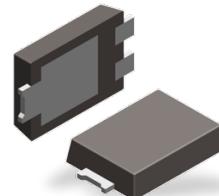


FEATURES

- Trench MOS schottky barrier diode
- Low forward voltage drop
- Low profile - typical body height 1.1 mm
- High temperature soldering guaranteed: 260°C/10 seconds -
- RoHS compliant
- Halogen-free according to IEC 61249-2-21 definition

TO-277B



RoHS
COMPLIANT

HALOGEN
FREE

MECHANICAL DATA

- Case: TO-277B
- Case material: molding compound meets UL 94V-0 flammability rating

TYPICAL APPLICATION

General purpose use in AC to DC wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

MAXIMUM RATINGS

$T_A=25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	120	V
Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I_{FSM}	120	A
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$ unless otherwise noted

Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=1\text{A}$	$T_A=25^\circ\text{C}$	V_F	0.44	0.48	V
	$T_A=125^\circ\text{C}$		0.39	0.43	
Forward Voltage@ $I_F=5\text{A}$	$T_A=25^\circ\text{C}$		0.67	0.7	
	$T_A=125^\circ\text{C}$		0.6	0.63	
Reverse Current @ V_{RRM}	$T_A=25^\circ\text{C}$	I_R	10	50	uA
	$T_A=125^\circ\text{C}$		0.6	5	mA
Typical Thermal Resistance		$R_{\theta JA}$	45		°C/W



RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$ unless otherwise noted

FIG.1: Forward Output Current Derating Curve

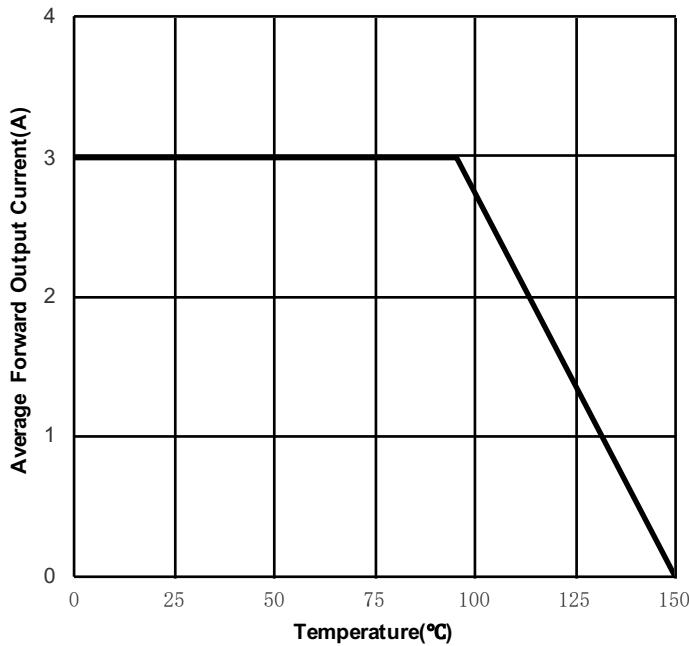


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

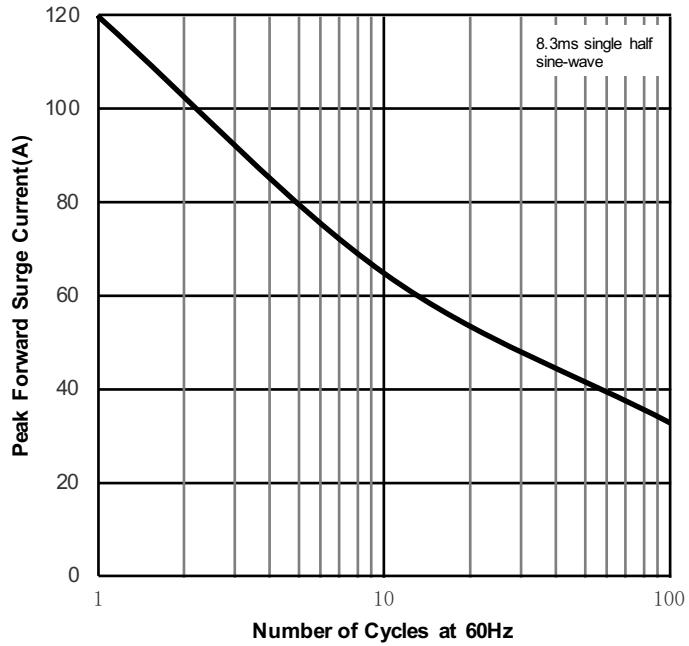


FIG.3: Typical Forward Characteristics

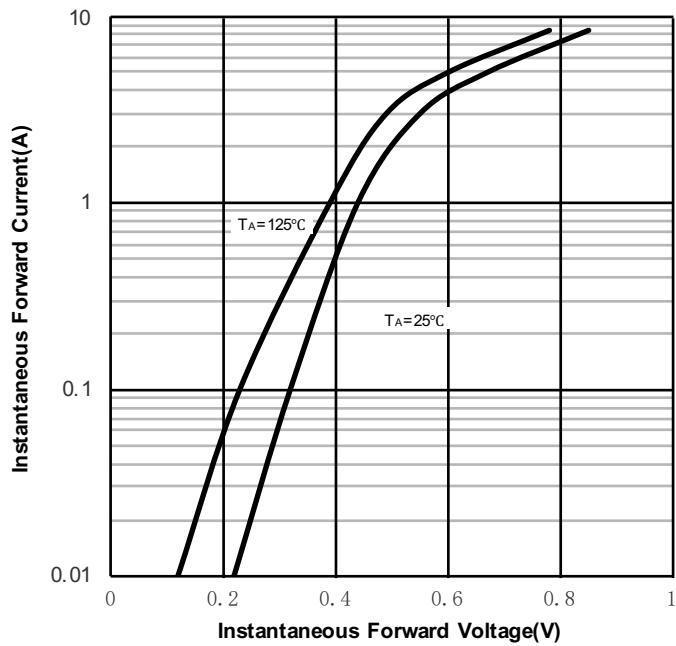
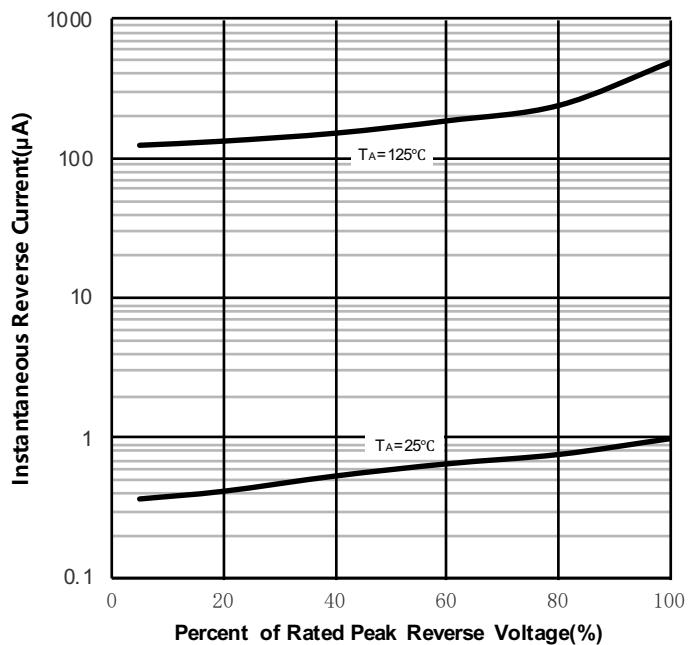
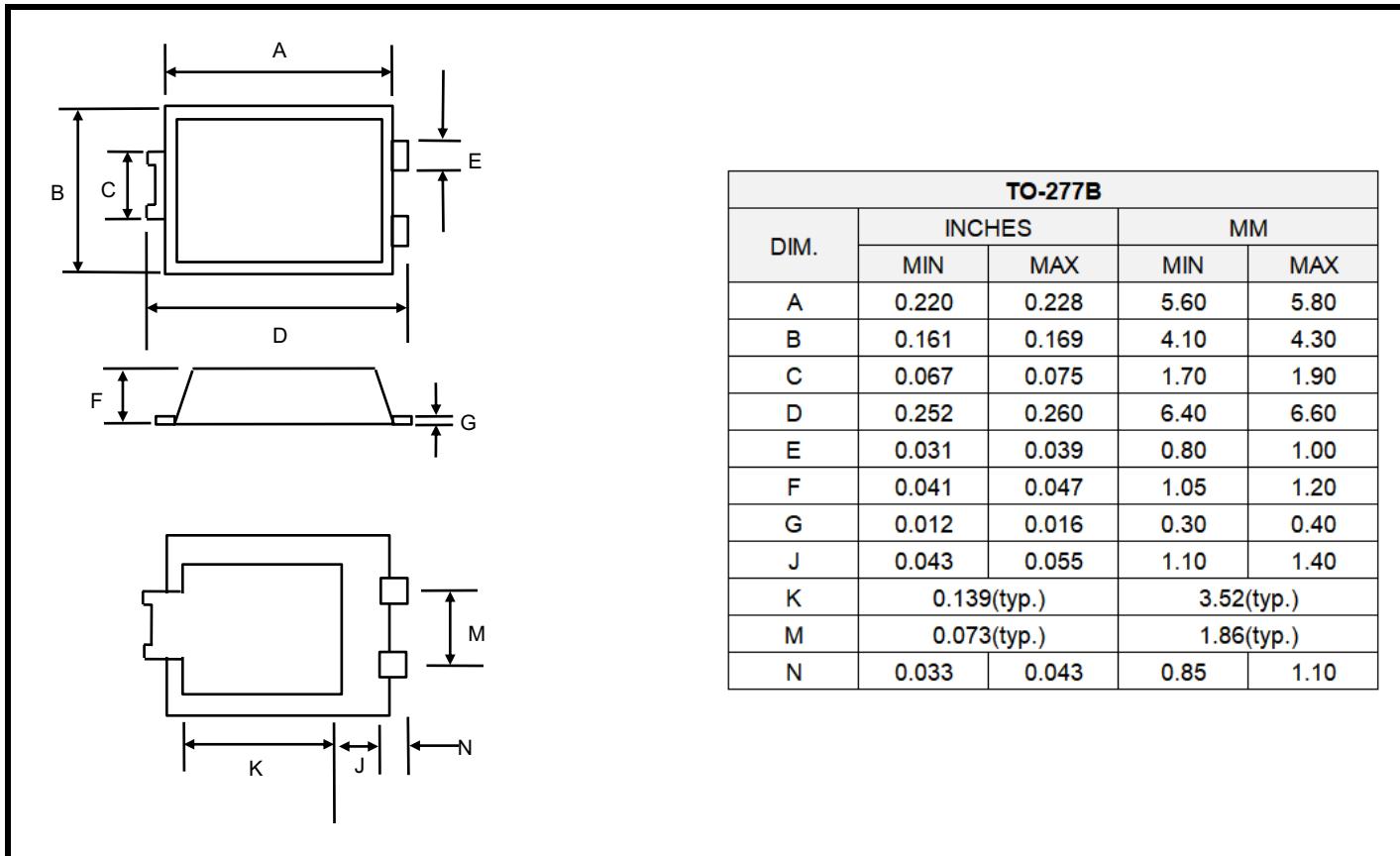


FIG.4: Typical Reverse Characteristics



PACKAGE OUTLINE DIMENSIONS



TO-277B

DIM.	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.220	0.228	5.60	5.80
B	0.161	0.169	4.10	4.30
C	0.067	0.075	1.70	1.90
D	0.252	0.260	6.40	6.60
E	0.031	0.039	0.80	1.00
F	0.041	0.047	1.05	1.20
G	0.012	0.016	0.30	0.40
J	0.043	0.055	1.10	1.40
K	0.139(typ.)		3.52(typ.)	
M	0.073(typ.)		1.86(typ.)	
N	0.033	0.043	0.85	1.10

PACKING INFORMATION

Part Number	Package	Packing Method	Reel (pcs)
ST5120L	TO-277B	Reel	5,000



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1. Above specification may be changed without notice. MHCHXM will reserve authority on material change for above specification.
2. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
3. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. MHCHXM assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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