

P3L300B

PFC Device Corporation

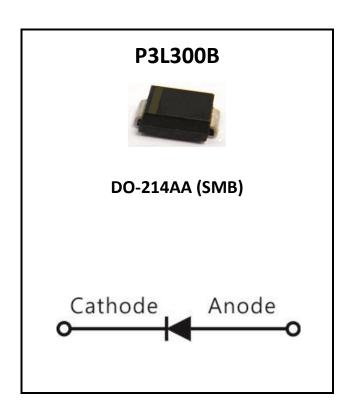
3A 300V MOS Schottky Rectifier

Major ratings and characteristics

Characteristics	Values	Units	
I _{F(AV)} Rectangular Waveform	3	А	
V _{RRM}	300	V	
V _F @ 3A , Tj=125 °C	0.79	V, typ.	
T _J Operating Junction	-65 to +175	°C	
Temperature			

Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 175°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 ($T_A = 25$ °C unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}		
Working Peak Reverse Voltage	V_{RWM}	300	Volts
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current			
Per device	Io	3	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
Peak Forward Surge Current - 1/2 60hz	I _{FSM}	50	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	1	Amps
Typical Thermal Resistance	$R\theta_{JL}$	20	°C/W
Maximum Rate of Voltage Change (at Rated VR)	dv/dt	10000	V/uS
Operating Junction Temperature	TJ	- 65 to +175 °C	
Storage Junction Temperature	T _{STG}	- 65 to +175	

Electrical Characteristics - (per leg) ($T_A = 25$ °C unless otherwise specified)

Parameter	Test Conditions		Symbol	Тур.	Max.	Units
Instantaneous	IF = 3 A	T _J = 25 °C	VF*		0.92	Volte
Forward Voltage	IF = 3 A	T _J = 125 °C	VF"	0.79	0.83	Volts
Instantaneous	At V _{RM}	T _J = 25 °C	IR*		100	uA
Reverse Current		T _J = 125 °C			20	mA

^{*} Pulse width < 300 uS, Duty cycle < 2%



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2. Characteristics Curves

Ratings and Characteristics Curves

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

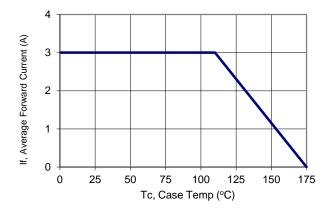


Figure 1: Current Derating, Case

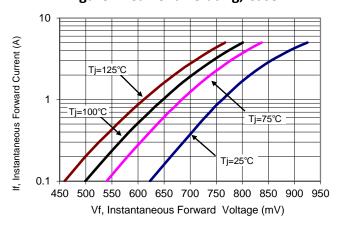


Figure 3: Typical Forward Voltage

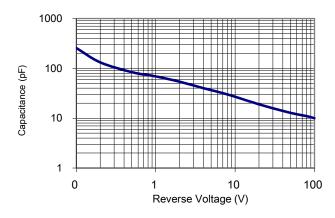


Figure 5: Typical Junction Capacitance

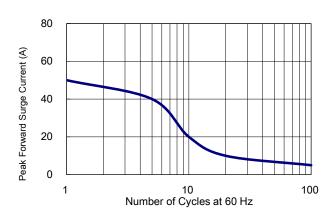


Figure 2: Maximum Repetitive Surge Current

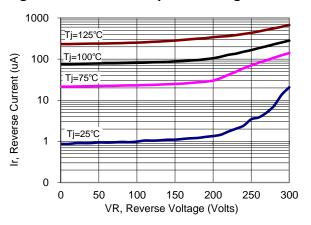


Figure 4: Typical Reverse Current



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3. Marking information

Top Marking Rule

P3L300B AYMH P3L300B= Product Type Marking Code

A = Assembly code

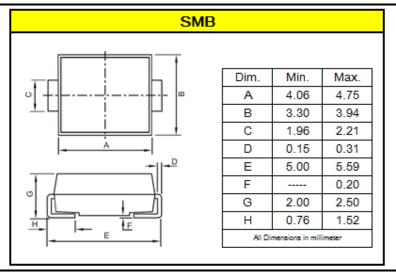
Y = Last one digits of year

M = Month code

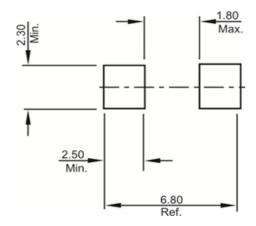
H = Halogen Free (N/A = common molding compound)

4. Package information

Suggested Package Outline Dimensions millimeters



Mounting pad Outline Dimensions millimeters

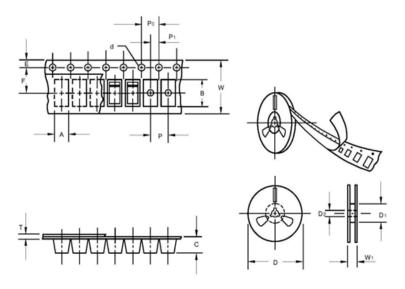




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5. Packing and Ordering information

Packing information millimeters



Symbol	Dimension
Α	3.77±0.10
В	5.7±0.10
С	2.45±0.10
d	1.55±0.10
D	330.0±1.0
D1	75±1.0
D2	13.5±1.0
Е	1.75±0.10
F	5.5±0.05
Р	8.0±0.10
P0	4.0±0.10
P1	2.0±0.10
Т	0.25±0.10
W	12.0±0.15
W1	18.1±1.5
	A B C d D D1 D2 E F P P0 P1 T W

Ordering information

Part Number	Package	Base Quantity	Delivery mode
P3L300B	DO-214AA (SMB)	3000	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: 0.003 ounces (0.093grams) - DO-214AA(SMB)

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