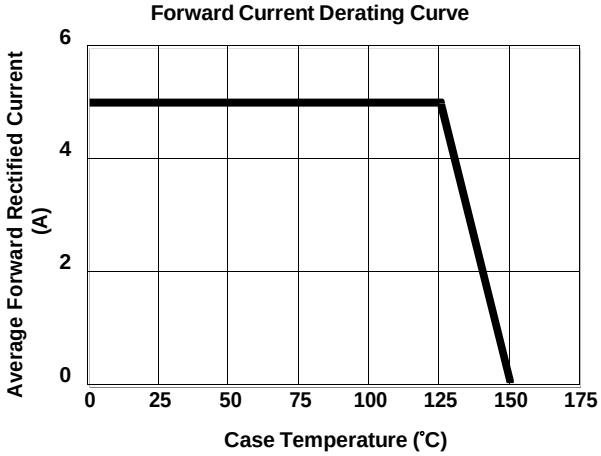
Typical Forward Voltage Characteristics



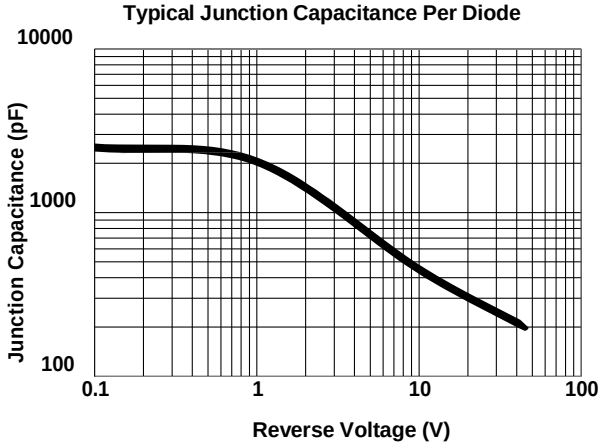
Typical Reverse Leakage Characteristics



Forward Current Derating Curve

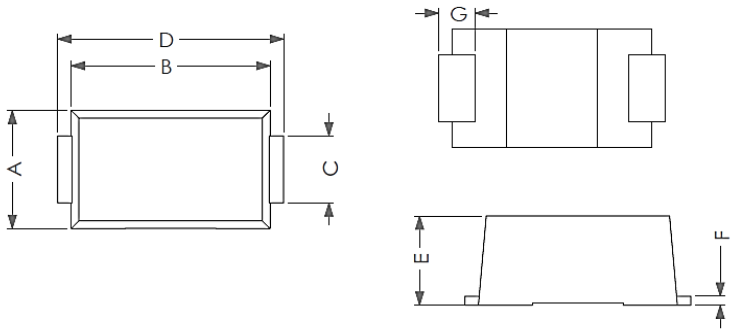


Typical Junction Capacitance Per Diode



PACKAGE OUTLINE

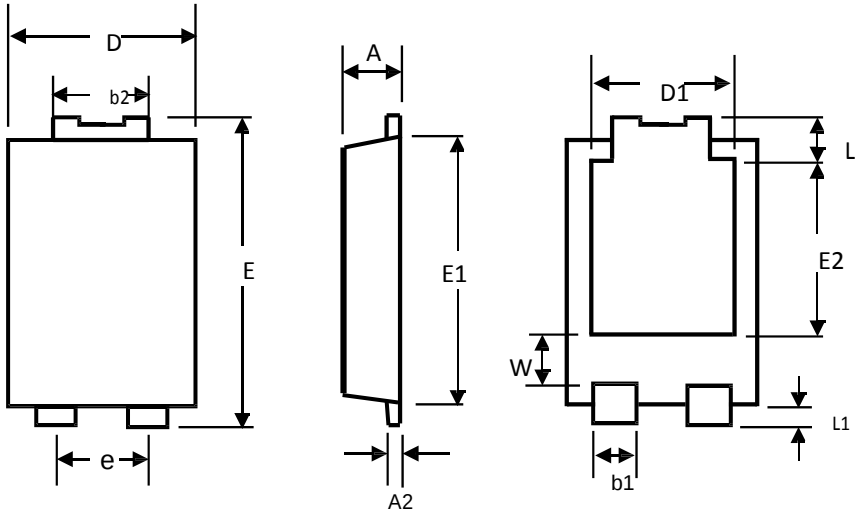
SMA:



Dim	Min	Max
A	2.50	2.90
B	4.20	4.45
C	1.35	1.65
D	4.90	5.20
E	1.55	1.90
F	0.15	0.25
G	0.70	1.00

unit:mm

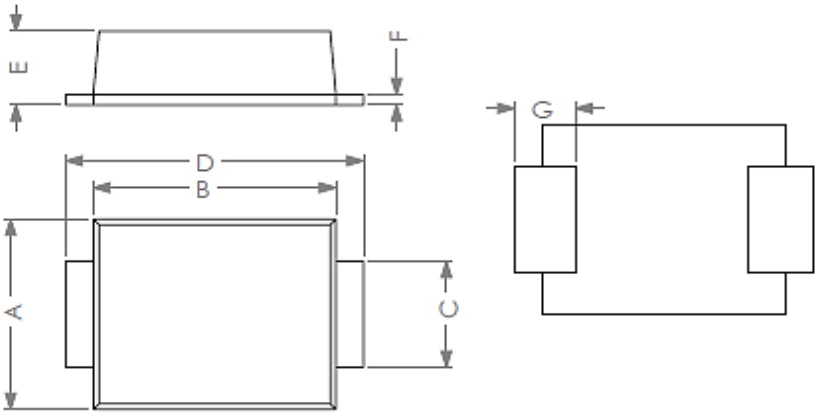
TO-277



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

SMB-FL



Dim	Min	Max
A	3.55	3.75
B	4.35	4.55
C	1.95	2.15
D	5.35	5.55
E	1.35	1.55
F	0.15	0.25
G	1.10	1.30

unit:mm