

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

FEATURES

- Planar MOS Schottky Technology
- High Thermal Reliability
- High Forward Surge Capability
- Ultra Low Power Loss and High Efficiency
- Excellent High Temperature Stability
- Plastic Material-UL Flammability 94V-0

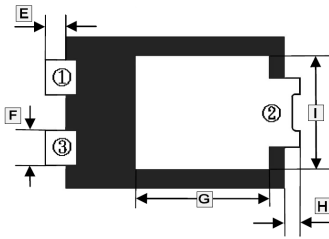
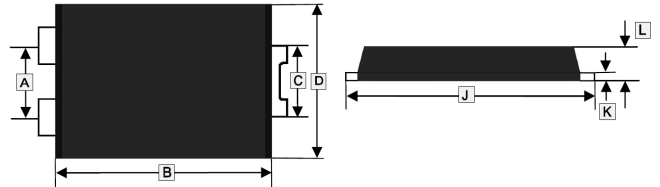
PACKAGE INFORMATION

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

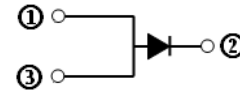
ORDER INFORMATION

Part Number	Type
SMPD2045L	Lead (Pb)-free
SMPD2045L-C	Lead (Pb)-free and Halogen-free

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(T_A=25°C, unless otherwise specified. Single phase, half 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	20	A
Non-Repetitive Peak Forward Surge Current @8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method) ²	I _{FSM}	275	A
I ² t Rating for Fusing @t<8.3ms	I ² t	313.844	A ² S
Typical Thermal Resistance from Junction-Case ¹	R _{θJC}	7	°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS

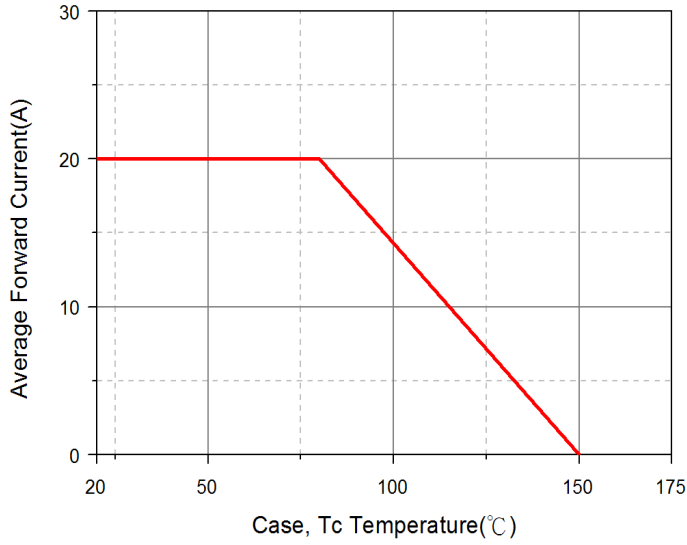
Parameter	Symbol	Typ.	Max.	Unit	Test Conditions
Maximum Instantaneous Forward Voltage	V _F	0.41	-	V	I _F =10A, T _A =25°C
		0.5	0.55		I _F =20A, T _A =25°C
		0.47	-		I _F =20A, T _A =125°C
Maximum DC Reverse Current at Rated DC Blocking Voltage ²	I _R	-	0.3	mA	T _A =25°C
		-	15		T _A =100°C
Typical Junction Capacitance ³	C _J	820	-	pF	

Notes:

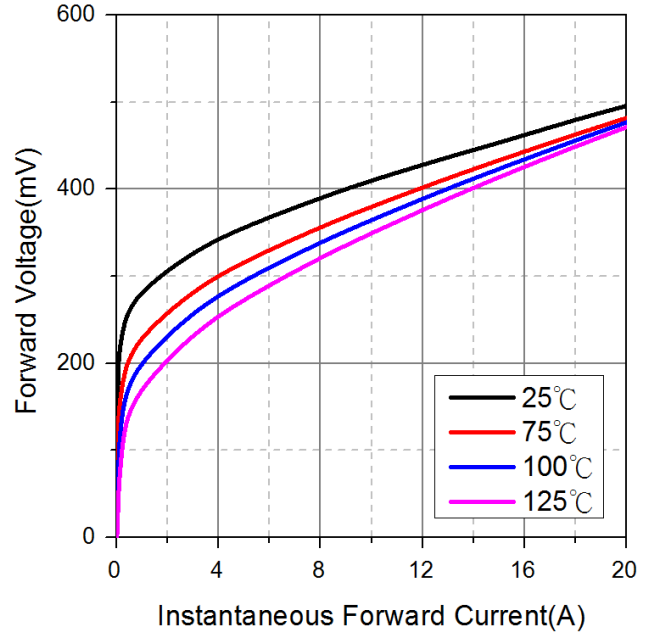
1. FR4 Board Heat sink size: 10*10*0.2mm.
2. Pulse Test : Pulse Width=300 μs, Duty Cycle ≤ 2.0%.
3. Measured at 1MHz and applied reverse voltage of 5.0V D.C.

CHARACTERISTIC CURVES

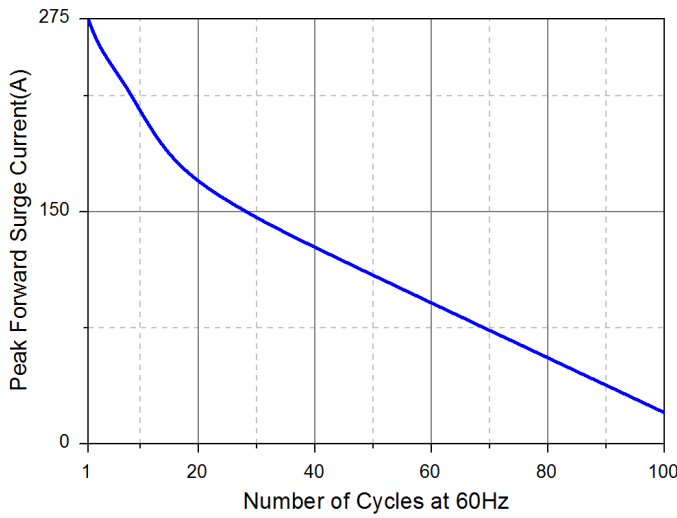
Typical Forward Current Derating Curve



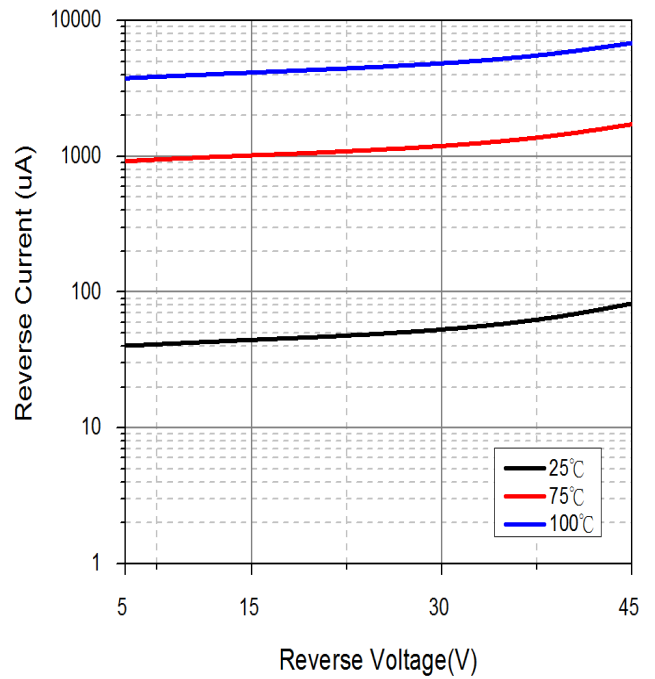
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

