



PFC Device Corporation

P10L300E
P10L300D

10A 300V MOS Schottky Rectifier

Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5×2	A
V_{RRM}	300	V
V_F @ 5A , $T_J=125^\circ\text{C}$	0.7	V, typ.
T_J Operating Junction Temperature	-65 to +175	$^\circ\text{C}$

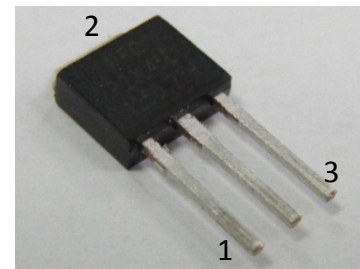
Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 175°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Typical Applications

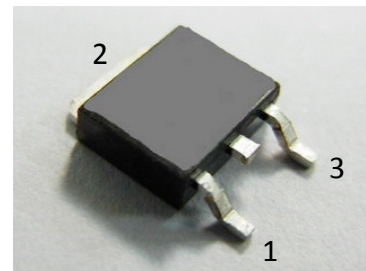
Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications

P10L300E

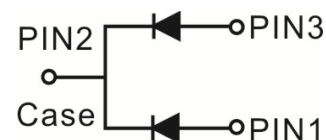


TO-251 (I-PAK)

P10L300D



TO-252 (D-PAK)



1. Characteristics

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

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}	300	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current Per device	I_o	10	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	120	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	1	Amps
Typical Thermal Resistance (per leg) Package = I-PAK TO-251 Package =D-PAK TO-252	$R\theta_{JC}$	6	$^{\circ}\text{C} / \text{W}$
		6	
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 °C	VF*	----	0.92	Volts
		T _J = 125 °C		0.7	0.8	
Instantaneous Reverse Current	At V _{RM}	T _J = 25 °C	IR*	----	100	uA
		T _J = 125 °C		----	10	mA
* Pulse width < 300 uS, Duty cycle < 2%						



2. Characteristics Curves

Ratings and Characteristics Curves

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

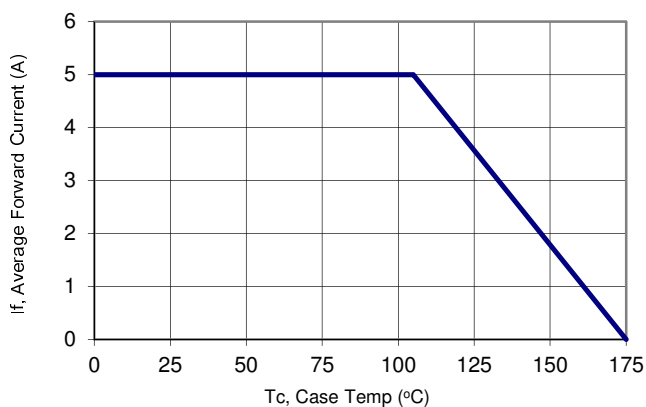


Figure 1: Current Derating, Case

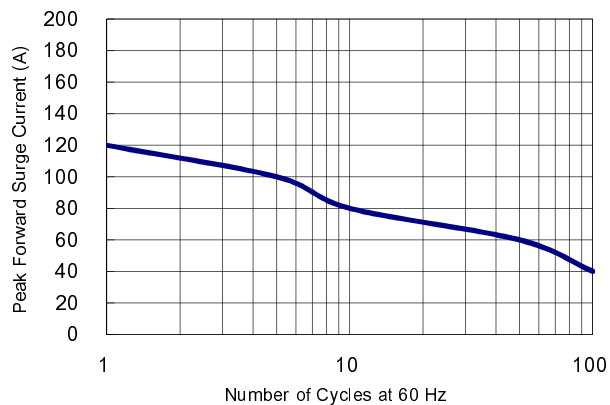


Figure 2: Maximum Repetitive Surge Current

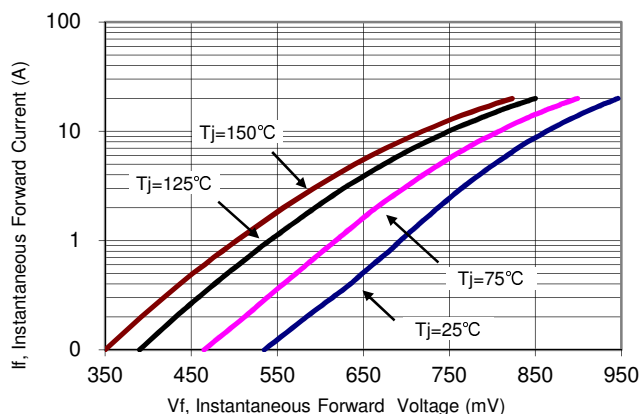


Figure 3: Typical Forward Voltage

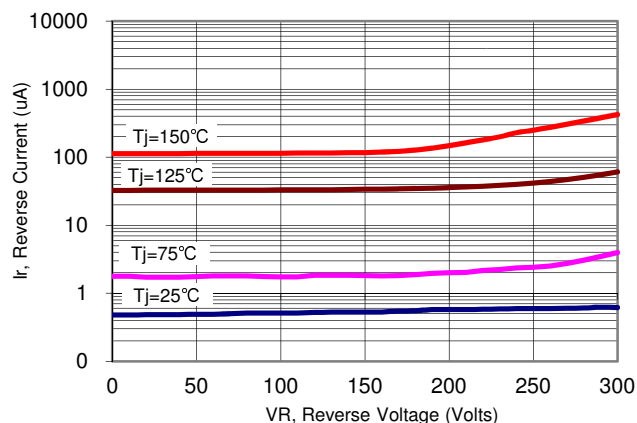


Figure 4: Typical Reverse Current

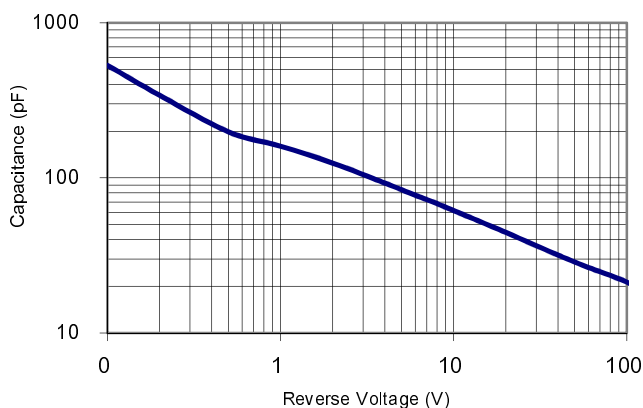


Figure 5: Typical Junction Capacitance



3. Marking information

Top Marking Rule

PFC
P10L300E
YYWW ABH

P10L300E = Product Type Marking Code

YYWW = Date Code

YY = Last two digits of year

WW = Week code

AB = Assembly code

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

PFC
P10L300D
YYWW ABH

P10L300D = Product Type Marking Code

YYWW = Date Code

YY = Last two digits of year

WW = Week code

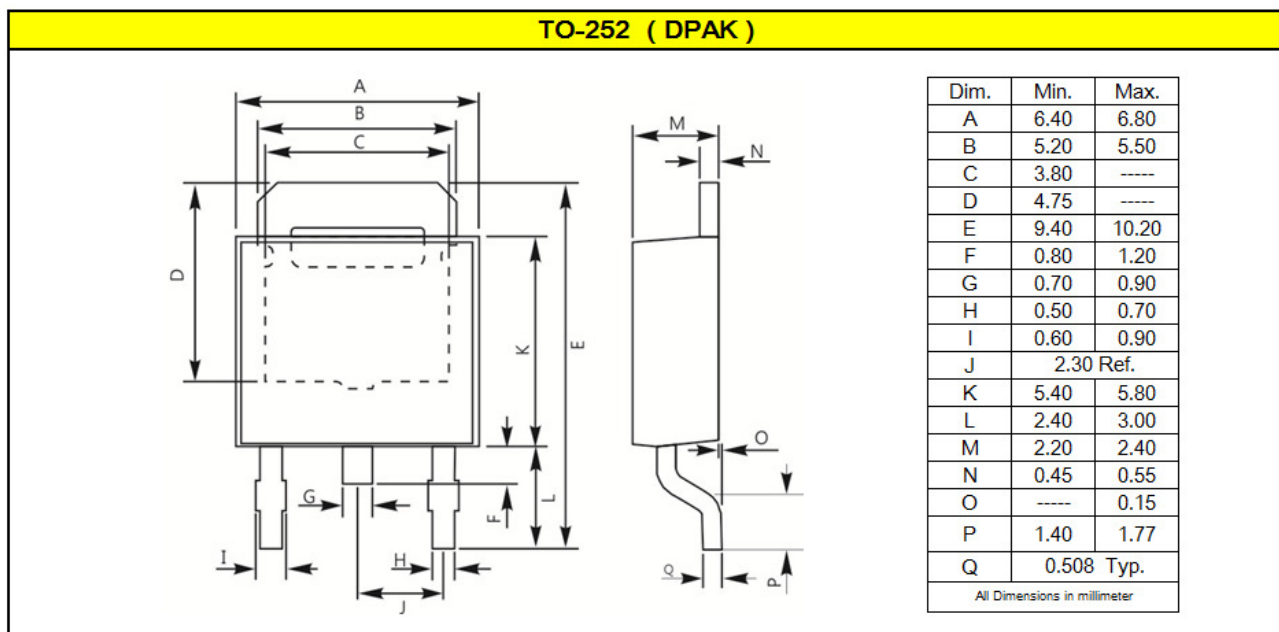
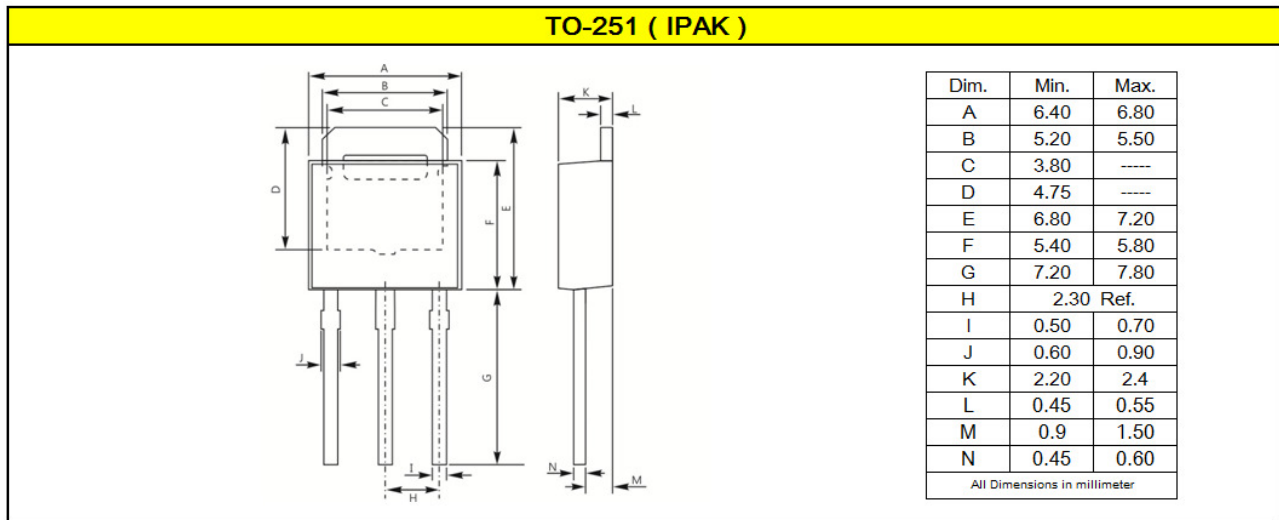
AB = Assembly code

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



4. Package information

Package Outline Dimensions millimeters



5. Ordering information

Part Number	Package	Delivery mode
P10L300E	TO-251 (I-PAK)	75 pieces / tube
P10L300D	TO-252 (D-PAK)	2500 pcs / 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 : 0.01 ounces (0.3grams) - TO-251 (I-PAK)
0.01 ounces (0.3grams) - TO-252 (D-PAK)

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