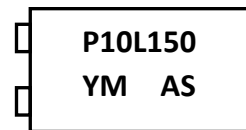
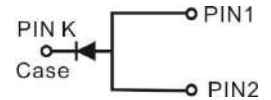



10.0A Surface Mount MOS Schottky Barrier Rectifier - 150V
PRIMARY CHARACTERISTICS

V_{RRM}	150V
I_O	10A
$V_F@I_F=10A(TYP)$	0.79V
$T_{J,Max}$	150°C

SCHEMATIC DIAGRAM
TO-277B PACKAGE


P10L150 = Product Type Marking Code
 YM = Date Code
 Y = Last one digits of year
 M = Month code
 A = Assembly Code
 S = Series Number

FEATURES

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150oC Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Moisture Sensitivity Level 1

MECHANICAL DATA

- Case : Molded plastic, TO-277B
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

Maximum Ratings Characteristics

($T_A = 25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}	150	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current Per device	I_O	10	Amps
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	180	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	0.5	Amps
Typical Thermal Resistance			
Thermal Resistance junction to Ambient Note (1)	$R\theta_{JA}$	72	°C / W
Thermal Resistance junction to Ambient Note (2)	$R\theta_{JA}$	30	
Maximum Rate of Voltage Change (at Rated VR)	dv/dt	10000	V/uS
Operating Junction Temperature	T_J	- 65 to +150	°C
Storage Junction Temperature	T_{STG}	- 65 to +150	

**10.0A Surface Mount MOS Schottky Barrier Rectifier - 150V****Electrical Characteristics - (per leg) ($T_A = 25^\circ\text{C}$ unless otherwise specified)**

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 5 A	T _J = 25 °C	VF*	0.71	----	Volts
	IF = 10 A			0.79	0.83	
	IF = 5 A	T _J = 125 °C		0.57	----	
	IF = 10 A			0.66	0.72	
Instantaneous Reverse Current	At V _{RM}	T _J = 25 °C	IR*	4	100	uA
		T _J = 125 °C		1	10	mA

* Pulse width < 300 μs , Duty cycle < 2%

Note 1. FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

Note 2. Polyimide PCB, 2 oz Copper. Cathode pad dimensions 18.8x14.4mm , Anode pad dimensions- (5.6x14.4mm)

Characteristics Curves

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise specified)

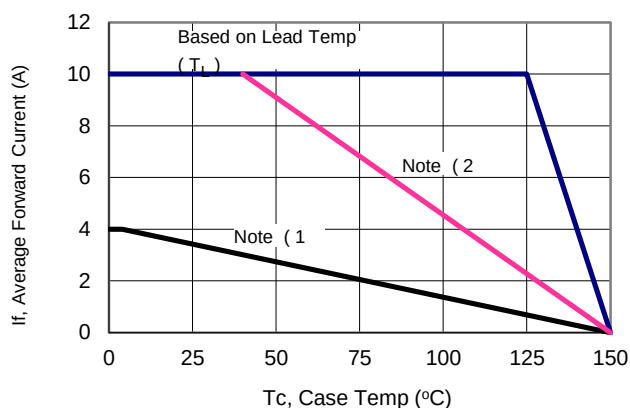


Figure 1: Current Derating, Case

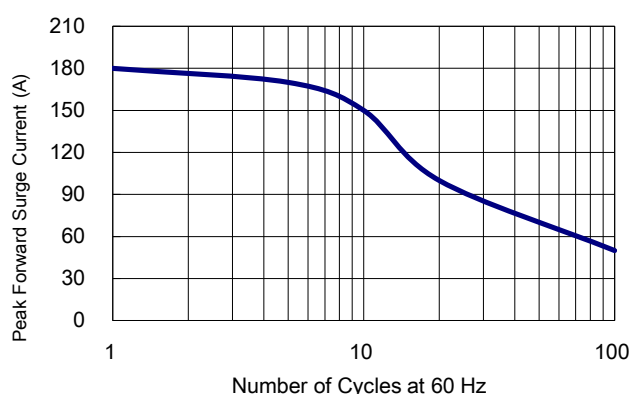


Figure 2: Maximum Repetitive Surge Current



Characteristics Curves

Ratings and Characteristics Curves ($T_A = 25^{\circ}\text{C}$ unless otherwise specified)

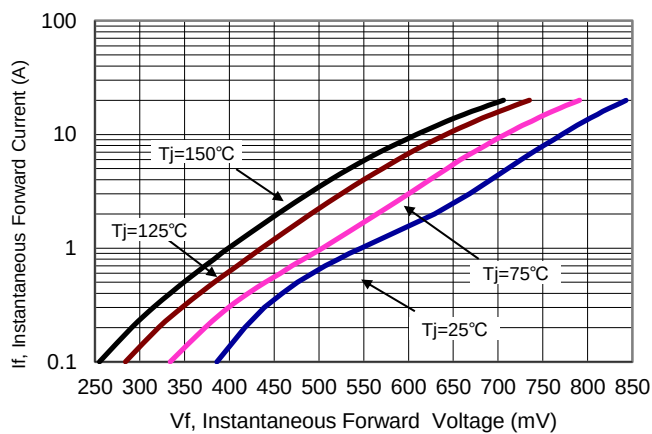


Figure 3: Typical Forward Voltage

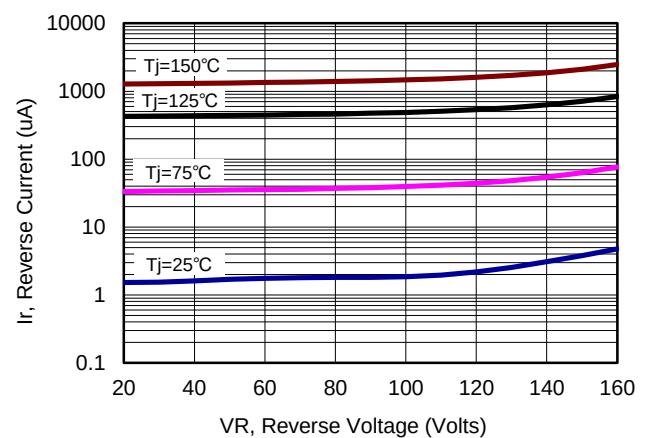


Figure 4: Typical Reverse Current

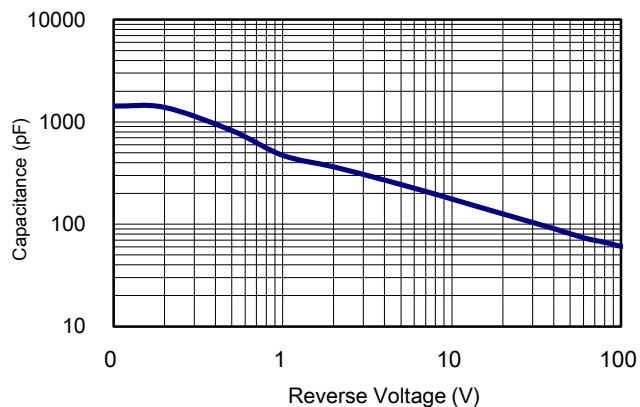
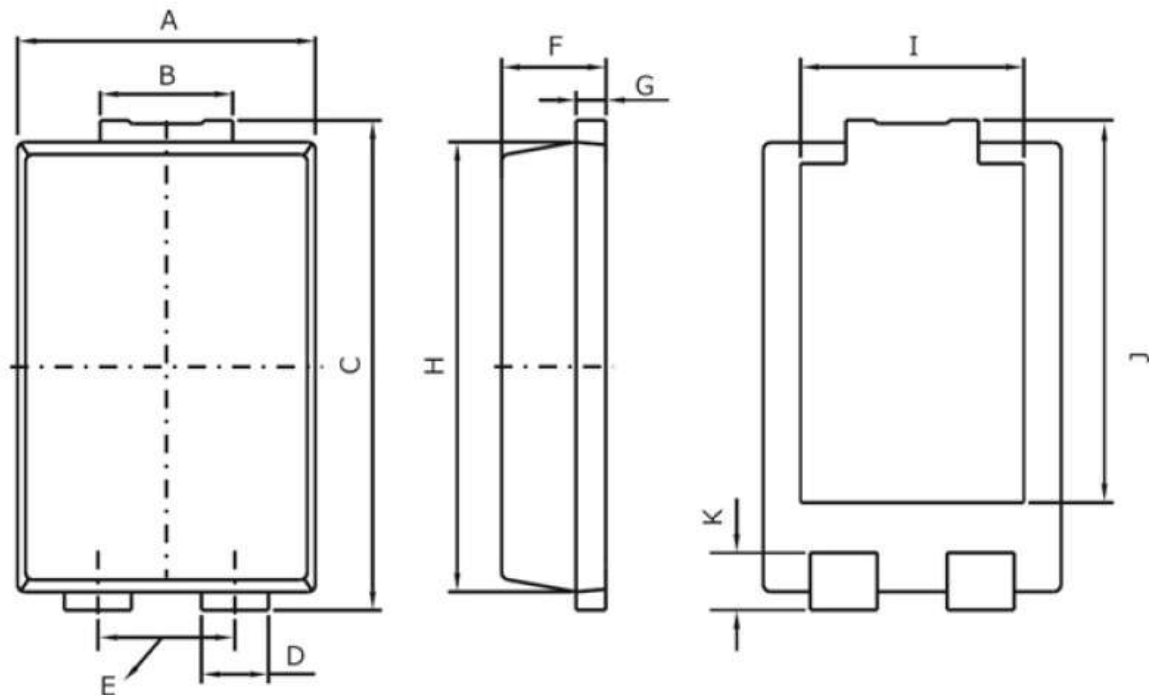


Figure 5: Typical Junction Capacitance



Outline Drawing

TO-277B



Dim.	Min.	Max.
A	3.90	4.10
B	1.74	1.94
C	6.40	6.60
D	0.80	1.05
E	1.84 typ.	
F	1.00	1.20
G	0.35	0.45
H	5.30	5.45
I	3.05 typ.	
J	4.40 typ.	
K	0.60	0.95
All Dimensions in millimeter		

Rev.C-1

**Ordering Information:**

Device PN	Packing
MBR10150BLPS -T ⁽¹⁾ H ⁽²⁾ -WS ⁽³⁾	Tape&Reel: 5 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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