Elektronische Bauelemente

SMPD1045

45V, 10A

Surface Mount Schottky Barrier Rectifiers

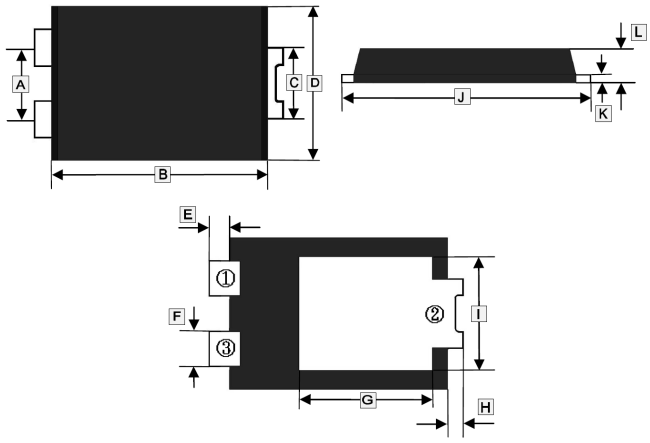
RoHS Compliant Product

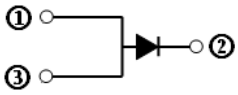
A suffix of “-C” specifies halogen & lead-free

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

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	Rating	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 RMS Rectified Voltage	V_{RMS}	32	V
Maximum Average Rectified Output Current [1]	I_O	10	A
Non-Repetitive Peak Forward Surge Current@ 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC method) [2]	I_{FSM}	150	A
I^2t Rating for Fusing@ t＜8.3ms	I^2t	93.375	A^2S
Typical Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	℃ / W
Typical Thermal Resistance from Junction to Lead	$R_{\theta JL}$	10	℃ / W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	℃

Notes:

1. The data is tested on the condition that the ambient temperature is tested at a 9.5mm distance from the case.
2. FR-4 2oz 18.8mm × 14.4mm PCB with 5.6mm × 14.4mm copper pad.

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Forward Voltage Drop	V_{FM}	-	0.5	V	I_F=10A, T_A=25℃
Peak Reverse Current at Rated DC Blocking Voltage	I_R	-	0.3	mA	T_A=25℃
		-	15		T_A=100℃

CHARACTERISTIC CURVES

Fig.1 - Forward Current Derating Curve

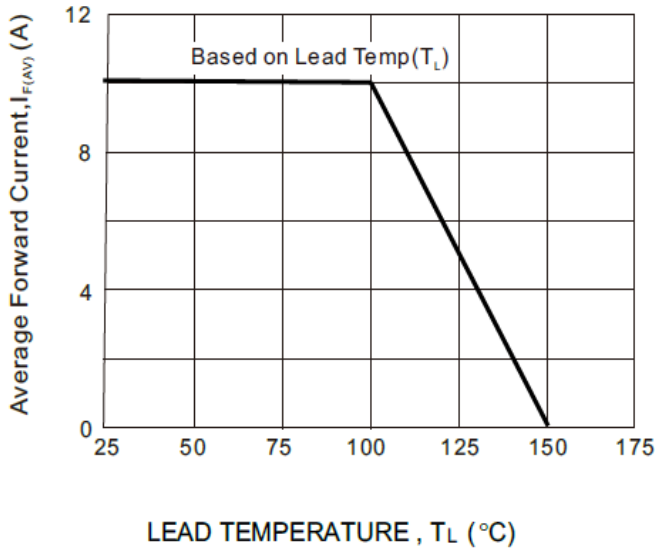


Fig2 : Instantaneous Forward Voltage

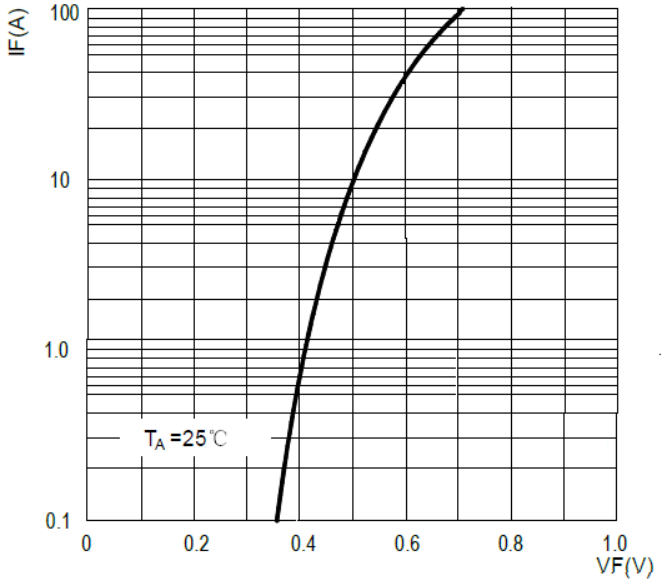


Fig3: Surge Forward Current Capadility

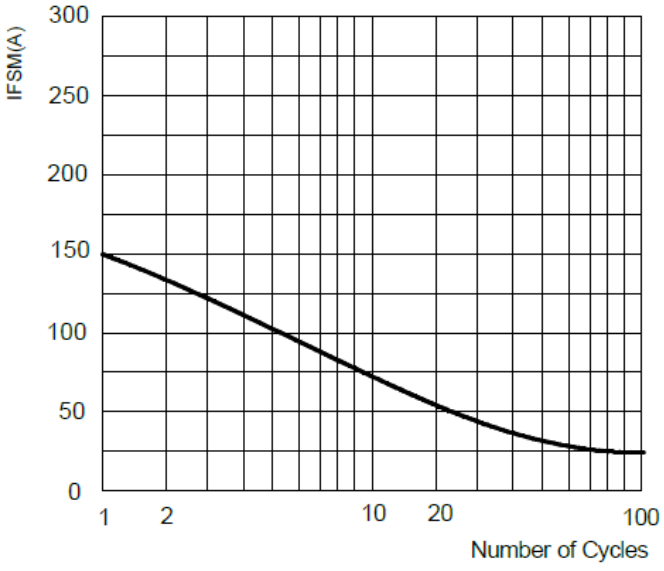


Fig4: Typical Reverse Characteristics

