Elektronische Bauelemente

SMPB1545L

Voltage 45 V

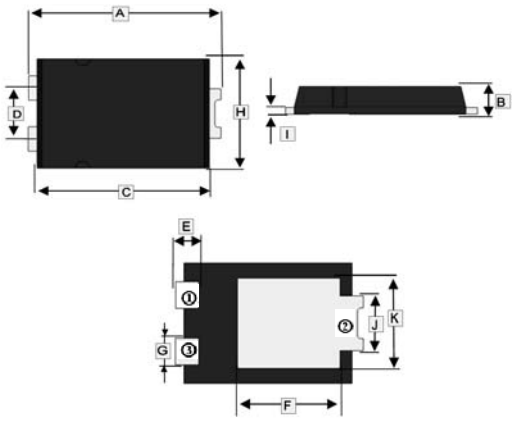
15 Amp Surface Mount Schottky Barrier Rectifiers

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

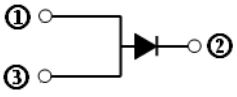
FEATURES

- Super long operating life
- Low forward voltage
- Low forward voltage drop
- Plastic package has Underwriters Laboratory Flammability Classification 94

TO-277B



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.40	6.60	G	0.85	0.95
B	0.90	1.10	H	3.90	4.10
C	5.70	5.90	I	0.25 REF.	
D	1.80	1.95	J	1.75	1.85
E	0.75	0.85	K	2.95	3.05
F	3.45	3.60			



MECHANICAL DATA

- Case: TO-277B molded plastic body
- Polarity: Color band denotes cathode end
- Mounting position: ANY

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-277B	3K	13 inch

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

Parameters	Symbol	Rating	Units
Maximum Repetitive peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	32	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	15	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	300	A
Thermal Resistance Junction to Ambient[1]	$R_{\theta JA}$	35	°C / W
Thermal Resistance Junction to Case[2]	$R_{\theta JC}$	7	°C / W
Operating and Storage Temperature Range	T_J ,T_{STG}	125, -55~125	°C

Note:
1. To evaluate the maximum conduction losses use the following equation：PF(av) = 0.37X IF(av) + 0.01X I2F(RMS)
2. FR4 Board Heat sink size: 10*10*0.2mm

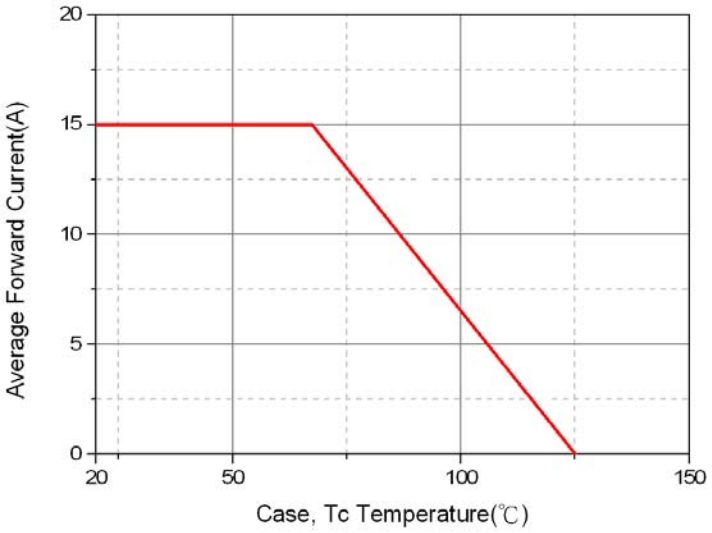
ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	0.43	0.48	V	I_F = 10A, T_J = 25°C
		0.47	0.53		I_F = 15A, T_J = 25°C
		0.42	-		I_F = 15A, T_J = 125°C
Maximum DC Reverse Current at Rated DC Blocking Voltage [2]	I_R	0.02	0.2	mA	T_J=25°C
		7	50		T_J=100°C
Typical Junction Capacitance [1]	C_J	680	-	pF	

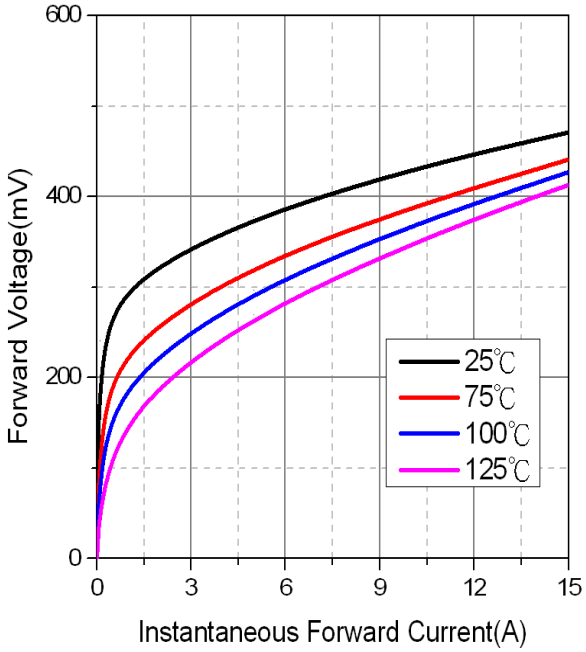
NOTES:
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Pulse Test：Pulse Width = 300 μs, Duty Cycle ≦ 2.0%.

CHARACTERISTIC CURVES

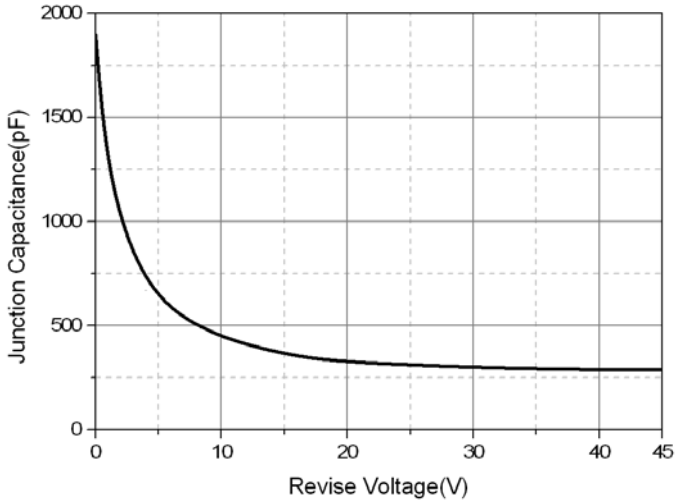
Typical Forward Current Derating Curve



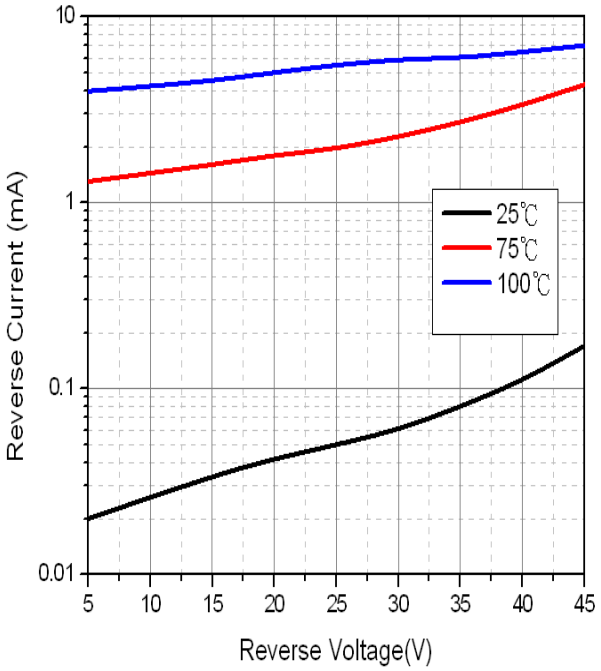
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current