PFC Device Corporation

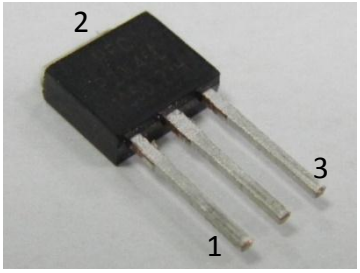
P2060E
P2060D

20A 60V MOS Schottky Rectifier

Major ratings and characteristics

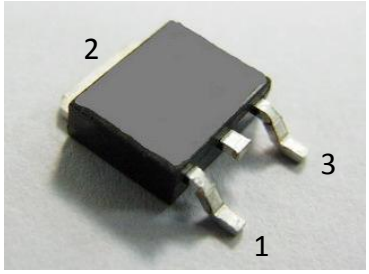
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	10 × 2	A
V_{RRM}	60	V
V_F@ 10A , Tj=125 °C	0.58	V, typ.
T_J Operating Junction Temperature	-40 to +150	°C

P2060E

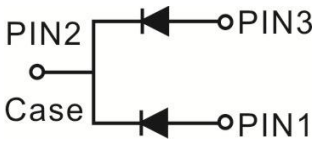


TO-251 (I-PAK)

P2060D



TO-252 (D-PAK)



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℃ unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}	60	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current Per device (Rated VR-20Khz Square Wave) - 50% duty cycle	I_o	20	Amps
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 6	^oC / W
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10000	V/uS
Operating Junction Temperature	T_J	- 40 to +150	^oC
Storage Junction Temperature	T_{STG}	- 40 to +150	

Electrical Characteristics - (per leg) (T_A = 25℃ unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 10 A	T_J = 25 ^oC	VF*	----	0.70	Volts
		T_J = 125 ^oC		0.58	0.65	
Instantaneous Reverse Current	At V_{RM}	T_J = 25 ^oC	IR*	----	500	uA
		T_J = 125 ^oC		----	100	mA
* Pulse width < 300 uS, Duty cycle < 2%						

2. Characteristics Curves

Ratings and Characteristics Curves (TA = 25℃ unless otherwise specified)

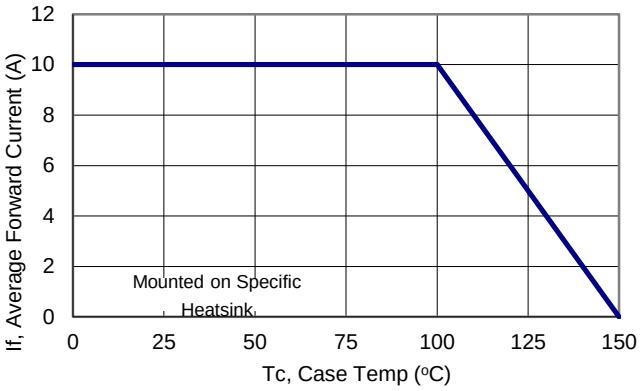


Figure 1: Current Derating, Case

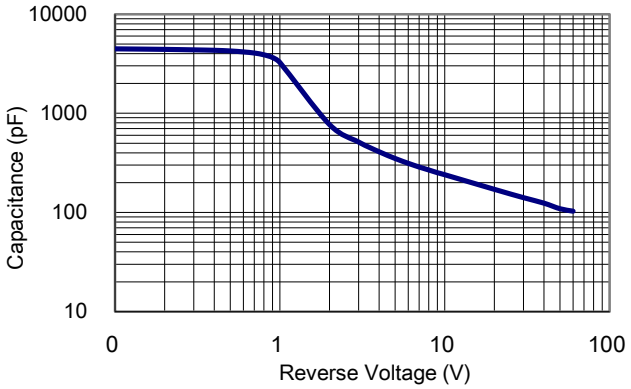


Figure 2: Maximum Repetitive Surge Current

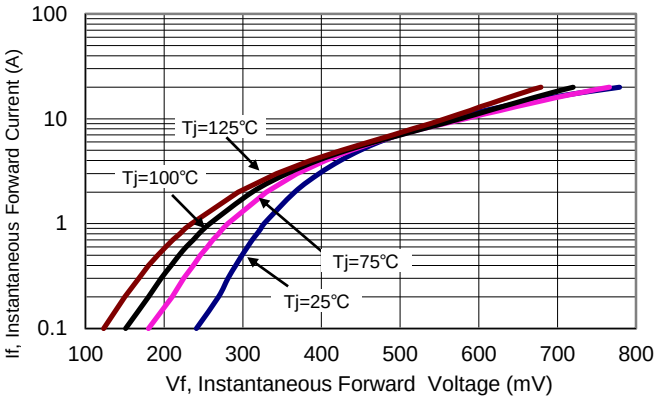


Figure 3: Typical Forward Voltage

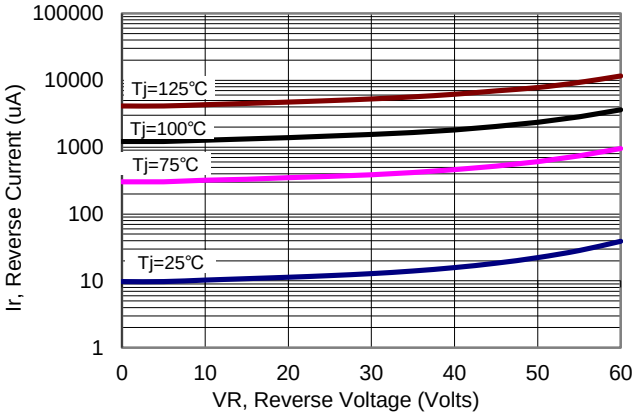


Figure 4: Typical Reverse Current

3. Marking information

Top Marking Rule

PFC **P2060E** **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)

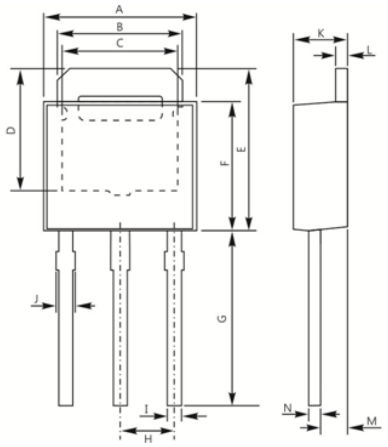
PFC **P2060D** **YYWW ABH**

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. Package information

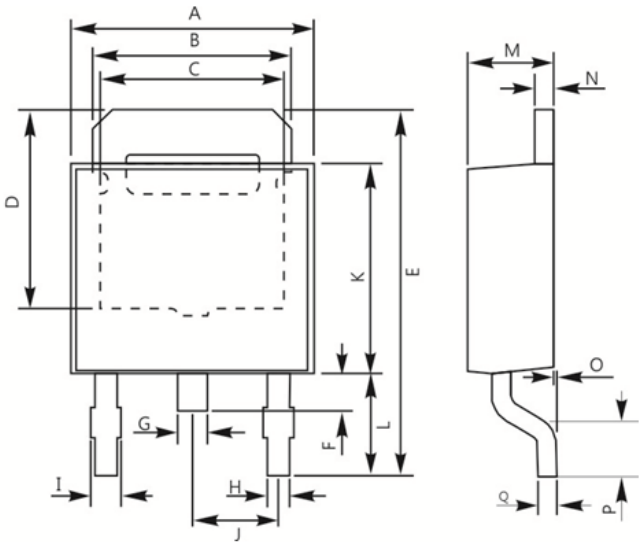
Package Outline Dimensions millimeters

TO-251 (IPAK)



Dim.	Min.	Max.
A	6.40	6.80
B	5.20	5.50
C	3.80	-----
D	4.75	-----
E	6.80	7.20
F	5.40	5.80
G	7.20	7.80
H	2.30 Ref.	
I	0.50	0.70
J	0.60	0.90
K	2.20	2.4
L	0.45	0.55
M	0.9	1.50
N	0.45	0.60
All Dimensions in millimeter		

TO-252 (DPAK)



Dim.	Min.	Max.
A	6.40	6.80
B	5.20	5.50
C	3.80	-----
D	4.75	-----
E	9.40	10.20
F	0.80	1.20
G	0.70	0.90
H	0.50	0.70
I	0.60	0.90
J	2.30 Ref.	
K	5.40	5.80
L	2.40	3.00
M	2.20	2.40
N	0.45	0.55
O	-----	0.15
P	1.40	1.77
Q	0.508 Typ.	
All Dimensions in millimeter		

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)