



PFC Device Corporation

PTR30L80S
PTR30L80SF
PTR30L80SI
PTR30L80SB

30A 80V HPTR® Single Schottky Rectifier

Major ratings and characteristics

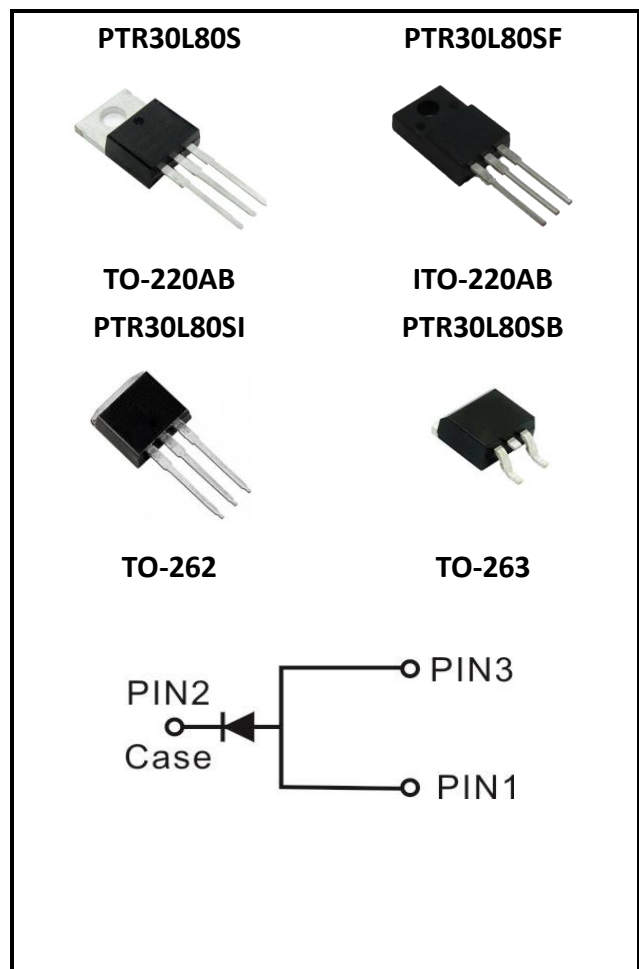
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	30	A
V_{RRM}	80	V
$V_F@ 30A, T_J=125^\circ C$	0.68	V, typ.
T_J Operating Junction Temperature	-40 to +150	$^\circ C$

Features

- Super Low Forward Voltage (SLVF®) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150 $^\circ C$ Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

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}	80	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current Per device	I_o	30	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	260	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	1	Amps
Typical Thermal Resistance	$R\theta_{JC}$	2	$^{\circ}\text{C} / \text{W}$
Package = TO-220AB		4	
Package = ITO-220AB		2.5	
Package = TO-262		3	
Package = TO-263			
Isolation voltage (ITO-220 only)	V_{AC}	1500	V
Maximum Rate of Voltage Change (at Rated V_R)	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 - ($T_A = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 5 A	T _J = 25 °C	V _F *	0.47	-----	Volts
	IF = 15 A			0.57	-----	
	IF = 30 A			0.71	0.75	
	IF = 5 A	T _J = 125 °C		0.37	-----	
	IF = 15 A			0.53	-----	
	IF = 30 A			0.68	0.72	
Instantaneous Reverse Current	At V _{RM}	T _J = 25 °C	IR *	35	500	uA
		T _J = 125 °C		22	45	mA
* Pulse width < 300 uS, Duty cycle < 2%						

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



2. Characteristics Curves

Ratings and Characteristics Curves

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

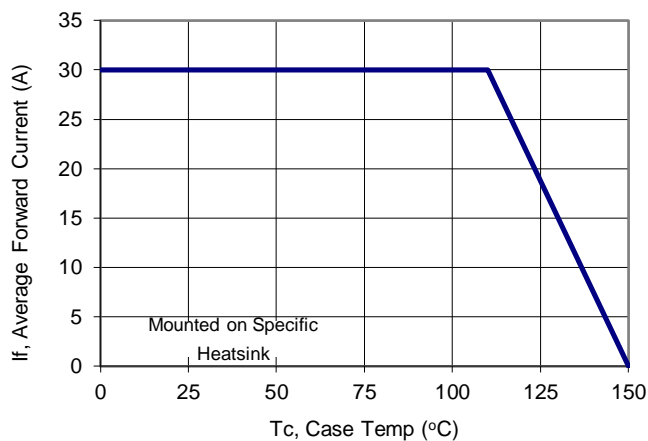


Figure 1: Current Derating, Case

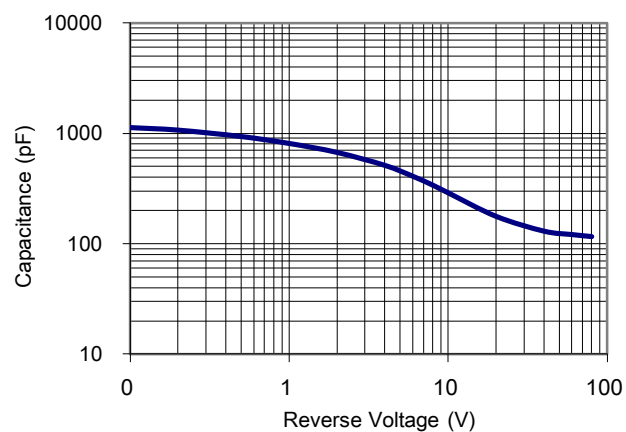


Figure 2: Typical Junction Capacitance

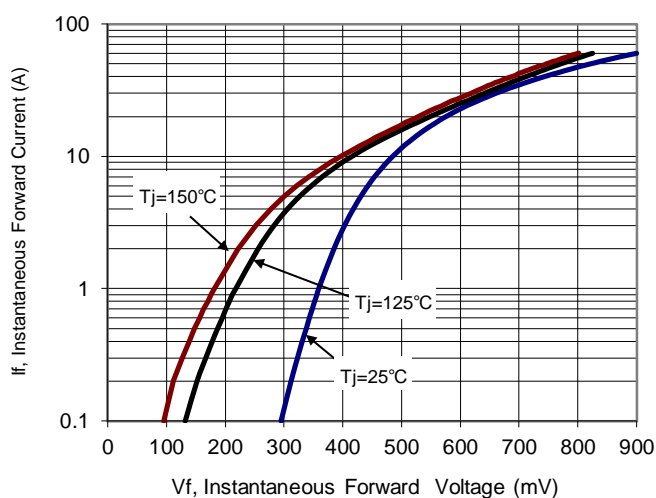


Figure 3: Typical Forward Voltage

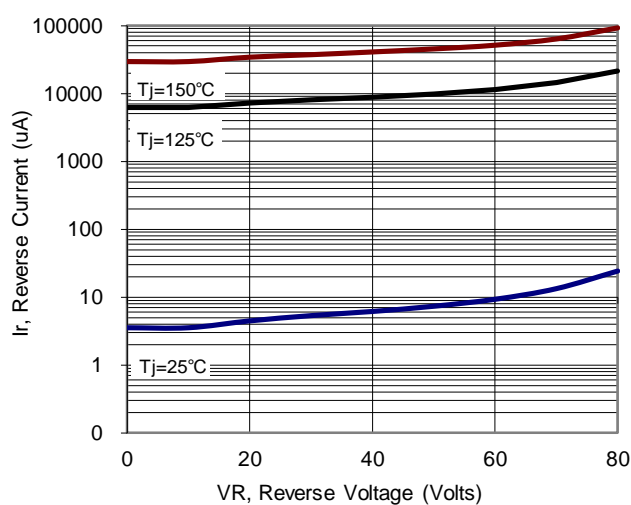


Figure 4: Typical Reverse Current



3. Marking information

Top Marking Rule

PFC PTR
30L80S
YYWW ABSH

PTR30L80S = Product Type Marking Code

YYWW = Date Code

YY = Last two digits of year

WW = Week code

AB = Assembly code

S = Series Number

H = Halogen Free (N/A = common molding compound)

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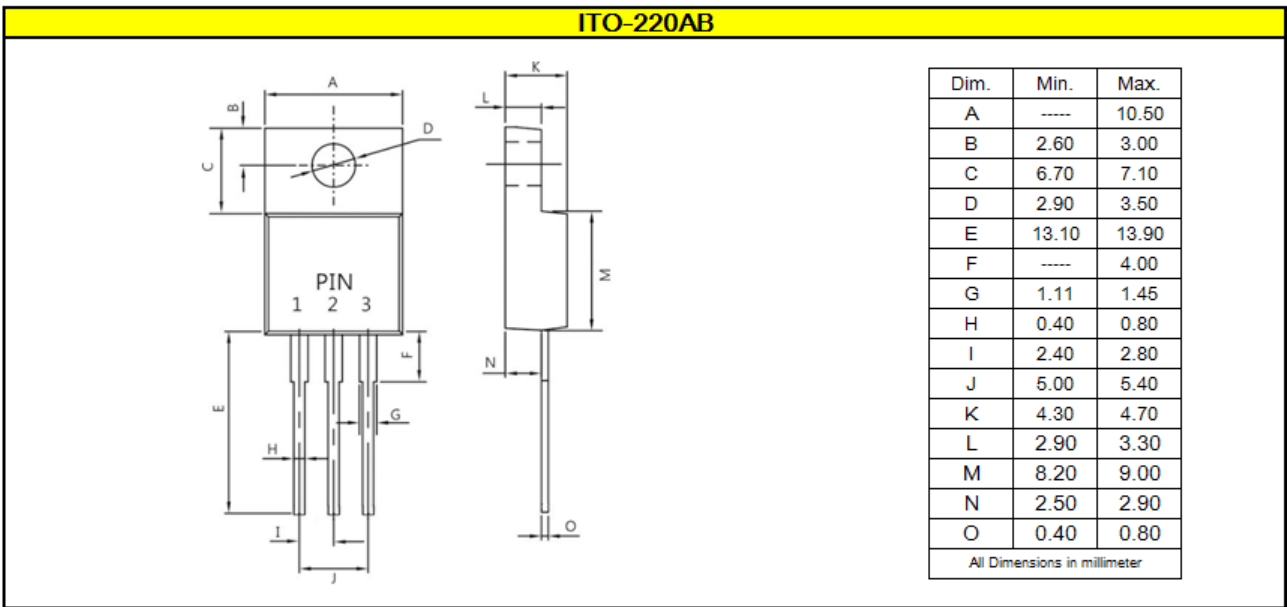
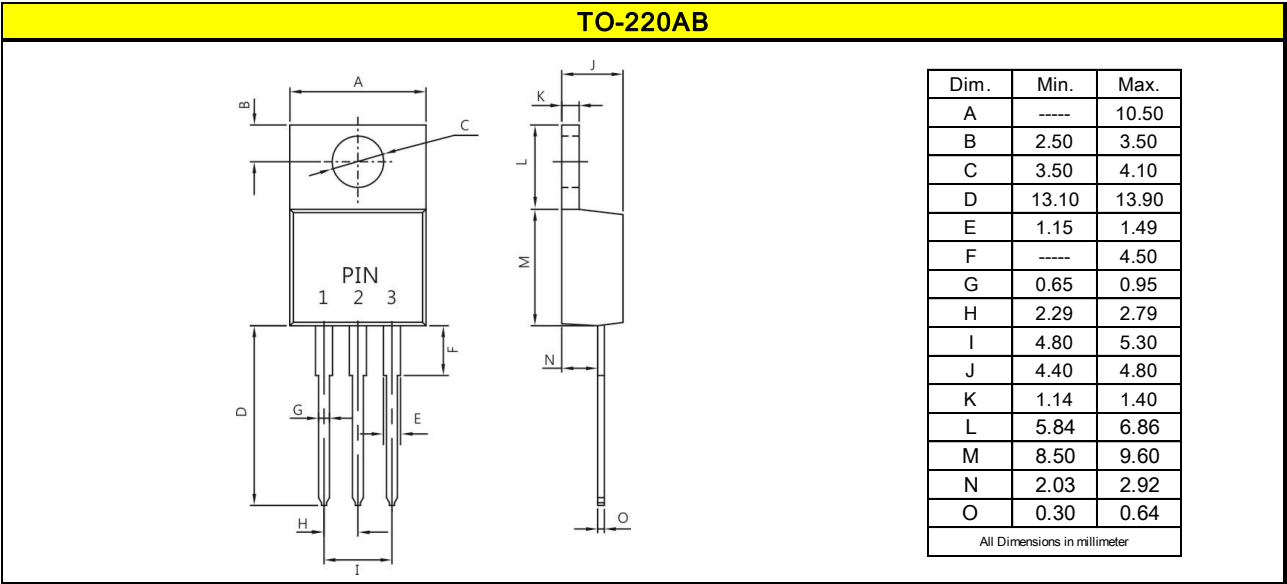
S = Series Number

H = Halogen Free (N/A = common molding compound)



4. Package information

Package Outline Dimensions millimeters



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5. Ordering information

Part Number	Package	Delivery mode
PTR30L80S	TO-220AB	50 pieces / tube
PTR30L80SF	ITO-220AB	50 pieces / tube
PTR30L80SI	TO-262	50 pieces / tube
PTR30L80SB	TO-263	800 pieces / 13" diameter 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 : 0.07 ounces (1.96grams) - TO-220AB
0.06 ounces (1.74grams) - ITO-220AB
0.05 ounces (1.45 grams) - TO-262
0.04 ounces (1.16 grams) - TO-263
- Mounting Torque : Recommended 4~5 kg-cm.

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