Elektronische Bauelemente

SMPD1545L

45V, 15A

Low VF Planar MOS Barrier Schottky Rectifiers

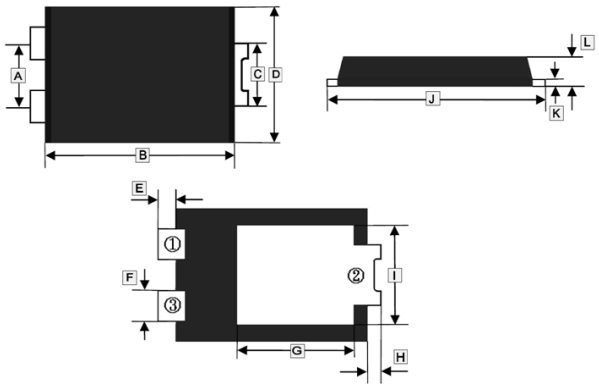
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- Planar MOS Schottky Technology
- Low Forward Voltage Drop
- High Thermal Reliability
- High Current Capability
- High Surge Current Capability
- Excellent High Temperature Stability
- Plastic Material-UL Flammability 94V-0

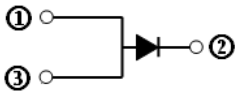
TO-277D



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.65	1.95	G	3.25	3.85
B	5.3	5.5	H	0.45	0.65
C	1.7	1.9	I	2.9	3.2
D	3.8	4.2	J	6.4	6.6
E	0.45	0.65	K	0.3	0.45
F	0.8	1.0	L	1.0	1.2

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-277D	5K	13 inch



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(T_A=25℃, unless otherwise specified. Single phase, ha lf wave, 60Hz, resistive or inductive load. For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Ratings	Unit
Maximum Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Maximum Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Rectified Output Current	I_F	15	A
Non-Repetitive Peak Forward Surge Current @8.3ms Single Half Sine-Wave	I_{FSM}	280	A
Voltage Rate of Chance @Rated V_R	dv/dt	10000	V/μs
Typical Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	80	℃/W
Typical Thermal Resistance from Junction-Lead	$R_{\theta JL}$	3.5	℃/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	℃

ELECTRICAL CHARACTERISTICS

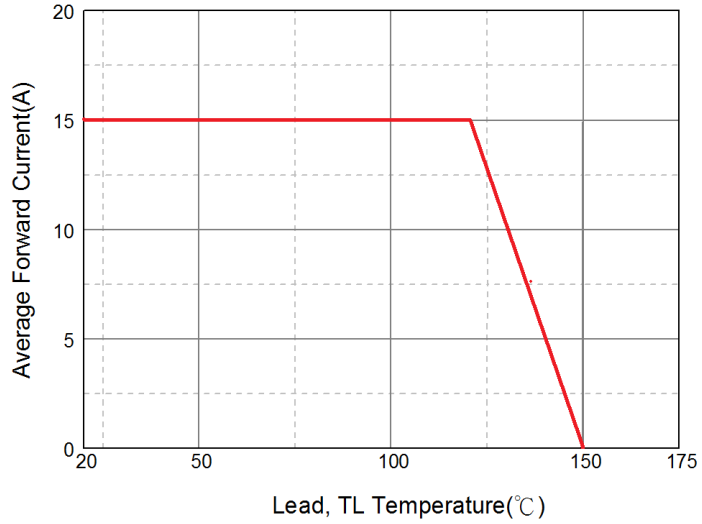
Parameter	Symbol	Typ.	Max.	Unit	Test Conditions
Maximum Forward Voltage	V_F	0.33	0.36	V	I_F=3A, T_A=25℃
		0.37	0.41		I_F=5A, T_A=25℃
		0.43	0.46		I_F=10A, T_A=25℃
		0.49	0.52		I_F=15A, T_A=25℃
		0.47	-		I_F=15A, T_A=125℃
Maximum DC Reverse Current @Rated DC Blocking Voltage [2]	I_R	-	0.3	mA	T_J=25℃
		-	15		T_J=100℃
Typical Junction Capacitance [1]	C_J	650	-	pF	

Notes:

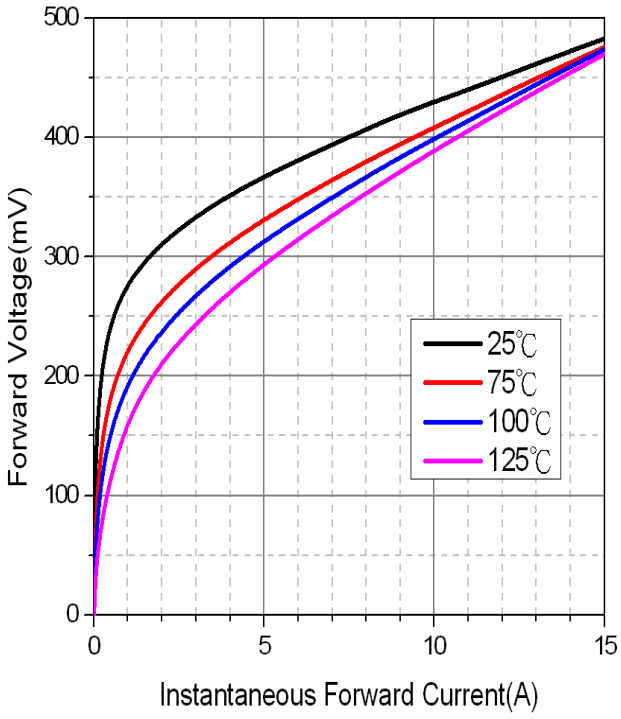
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300μs, Duty Cycle≦2%.

CHARACTERISTIC CURVES

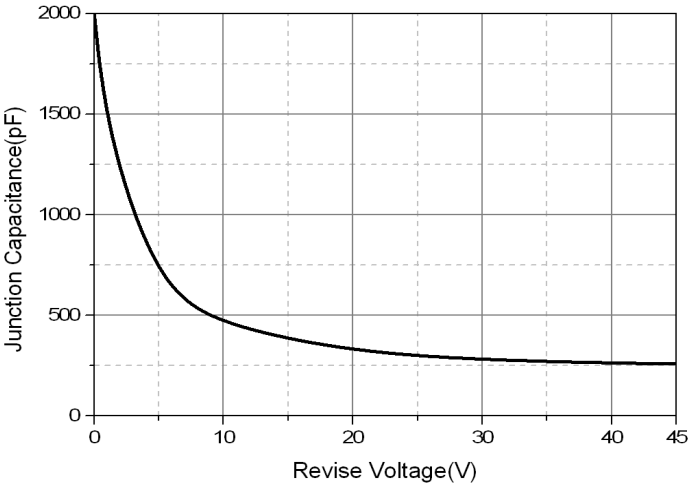
Typical Forward Current Derating Curve



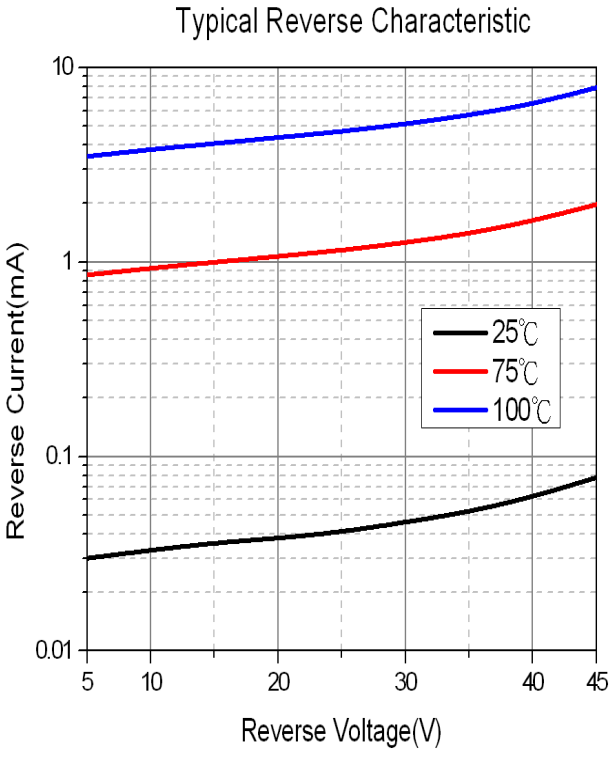
Typical Forward Characteristic



Typical Junction Capacitance(pF)



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current