PT20L100N5

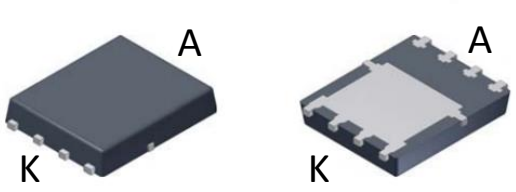
PFC Device Corporation

20A 100V HPTR® Schottky Rectifier

Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	20	A
V_{RRM}	100	V
V_F@ 20A , Tj=125 °C	0.61	V, typ.
T_J Operating Junction Temperature	-40 to +150	°C

PT20L100N5



DFN 5X6

Features

- Super Low Forward Voltage (SLVF®) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Green Molding Compound (No Br, Sb)

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}	100	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}	250	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	1	Amps
Typical Thermal Resistance			°C / W
Thermal Resistance junction to Ambient Note (1)	$R\theta_{JA}$	72	
Thermal Resistance junction to Ambient Note (2)	$R\theta_{JA}$	30	
Maximum Rate of Voltage Change (at Rated VR)	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 °C unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 5 A	T_J = 25 °C	VF*	0.47	-----	Volts
	IF = 10 A			0.53	-----	
	IF = 20 A			0.67	0.73	
	IF = 5 A	T_J = 125 °C		0.38	-----	
	IF = 10 A			0.48	-----	
	IF = 20 A			0.61	0.67	
Instantaneous Reverse Current	VR = 70V	T_J = 25 °C	IR*	7.0	-----	uA
	VR = 100V			-----	300	uA
	VR = 70V	T_J = 125 °C		10.0	-----	mA
	VR = 100V			17.0	45	mA

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

Note 1. FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

Note 2. Polymide PCB, 2 oz Copper. Cathode pad dimensions 18.8x14.4mm , Anode pad dimensions- (5.6x14.4mm)

2. Characteristics Curves

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

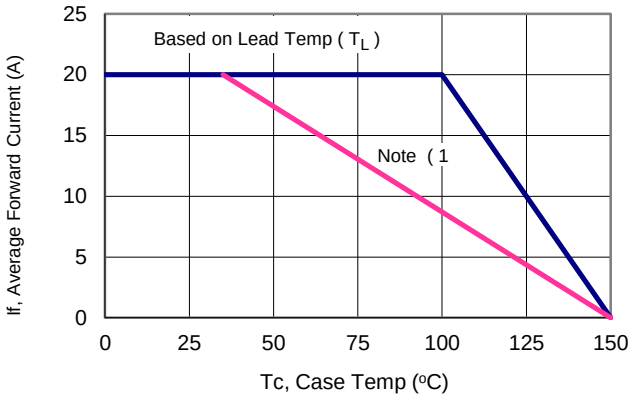


Figure 1: Current Derating, Case

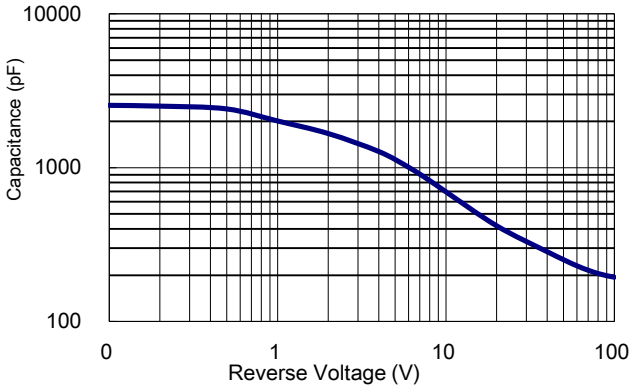


Figure 2: Maximum Repetitive Surge Current

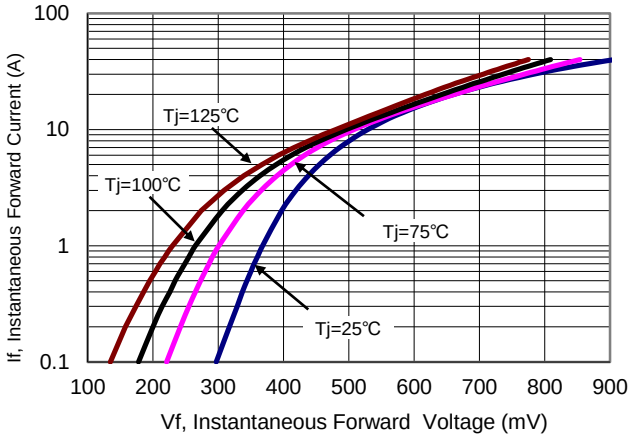


Figure 3: Typical Forward Voltage

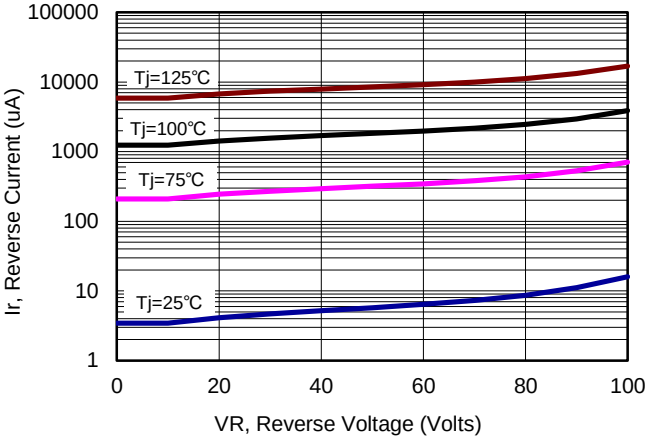
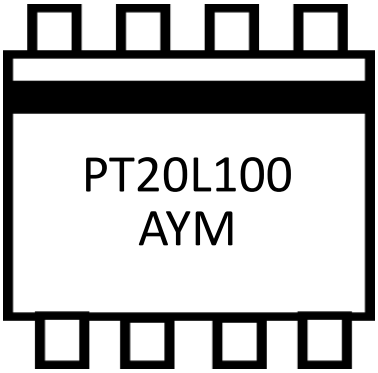


Figure 4: Typical Reverse Current

3. Marking information

Top Marking Rule



PT20L100 = Product Type Marking Code

A = Assembly Code

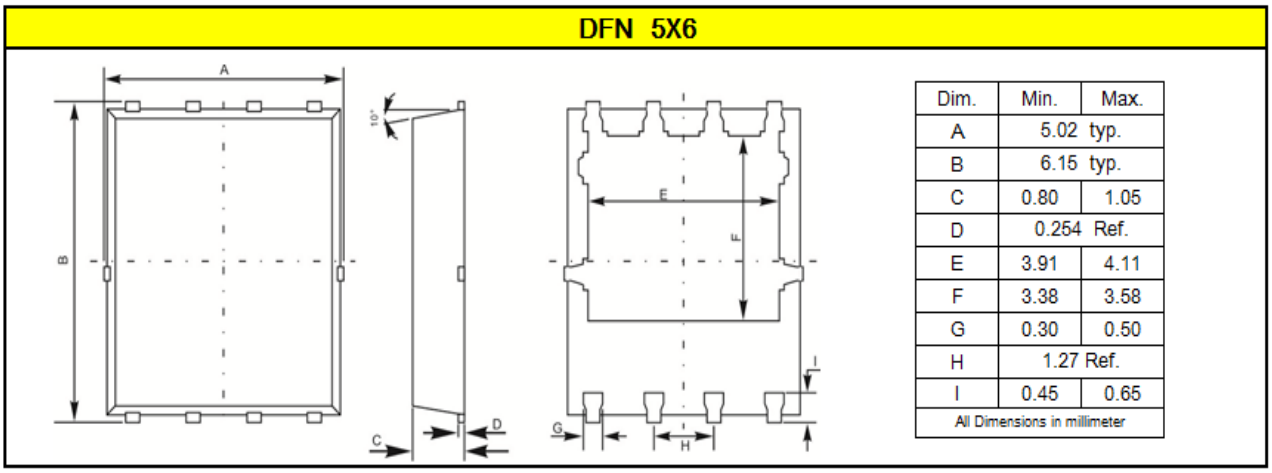
YM = Date Code

Y = Last digits of year

M = Month code

4. Package information

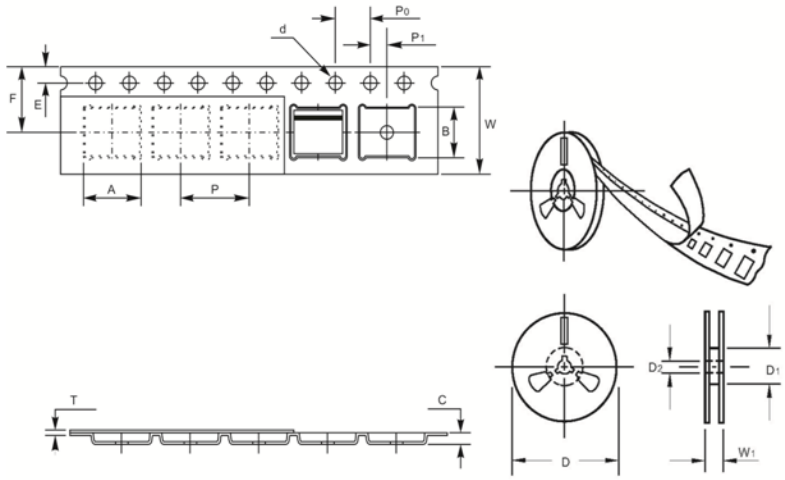
Suggested Package Outline Dimensions millimeters



Dim.	Min.	Max.
A	5.02 typ.	
B	6.15 typ.	
C	0.80	1.05
D	0.254 Ref.	
E	3.91	4.11
F	3.38	3.58
G	0.30	0.50
H	1.27 Ref.	
I	0.45	0.65
All Dimensions in millimeter		

5. Packing and Ordering information

Packing information millimeters



Item	Symbol	Dimension
Carrier width	A	6.3±0.10
Carrier length	B	5.3±0.10
Carrier depth	C	1.2±0.10
Sprocket hole	d	1.5±0.10
Reel outside diameter	D	330.0±2.0
Reel inner diameter	D1	100±1.0
Feed hole diameter	D2	13.5±1.0
Stocket hole position	E	1.75±0.10
Punch hole position	F	5.5±0.05
Punch hole pitch	P	8.0±0.10
Sprocket hole pitch	P0	4.0±0.10
Embossment center	P1	2.0±0.10
Totall tape thickness	T	0.3±0.05
Tape width	W	12.0±0.15
Reel width	W1	18.4±1.5

Ordering information

Part Number	Package	Base Quantity	Delivery mode
PT20L100N5	DFN 5X6	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) – DFN 5X6