Elektronische Bauelemente

SMPD5100-C

100V, 5A

Surface Mount Schottky Barrier Rectifiers

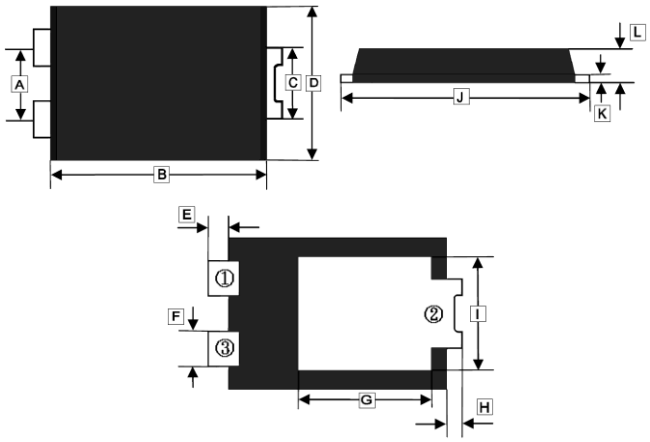
RoHS Compliant Product

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

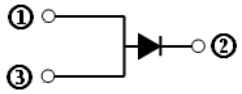
FEATURES

- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss and High Efficiency
- 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

ORDER INFORMATION

Part Number	Type
SMPD5100-C	Lead (Pb)-free and Halogen-free

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	Rating	Unit
Maximum Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Maximum Working Peak Reverse Voltage	V_{RWM}	100	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Rectified Output Current	I_O	5	A
Non-Repetitive Peak Forward Surge Current@ 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC method)	I_{FSM}	130	A
I^2t Rating for Fusing@ t＜8.3ms	I^2t	70.135	A^2S
Typical Thermal Resistance from Junction to Case [1]	$R_{\theta JC}$	7	°C / W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS

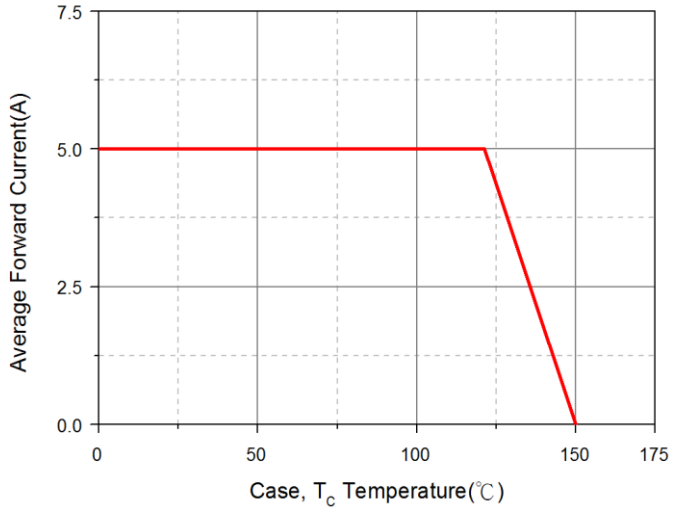
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	-	0.82	V	I_F=5A, T_A=25°C
		0.61	-		I_F=5A, T_A=125°C
Maximum DC Reverse Current at Rated DC Blocking Voltage [2]	I_R	-	0.3	mA	T_A=25°C
		-	15		T_A=100°C
Typical Junction Capacitance [3]	C_J	150	-	pF	

Notes:

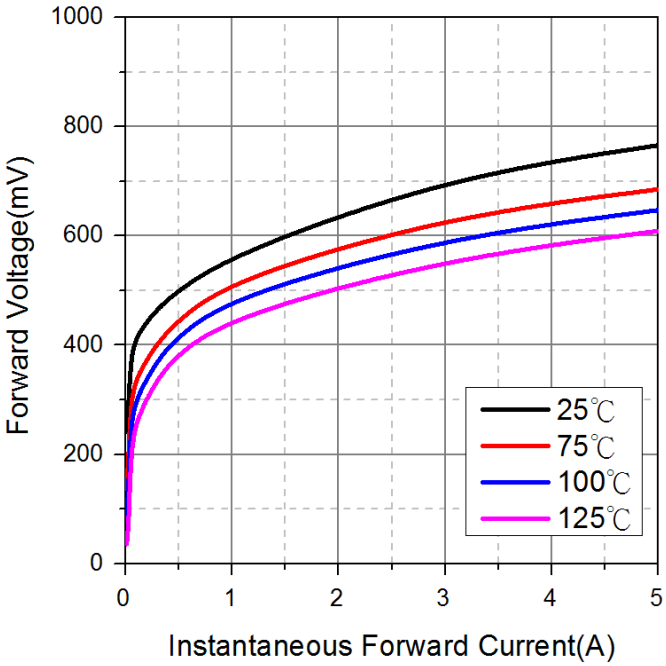
1. FR4 Board Heat sink size: 10*10*0.2mm.
2. Pulse Test : Pulse Width=300μs, Duty Cycle≦2.0%.
3. Measured at 1MHz and applied reverse voltage of 5.0V D.C

CHARACTERISTIC CURVES

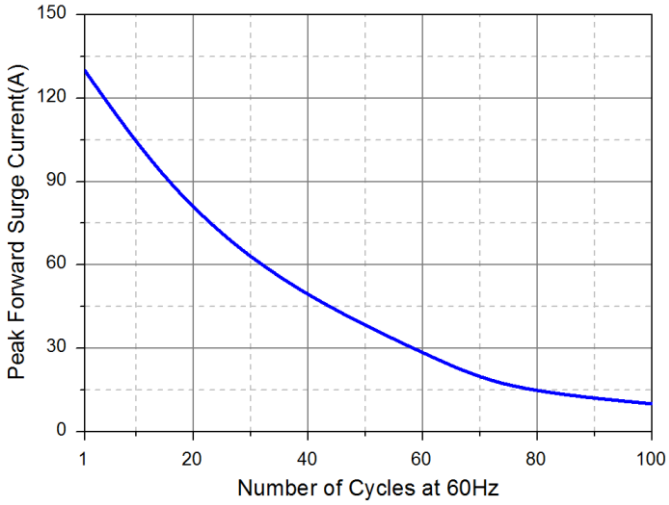
Typical Forward Current Derating Curve



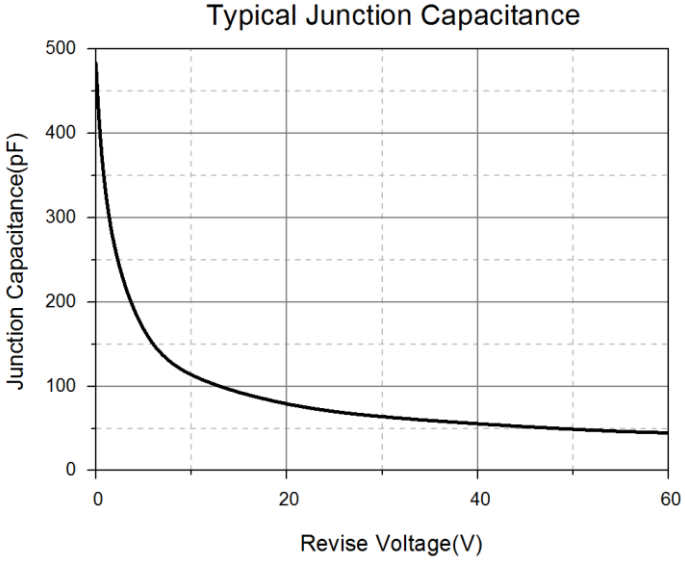
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Junction Capacitance



Typical Reverse Characteristic