



PFC Device Corporation

**P5L150DS**

## 5A 150V MOS Schottky Rectifier

### Major ratings and characteristics

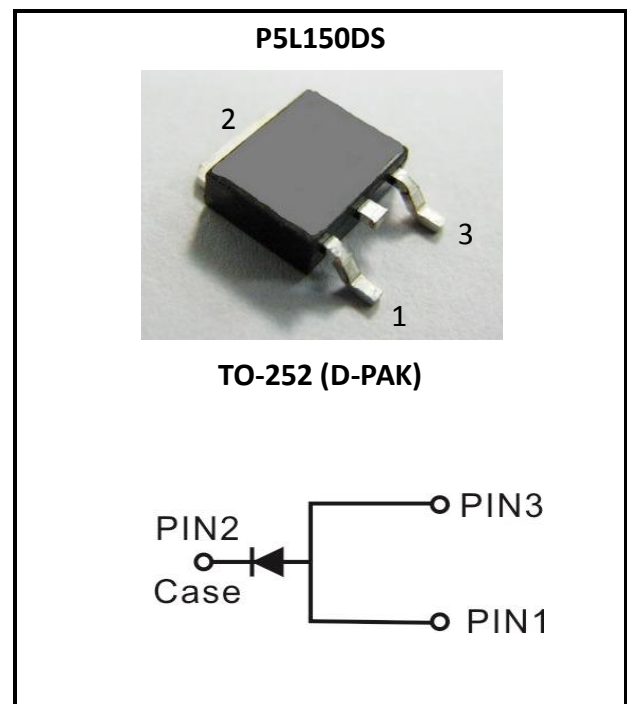
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5	A
$V_{RRM}$	150	V
$V_F@ 5A, T_J=125^\circ C$	0.64	V, typ.
$T_J$ Operating Junction Temperature	-65 to +175	$^\circ C$

### Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 175 $^\circ C$  Operating Junction Temperature
- Green Molding Compound (No Br, Sb)

### Typical Applications

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications



## 1. Characteristics

### Maximum Ratings Characteristics ( $T_A = 25^\circ\text{C}$ 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 (Rated VR-20Khz Square Wave) - 50% duty cycle	$I_o$	5	Amps
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	80	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	0.5	Amps
Typical Thermal Resistance (per leg) Package D-PAK TO-252	$R\theta_{JC}$	6	$^\circ\text{C} / \text{W}$
Maximum Rate of Voltage Change ( at Rated $V_R$ )	dv/dt	10000	V/uS
Operating Junction Temperature	$T_J$	- 65 to +175	$^\circ\text{C}$
Storage Junction Temperature	$T_{STG}$	- 65 to +175	

### 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	$T_J = 25^\circ\text{C}$	VF*	----	0.84	Volts
		$T_J = 125^\circ\text{C}$		0.64	0.74	
Instantaneous Reverse Current	At $V_{RM}$	$T_J = 25^\circ\text{C}$	IR*	----	100	$\mu\text{A}$
		$T_J = 125^\circ\text{C}$		----	10	mA

\* Pulse width < 300 uS, Duty cycle < 2%



2. Characteristics Curves

Ratings and Characteristics Curves

( TA = 25°C unless otherwise specified )

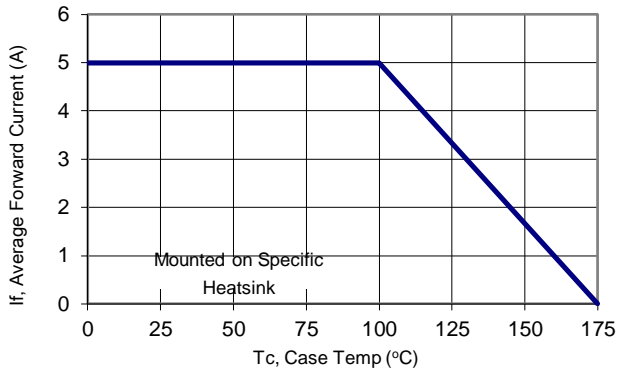


Figure 1: Current Derating, Case

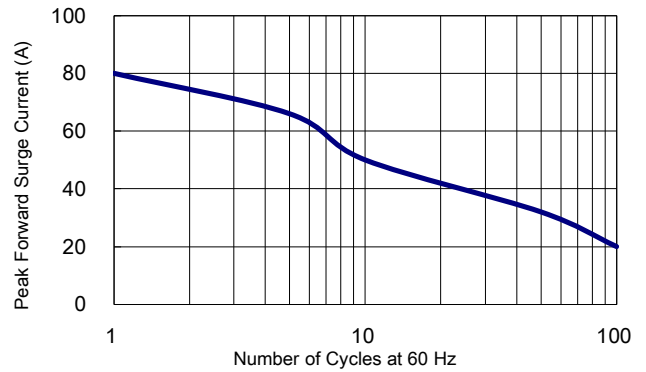


Figure 2: Maximum Repetitive Surge Current

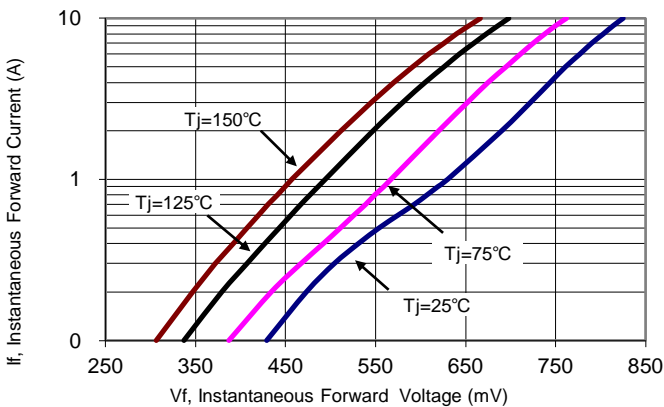


Figure 3: Typical Forward Voltage

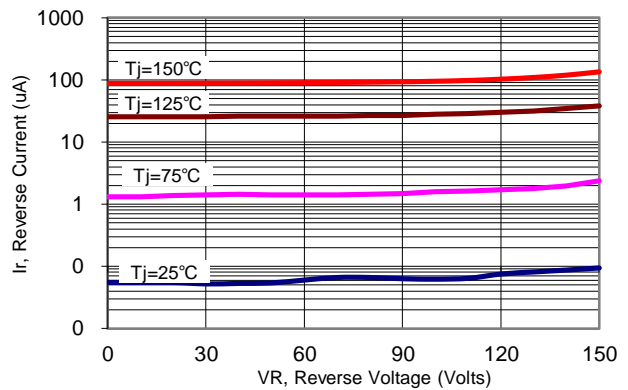


Figure 4: Typical Reverse Current

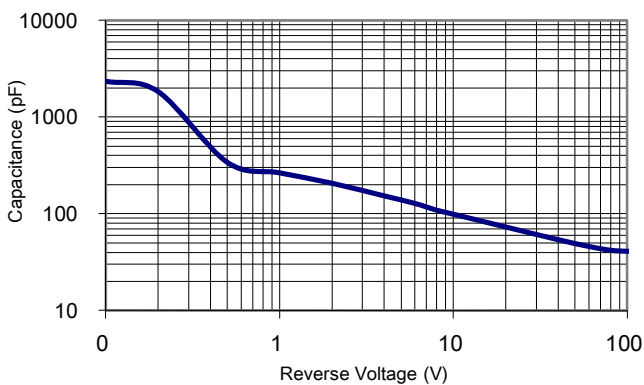
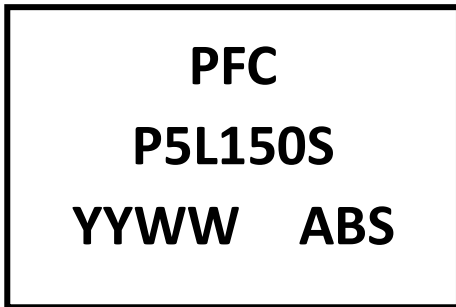


Figure 5: Typical Junction Capacitance



3. Marking information

Top Marking Rule



P5L150S = Product Type Marking Code

YYWW = Date Code

YY = Last two digits of year

WW = Week code

S = Series Number

AB = Assembly code

4. Package information

Package Outline Dimensions    millimeters

**TO-252 ( DPAK )**

Dim.	Min.	Max.
A	6.30	6.90
B	5.10	5.60
C	3.50	-----
D	4.60	-----
E	9.40	10.60
F	0.50	1.20
G	0.70	0.90
H	0.50	0.90
I	0.50	0.90
J	2.30 Ref.	
K	5.40	6.30
L	2.40	3.40
M	2.10	2.50
N	0.35	0.65
O	-----	0.20
P	1.40	1.90

All Dimensions in millimeter



**5. Ordering information**

Part Number	Package	Delivery mode
P5L150DS	TO-252 (D-PAK)	2500 pcs / 13" diameter reel

Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.01 ounces (0.3grams) - TO-252 (D-PAK)

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