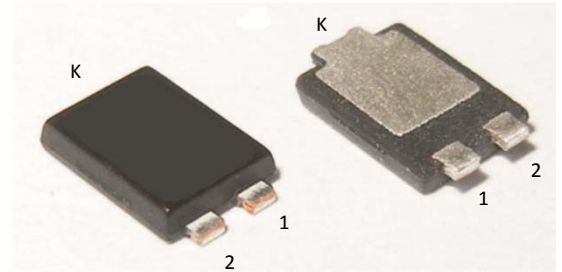




Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	10	A
V_{RRM}	45	V
$V_F @ 10 A, T_J=125^\circ C$	0.39	V, typ.
T_J Operating Junction Temperature	-40 to +150	$^\circ C$

TO-277A



Features

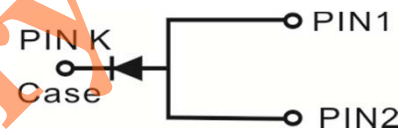
- * High Performance Forward Voltage Drop
- * Reliable High Temperature Operation
- * Softest, fast switching capability
- * 150 $^\circ C$ Operating Junction Temperature
- * Lead Free Finish, RoHS Compliant
- * Green Molding Compound (No Br, Sb)

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

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}	45	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current (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	$R\theta_{JA}$	60	$^\circ C / W$
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10000	V/uS
Operating Junction Temperature	T_J	- 40 to +150	$^\circ C$
Storage Junction Temperature	T_{STG}	- 40 to +150	



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

Parameter	Test Conditions	Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 10 A	V_F^*	----	0.47	Volts
			0.39	0.42	
Instantaneous Reverse Current	At V_{RM}	IR	----	500	μA
			----	100	mA

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

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

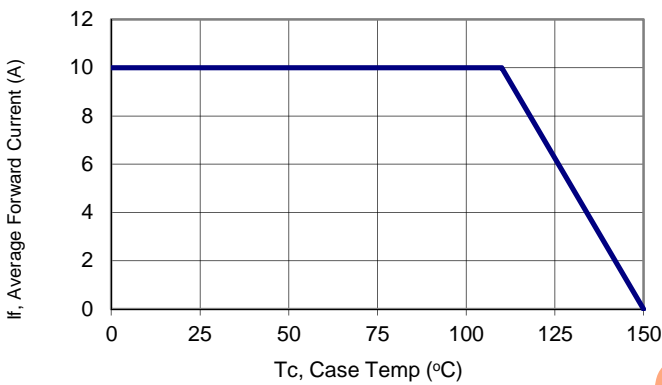


Figure 1: Current Derating, Case

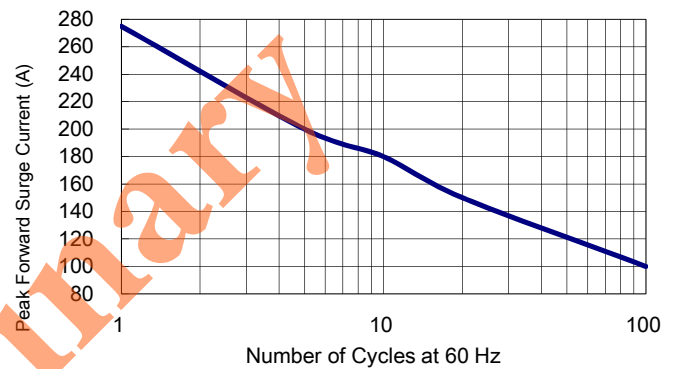


Figure 2: Maximum Repetitive Surge Current

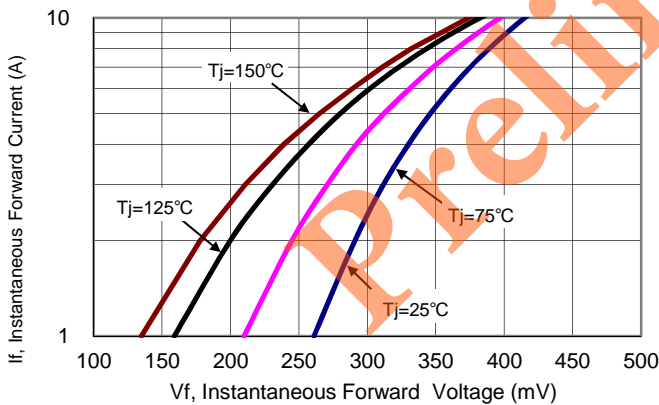


Figure 3: Typical Reverse Current

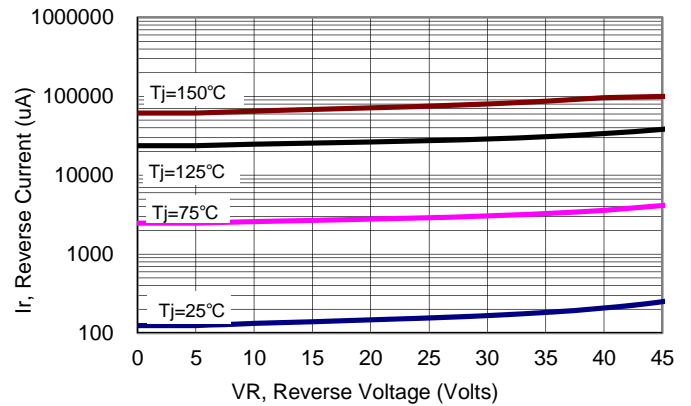


Figure 4: Typical Forward Voltage

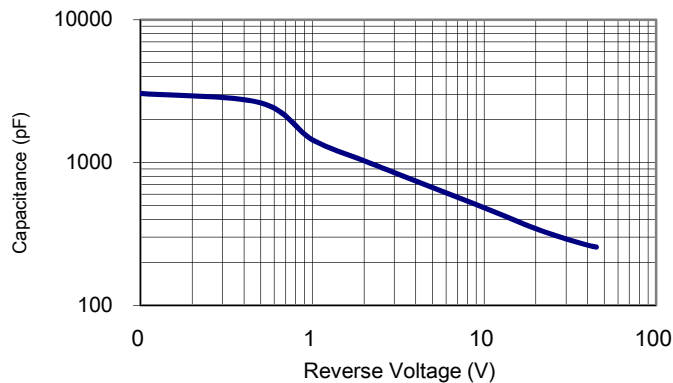
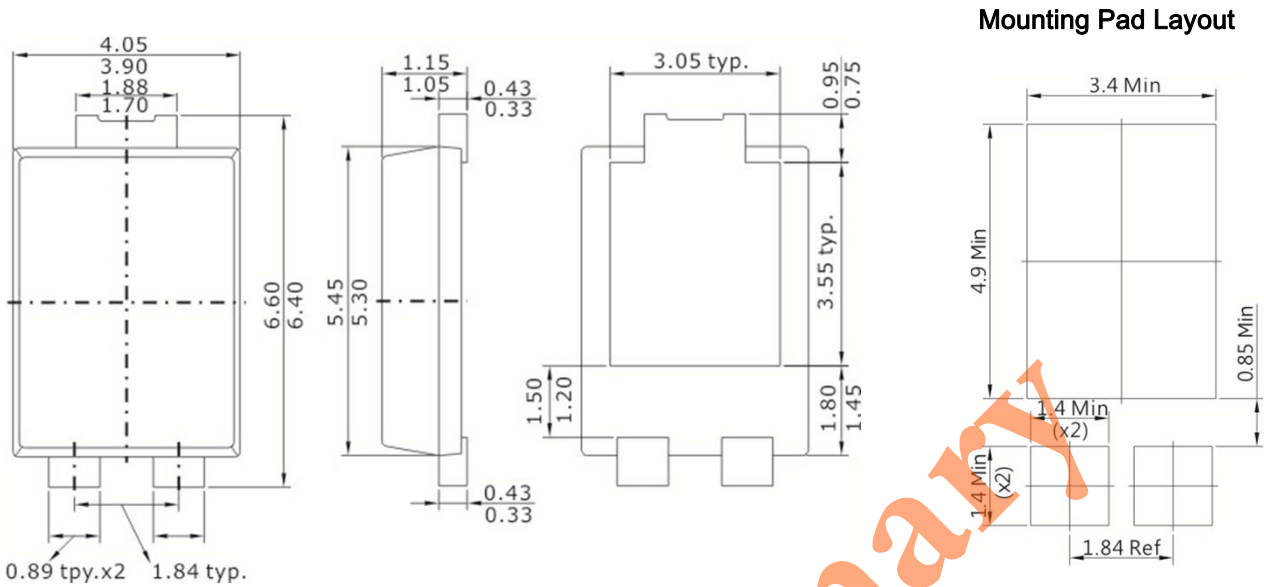


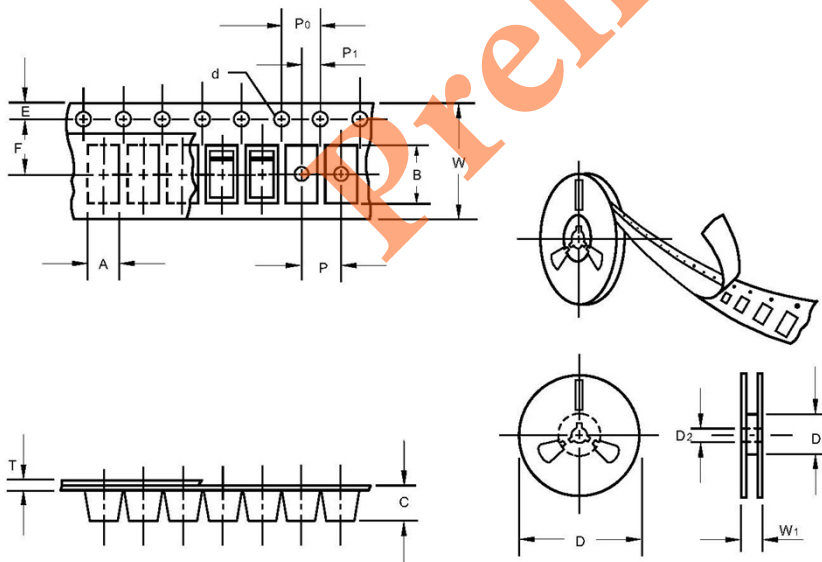
Figure 5: Typical Junction Capacitance



Package and Suggested Mounting pad Outline Dimensions millimeters



Packing and Ordering information

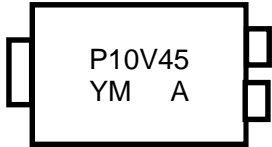


Item	Symbol	Dimension
Carrier width	A	4.4±0.10
Carrier length	B	7.0±0.10
Carrier depth	C	1.4±0.10
Sprocket hole	d	1.5±0.10
Reel outside diameter	D	330.0±1.0
Reel inner diameter	D1	75±1.0
Feed hole diameter	D2	13.5±1.0
Stocket hole position	E	1.75±0.10
Punch hole position	F	7.5±0.10
Punch hole pitch	P	8.0±0.10
Sprocket hole pitch	P0	4.0±0.10
Embossment center	P1	2.0±0.10
Total tape thickness	T	0.3±0.10
Tape width	W	16.0±0.20
Reel width	W1	22.7±1.5

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

Preliminary