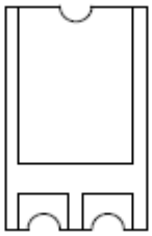
10A Schottky Barrier Rectifier



P5Y

Features

- Lead less chip form, no lead damage
- Low power loss, High efficiency
- High current capability, low V_F
- RoHS Compliant and Halogen Free
- AEC - Q101 qualified

Application

- Switching mode power supply applications
- Portable equipment battery applications
- High frequency rectification
- DC / DC Converter
- Designed as bypass diodes for solar panels

HALOGEN FREE

RoHS Compliant

Mechanical Data

Case:	Packed with FRP substrate and epoxy under filled
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Pure Tin plated. Solder plated, solderable per MIL-STD-750, Method 2026
Weight:	0.0036 ounce, 0.102 gram

Absolute Maximum Ratings *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	Value	Unit	Conditions
V_{RRM}	Repetitive Peak Reverse Voltage	45	V	
V_{RMS}	Max. RMS Voltage	31.5	V	
$I_{F(AV)}$	Max. Average Forward Rectified Current	10.0	A	See Fig.1
I_{FSM}	Non-Repetitive Peak Forward Surge Current	300	A	8.3ms single half sine-wave
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-55 to +150	°C	

Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	Typ.	Max.	Unit	Conditions	
V_F	Forward Voltage (Note 1)	0.52	0.55	V	I_F=10.0A	
I_R	Reverse Current	0.01	0.10	mA	V_R=Max.V_{RRM}	T_A=25 °C
		-	50			T_A=125 °C
$R_{\theta-JA}$	Thermal Resistance Junction to Ambient	60	-	°C/W	Note 2	
$R_{\theta-JL}$	Thermal Resistance Junction to Lead	22		°C/W	Note 2	
$R_{\theta-JC}$	Thermal Resistance Junction to Case	20	-	°C/W	Note 2	

Note: 1. Pulse test width PW=300usec, 1% duty cycle.
2. Mounted on P.C.B. with 14 x 14mm copper pad areas.

Typical Characteristics Curves

Fig.1- Typical Forward Current Derating Curve

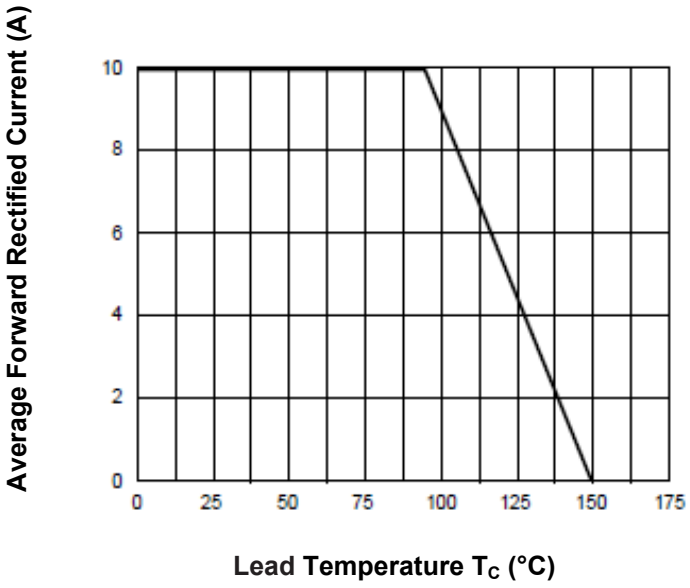


Fig.2- Max. Non-Repetitive Forward Surge Current

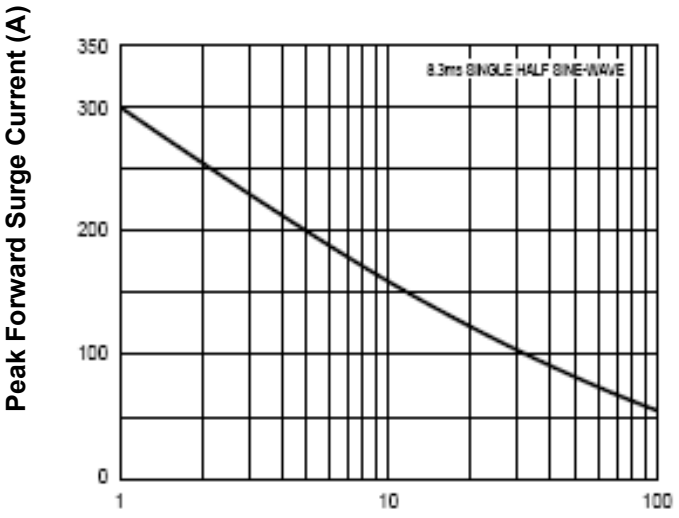


Fig.3- Typical Instantaneous Forward Characteristics

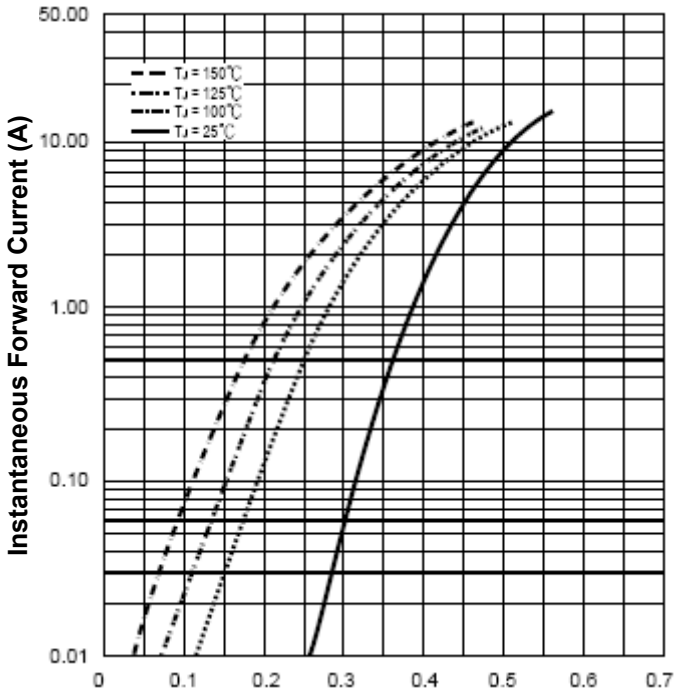
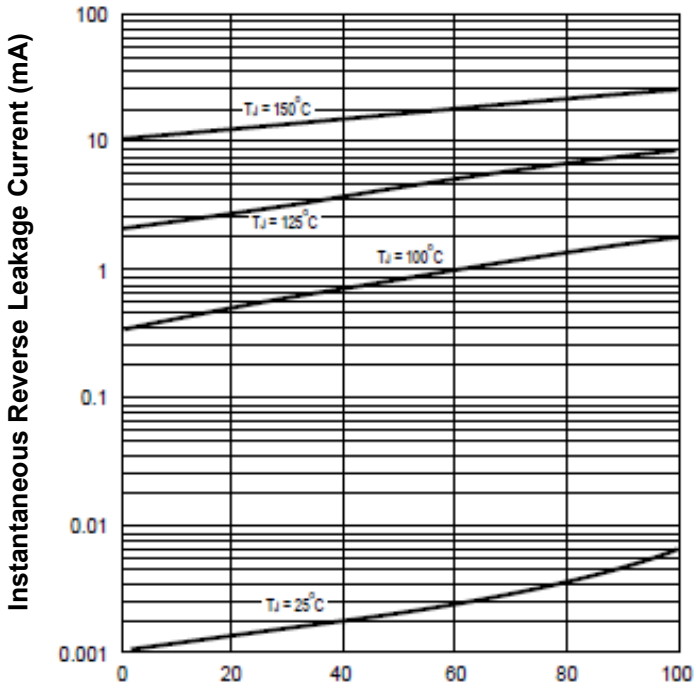
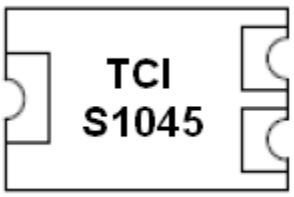


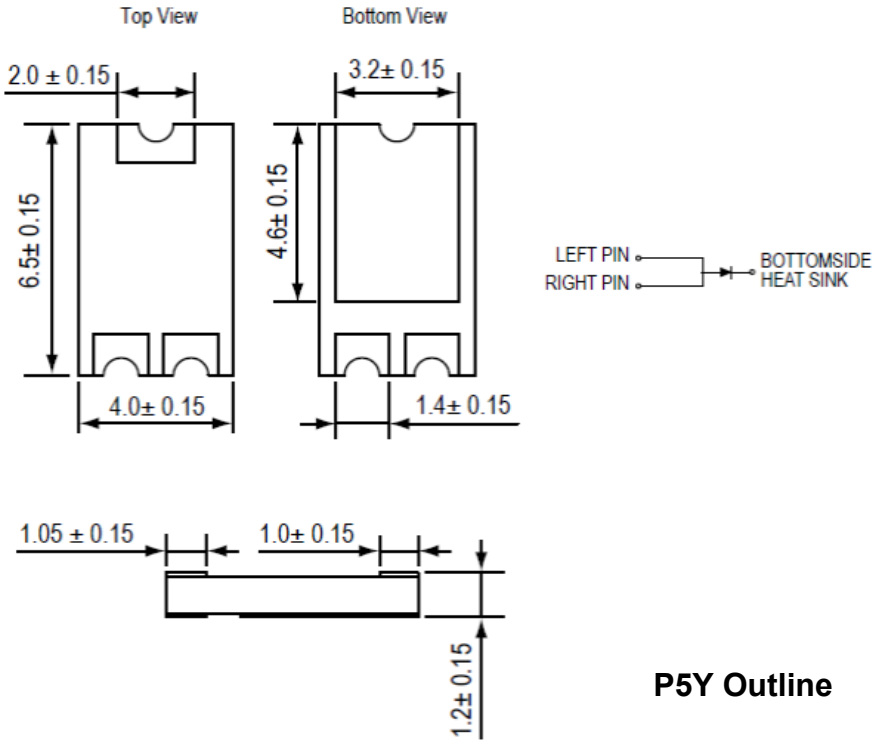
Fig.4- Typical Reverse Characteristics



Marking Information:

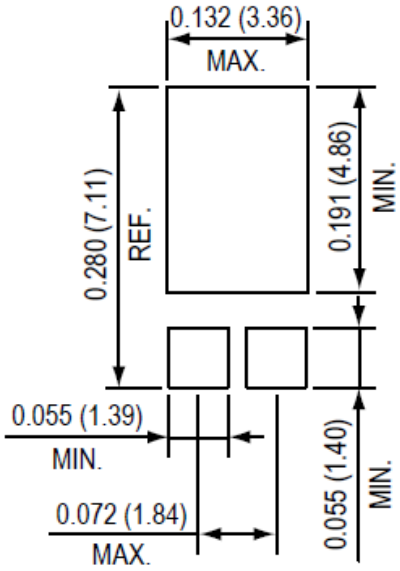


Dimensions in mm

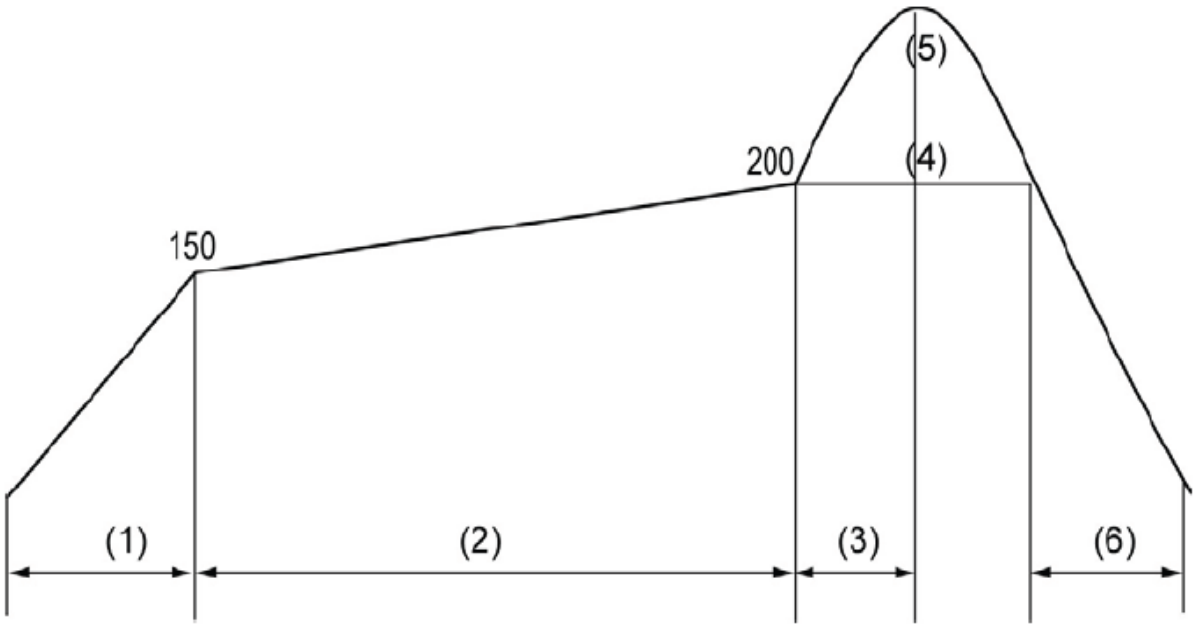


P5Y Outline

Mounting Pad Layout in inch (mm)



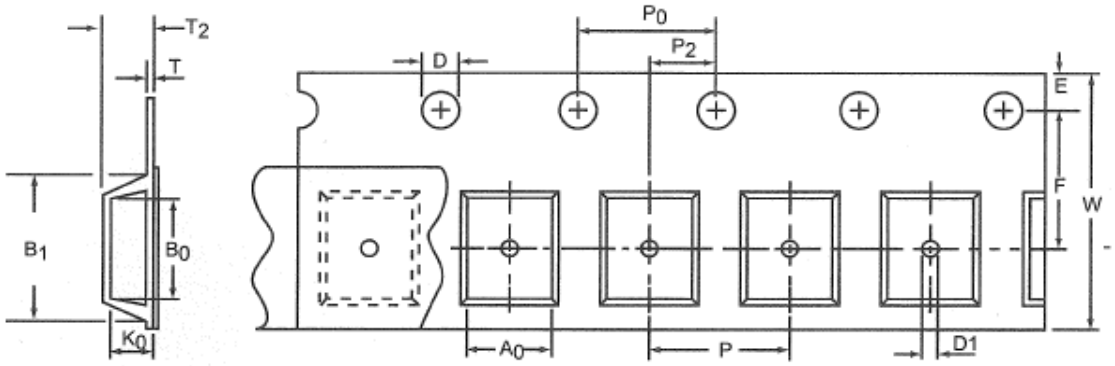
Recommendations for SMD Soldering Conditions



	(1) Ramp up	(2) Pre-heating zone	(3)	(4) Soldering zone	(5) Peak	(6) Ramp down
Temp.	Room temp to 150℃	150~200	200℃ to peak	≧220℃	≦260℃	
Time	≦3℃/sec	Max. 120sec	1~4℃/sec	Max. 60sec	Max.10 sec	1~4℃/sec

The duration and peak temperature as shown in the above table could conform to the concerned profile condition, Tp: 255C~260C and Duration Time: 30sec, as required in JEDEC J-STD-020 Rev. D. It would takes 25~30sec to raise the soldering zone temperature, kept at 260C (5. Peak) for about 35~40sec before ramping down, from 220C to 260C.

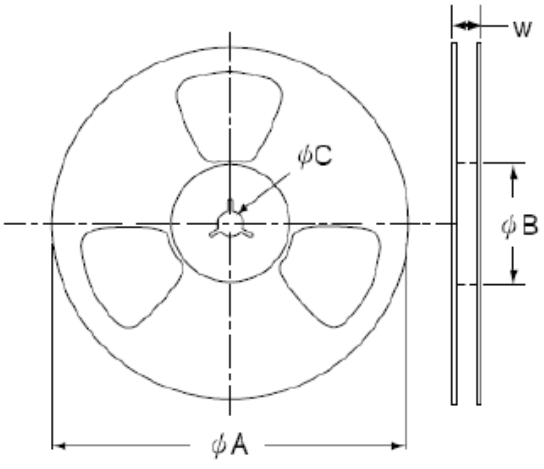
Packing Information in mm



Product Type	A0	B0	K0	D	E	P0	T
	See Note			1.50±0.1	1.75±0.1	4.00±0.1	0.40 Max.
P5Y	B1	D1	F	P	P2	W	T2
	8.20 Max.	1.50 Min.	5.50±0.05	8.00±0.1	2.00±0.1	12.00±0.3	1.65±0.1

Note: Symbol A0, B0, K0 are determined by the maximum dimensions of the component size. The clearance between the component and the cavity must be within 0.05 mm (0.002'') min. to 0.50 mm (0.02'') max. for 12 mm tape.

Reel Dimensions in mm

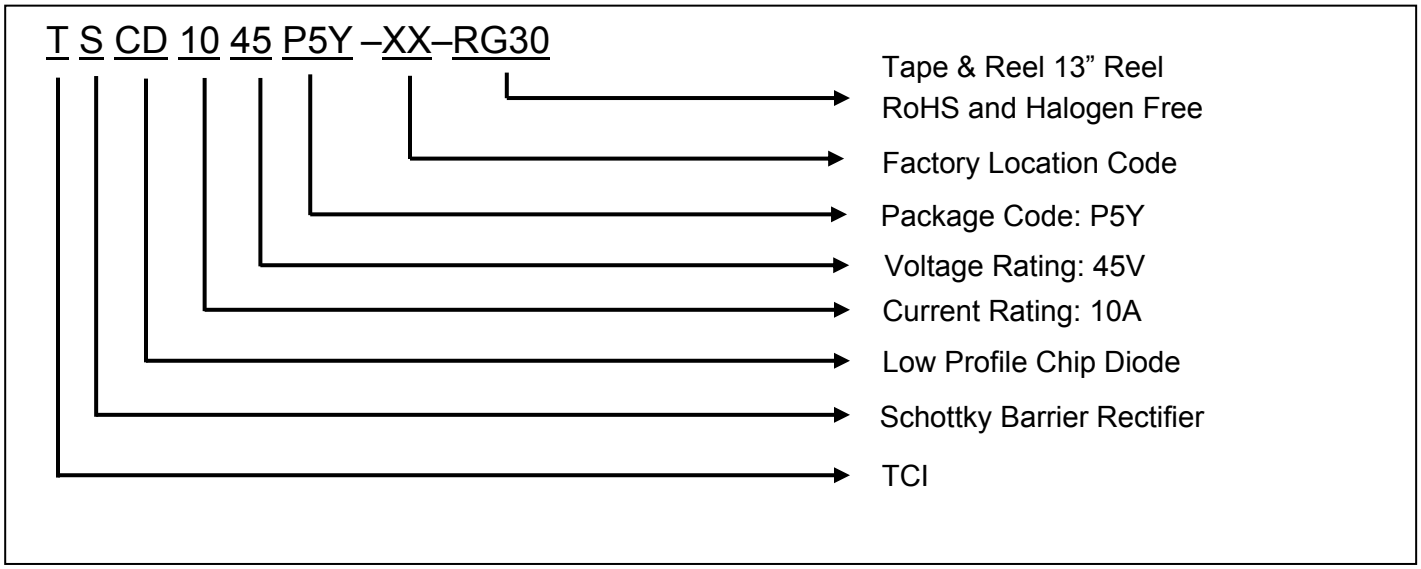


Product Type	ΦA	ΦB	ΦC	W
P5Y	330.00±2.0	50.00 Min.	13.00±0.5	18.70 Max.

Packing Quantity Information:

Quantity	PCS per Reel	PCS per Inner Box	PCS per Carton
RG30 Tape & Reel	5,000	10,000	50,000

Ordering Information



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