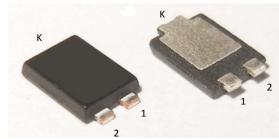


Major ratings and characteristics

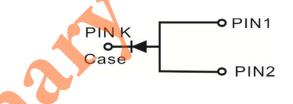
Characteristics	Values	Units	
I _{F(AV)} Rectangular Waveform	10	Α	
V_{RRM}	45	V	
V _F @ 10 A , Tj=125℃	0.39	V , typ.	
T _J Operating Junction Temperature	-40 to +150	°C	

TO-277A



Features

- * High Performance Forward Voltage 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 ultra-low forward voltage drop to maximize efficiency in Power Supply applications

Mechanical

- * Case: TO-277A
- * Molder Plastic: UL Flammability Classification
 - Rating 94V-0
- * Device Weight: 0.003 ounces (0.093grams)

Maximum Ratings Characteristics

(T_A = 25°C unless otherwise specified)

Parameter	Symbol		Units	
DC Blocking Voltage	V _{RM}			
Working Peak Reverse Voltage	V_{RWM}	45	Volts	
Peak Repetitive Reverse Voltage	V _{RRM}			
Average Rectified Forward Current		10	A	
(Rated VR-20Khz Square Wave) - 50% duty cycle	I _O	10	Amps	
Peak Forward Surge Current - 1/2 60hz	I _{FSM}	275	Amps	
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	Amps	
Typical Thermal Resistance	Rθ _{JA}	60	°C / W	
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10000	V/uS	
Operating Junction Temperature	T _J	- 40 to +150	~	
Storage Junction Temperature	T _{STG}	- 40 to +150		

Electrical Characteristics - (per leg)	(T _A = 25°C unless otherwise specified)
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Parameter	Test Co	nditions	Symbol	Тур.	Max.	Units
Instantaneous Forward Voltage	IF = 10 A	T _J = 25°C	V_F^*		0.47	Volts
		T _J = 125°C		0.39	0.42	
Instantaneous Reverse Current	At V _{RM}	T _J = 25°C	IR		500	uA
		T _J = 125°C			100	mA

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

Patings and Characteristics Curves

(T_A = 25°C unless otherwise specified)

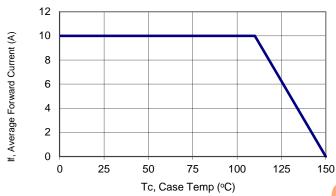


Figure 1: Current Derating, Case

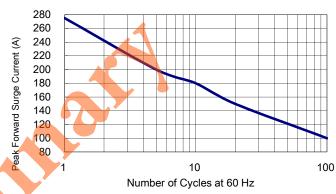


Figure 2: Maximum Repetitive Surge Current

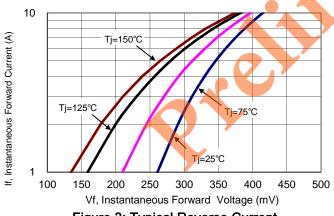


Figure 3: Typical Reverse Current

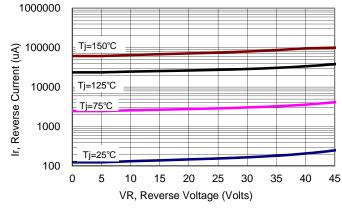


Figure 4: Typical Forward Voltage

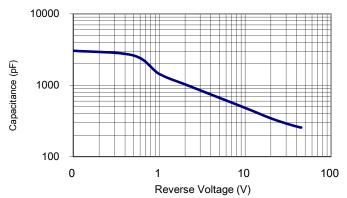
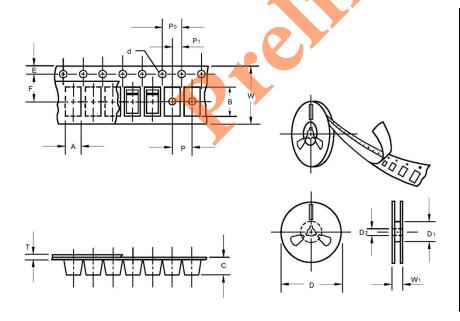


Figure 5: Typical Junction Capacitance

Package and Suggested Mounting pad Outline Dimensions millimeters

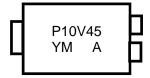
Packing and Ordering information



Symbol	Dimension
Α	4.4±0.10
В	7.0±0.10
С	1.4±0.10
d	1.5±0.10
D	330.0±1.0
D1	75±1.0
D2	13.5±1.0
Е	1.75±0.10
F	7.5±0.10
Р	8.0±0.10
P0	4.0±0.10
P1	2.0±0.10
T	0.3±0.10
W	16.0±0.20
W1	22.7±1.5
	A B C d D D1 D2 E F P P0 P1 T W

Part Number	Package	Base Quantity	Delivery mode
P10V45SP	TO-277A	5000	13" diameter plastic tape and reel

Marking information



P10V45 = Product Type Marking Code

YM = Date Code

Y = Last one digits of year

M = Month Code

A = Assembly code



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