



*PFC Device Corporation*

## **PT5L100A**

### **5A 100V HPTR® Single Schottky Rectifier**

#### **Major ratings and characteristics**

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5	A
$V_{RRM}$	100	V
$V_F$ @ 5A , $T_j=125^\circ\text{C}$	0.65	V, typ.
$T_j$ Operating Junction Temperature	-40 to +150	$^\circ\text{C}$

#### **Features**

- Super Low Forward Voltage ( SLVF® ) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- $150^\circ\text{C}$  Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Green Molding Compound (No Br, Sb)

#### **Typical Applications**

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

#### **PT5L100A**



**DO-214AC (SMA)**



## 1. Characteristics

### Maximum Ratings Characteristics

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

Parameter	Symbol	Values	Units
DC Blocking Voltage	$V_{RM}$	100	Volts
Working Peak Reverse Voltage	$V_{RWM}$		
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Average Rectified Forward Current Per device	$I_o$	5	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	100	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	1	Amps
Typical Thermal Resistance	$R\theta_{JL}$	20	$^{\circ}\text{C} / \text{W}$
Maximum Rate of Voltage Change ( at Rated VR )	$dv/dt$	10000	V/uS
Operating Junction Temperature	$T_J$	- 40 to +150	$^{\circ}\text{C}$
Storage Junction Temperature	$T_{STG}$	- 40 to +150	

### 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*	----	0.78	Volts
		$T_J = 125^{\circ}\text{C}$		0.65	0.69	
Instantaneous Reverse Current	At $V_{RM}$	$T_J = 25^{\circ}\text{C}$	IR*	----	200	$\mu\text{A}$
		$T_J = 125^{\circ}\text{C}$		5	15	mA

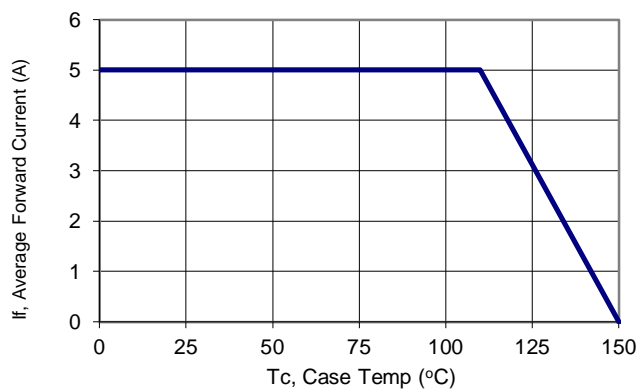
\* Pulse width < 300 uS, Duty cycle < 2%



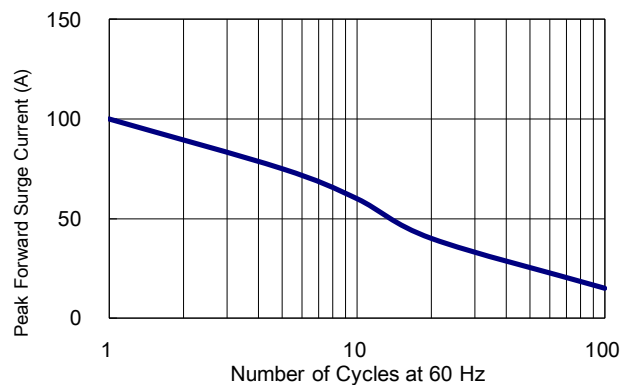
## 2. Characteristics Curves

### Ratings and Characteristics Curves

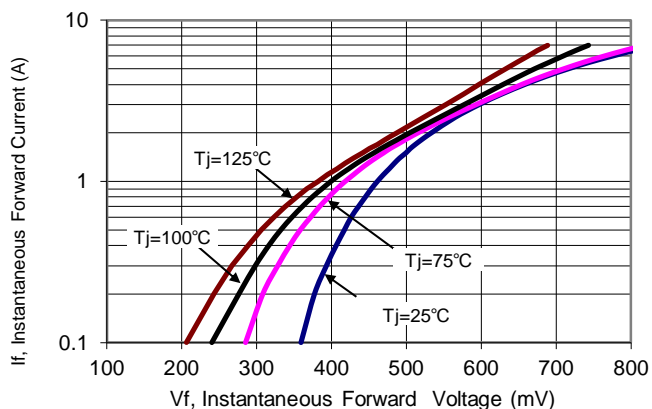
(  $T_A = 25^{\circ}\text{C}$  unless otherwise specified )



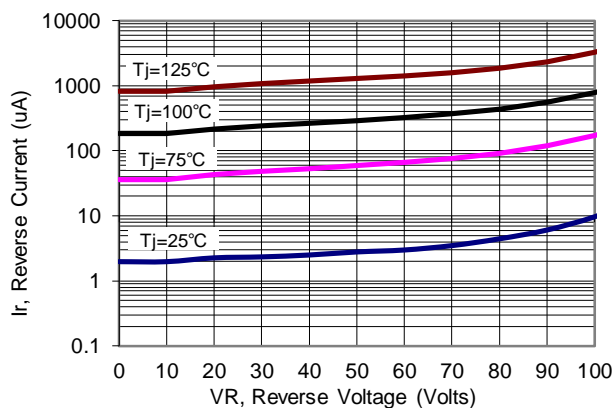
**Figure 1: Current Derating, Case**



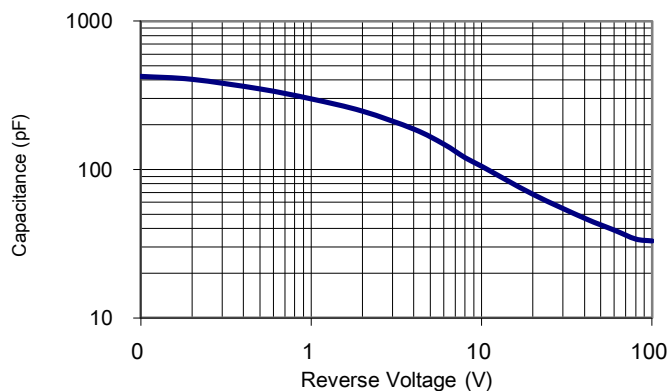
**Figure 2: Maximum Repetitive Surge Current**



**Figure 3: Typical Forward Voltage**



**Figure 4: Typical Reverse Current**



**Figure 5: Typical Junction Capacitance**



3. Marking information

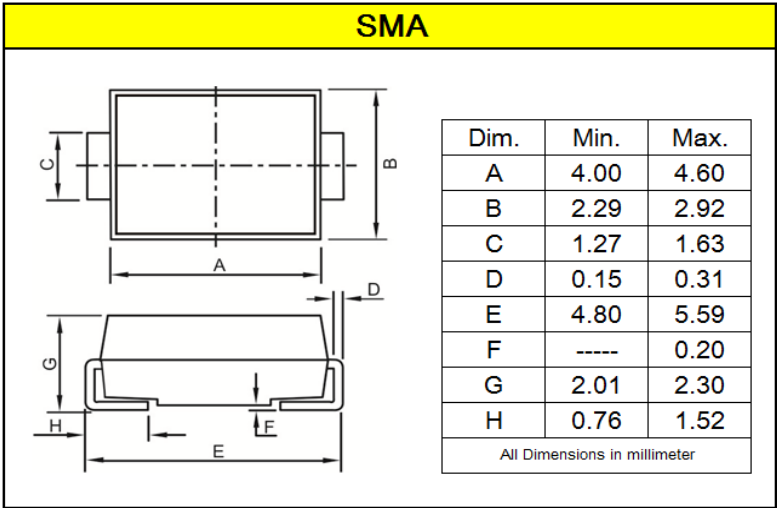
Top Marking Rule



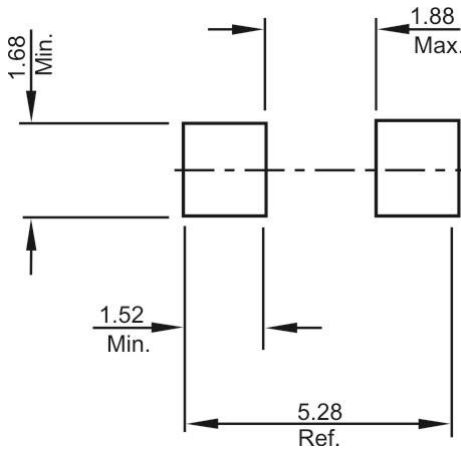
T5L100A= Product Type Marking Code  
A = Assembly code  
Y = Last one digits of year  
M = Month code  
S = Series Number  
H = Halogen Free (N/A = common molding compound)

4. Package information

Suggested Package Outline Dimensions    millimeters

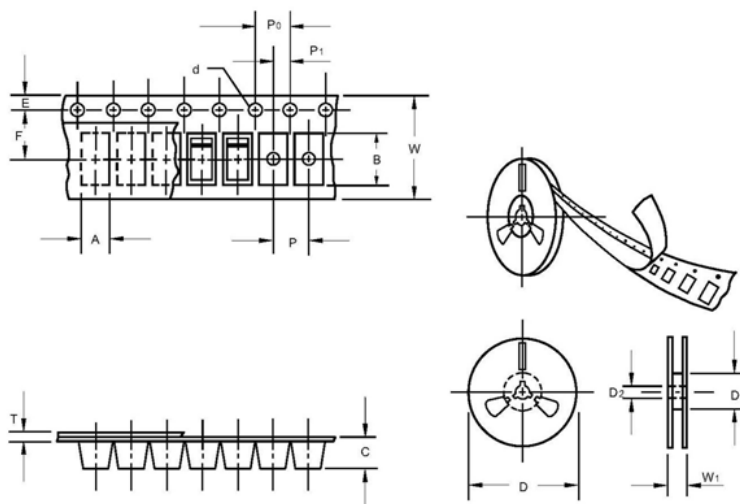


Mounting pad Outline Dimensions    millimeters



## 5. Packing and Ordering information

### Packing information millimeters



Item	Symbol	Dimension
Carrier width	A	2.79±0.15
Carrier length	B	5.33±0.15
Carrier depth	C	2.36±0.15
Sprocket hole	d	1.55±0.10
Reel outside diameter	D	330.0±1.0
Reel inner diameter	D1	75±1.0
Feed hole diameter	D2	13.5±1.0
Stocket hole position	E	1.75±0.10
Punch hole position	F	5.5±0.05
Punch hole pitch	P	4.0±0.10
Sprocket hole pitch	P0	4.0±0.10
Embossment center	P1	2.0±0.10
Total tape thickness	T	0.3±0.10
Tape width	W	12.0±0.15
Reel width	W1	18.1±1.5

### Ordering information

Part Number	Package	Base Quantity	Delivery mode
PT5L100A	DO-214AC (SMA)	5000	13" diameter plastic tape and reel

Note: For Halogen Free molding compound, add "H" suffix to part number above.

### Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.002 ounces (0.064grams) - DO-214AC(SMA)

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