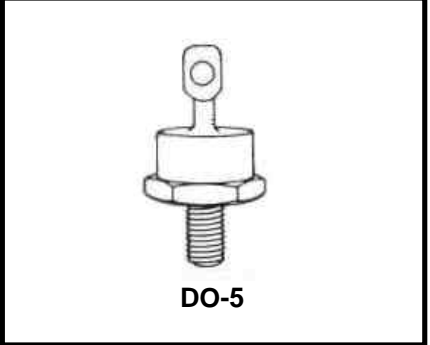


**USD520  
 USD535  
 USD545**

**150 Amp Pk,  
 Up to 45V  
 POWER SCHOTTKY  
 RECTIFIERS**



## Features:

- Very Low Forward Voltage (0.6V at 60A, 125°C)
- Low Recovered Charge
- Rugged Package Design (DO-5)
- High Efficiency for Low Voltage Supplies
- Low Thermal Resistance (1.0°C/W)
- High Surge Current (1000A)
- Low Reverse Current (<50mA at rated  $V_R$  at 125°C)

## Description:

This series of Schottky barrier power rectifiers is ideally suited for output rectifiers and catch diodes in low voltage power supplies. The Microsemi high conductivity design, using a heavy copper top post and 4 point crimp, ensures cool thermal operation and low dynamic impedance. Rugged design absorbs stress that can damage glass-to-metal seal during installation and use.

## Absolute Maximum Ratings:

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Working Peak Reverse Voltage, $V_{RWM}$	20V	35V	45V
DC Blocking Voltage, $V_R$	20V	35V	45V
Peak Repetitive Surge Voltage, $V_{RSM}$ @ $I_{RM}$	24V	42V	54V
Peak Repetitive Forward Current (Rated $V_{R1}$ Square Wave, 20KHz, 50 percent Duty Cycle), $I_{FRM}$	150A (at $T_C = 115^\circ C$ )	75A (at $T_C = 115^\circ C$ )	1000A
Average Rectified Forward Current, $I_{F(AV)}$			2A
Non-repetitive Peak Surge Current (8.3mS), $I_{FSM}$			-55° to +200°C
Peak Reverse Transient Current, $I_{RM}$			+175°C
Storage Temperature Range, $T_{STG}$			1°C/W
Operating Junction Temperature, $T_j$			
Thermal Resistance Junction-to-Case, $R_{\theta JC}$			

## Electrical Characteristics ( $T_{CASE} = 25^\circ C$ )

Characteristic	Symbol	Limit	Units	Conditions
Maximum Instantaneous Reverse Current	$i_R$	USD545	mA	$V_R = V_{RWM}$ ( $T_C = 125^\circ C$ ) Pulse Width = 300 $\mu$ s Duty Cycle = 1 percent
		20 (50)		
Maximum Instantaneous Forward Voltage	$V_F$	0.50	V	$i_F = 10A, T_C = 25^\circ C$
		0.68	V	$i_F = 60A, T_C = 25^\circ C$
		0.60	V	$i_F = 60A, T_C = 125^\circ C$
Maximum Capacitance	$C_t$	4000	pF	$V_R = 5.0V$
Maximum Voltage Rate of Change	dv/dt	1000	V/ $\mu$ S	$V_R = \text{rated}$

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MECHANICAL SPECIFICATIONS:

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	ins.	mm
A	.225 ± .005	5.72 ± 0.13
B	.060 MIN.	1.52 MIN.
C	.156 ± .020	3.96 ± 0.51
D	.156 MIN. FLAT	3.96 MIN. FLAT
E	.667 DIA. MAX.	16.94 DIA. MAX.
F	.090 MAX.	2.29 MAX.
G	.677 ± .010	17.20 ± 0.25
H	.375 MAX.	9.53 MAX.
J	.140 MIN. DIA.	3.56 MIN. DIA.
K	1.000 MAX.	25.40 MAX.
L	.450 MAX.	11.43 MAX.
M	.438 ± .015	11.13 ± 0.38
N	.078 MAX.	1.98 MAX.

**Notes:**

1. Cathode is stud.
2. All metal surfaces tin plated.
3. Maximum unlubricated stud torque: 30 inch pounds (35 kg. cm).
4. Angular orientation of terminal is undefined.

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 USD545

