

PFC Device Corporation

P2060E P2060D

20A 60V MOS Schottky Rectifier

Major ratings and characteristics

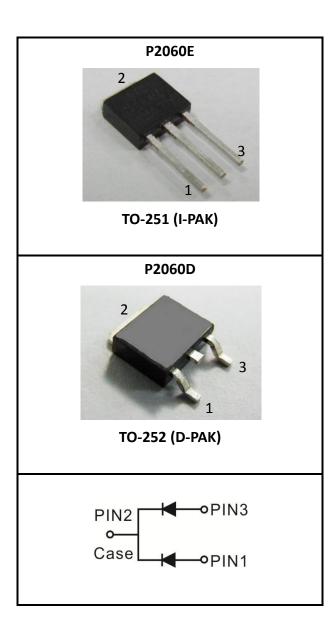
Characteristics	Values	Units	
I _{F(AV)} Rectangular Waveform	10 × 2	А	
V_{RRM}	60	V	
V _F @ 10A , Tj=125 °C	0.58	V, typ.	
T _J Operating Junction Temperature	-40 to +150	°C	

Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150°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 $(T_A = 25^{\circ}C)$ unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}		
Working Peak Reverse Voltage	V_{RWM}	60	Volts
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current			
Per device	I _o	20	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	$R\theta_{JC}$	6	°C / W
Package= D-PAK TO-252		6	
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10000	V/uS
Operating Junction Temperature	T _J	- 40 to +150	°C
Storage Junction Temperature	T _{STG}	- 40 to +150	

Electrical Characteristics - (per leg) ($T_A = 25^{\circ}C$ unless otherwise specified)

Parameter	Test Con	ditions	Symbol	Тур.	Max.	Units
Instantaneous	IF = 10 A	$T_J = 25$ °C	VF*		0.70	Volts
Forward Voltage		T _J = 125 °C		0.58	0.65	
Instantaneous	At V _{RM}	T _J = 25 °C	IR*		500	uA
Reverse Current		T _J = 125 °C			100	mA
* Pulse width < 300 uS, Duty cycle < 2%						

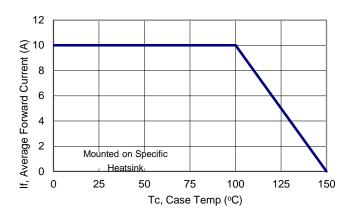


Version 4.0 2 / 6

2. Characteristics Curves

Ratings and Characteristics Curves

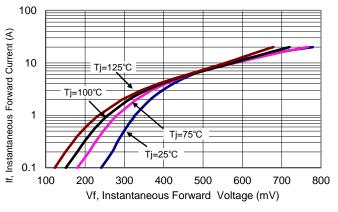
($TA = 25^{\circ}C$ unless otherwise specified)



10000 (d) 90 (e) 100 (f) 100

Figure 1: Current Derating, Case

Figure 2: Maximum Repetitive Surge Current



100000 10000 Tj=125°C Ir, Reverse Current (uA) Tj=100°C 1000 Tj=75°C 100 Tj=25°C 10 0 20 30 40 50 60 VR, Reverse Voltage (Volts)

Figure 3: Typical Forward Voltage

Figure 4: Typical Reverse Current



Version 4.0 3 / 6

3. Marking information

Top Marking Rule

PFC P2060E YYWW

PFC P2060D YYWW ABH P2060E = 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)

P2060D = Product Type Marking Code

YYWW = Date Code

YY = Last two digits of year

WW = Week code

AB = Assembly code

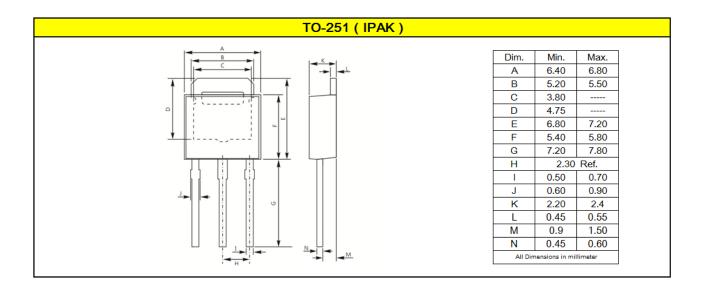
H = Halogen Free (N/A = common molding compound)

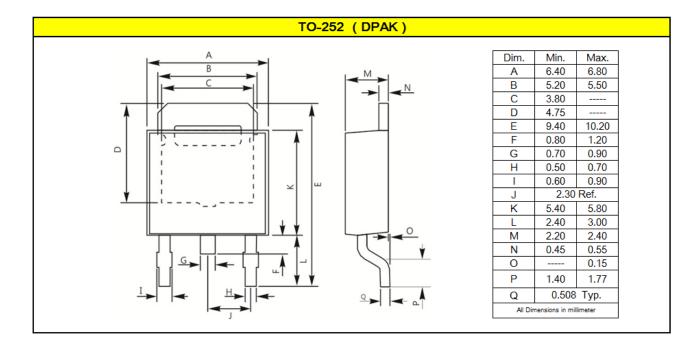


4/6 Version 4.0

4. Package information

Package Outline Dimensions millimeters







Version 4.0 5 / 6

5. Ordering information

Part Number	Package	Delivery mode
P2060E	TO-251 (I-PAK)	75 pieces / tube
P2060D	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)

PFC Device Corp reserves the right to make changes without further notice to any products herein. PFC Device Corp makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does PFC Device Corp assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in PFC Device Corp data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typical" must be validated for each customer application by customer's technical experts. PFC Device Corp does not convey any license under its patent rights nor the rights of others. PFC Device Corp products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the PFC Device Corp product could create a situation where personal injury or death may occur. Should Buyer purchase or use PFC Device Corp products for any such unintended or unauthorized application, Buyer shall indemnify and hold PFC Device Corp and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that PFC Device Corp. was negligent regarding the design or manufacture of the part.



Version 4.0 6 / 6