TSP5P150B

09-Nov-2024

Trench MOS Barrier Schottky Rectifier

TSP5P150B

SMB

Cathode ⟵ **Anode**

Features

- Advanced trench technology
- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead Free Finish, RoHS Compliant

Applications

- DC/DC Converters
- AC/DC Adaptors
- Switching Power Supplies
- Freewheeling Diodes

Maximum ratings and electrical characteristics (TJ = 25°C unless otherwise noted)

Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			VRRM	150		V
Maximum average forward rectified current			IF(AV)	5.0		A
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode			IFSM	180		A
Operating junction and storage temperature range			T_J, T_{STG}	-55 to +175		°C
Typical Thermal Resistance			$R_{\Theta JA}$	72		°C/W
Instantaneous forward voltage per diode			VF(1)	TYP.	MAX.	
	IF=2A	TJ=25°C		0.70	0.78	V
	IF=2A	TJ=125°C		0.65	-	
	IF=5A	TJ=25°C		0.80	0.85	
	IF=5A	TJ=125°C		0.75	-	
Instantaneous reverse current per diode at rated reverse voltage		TJ=25°C	IR(2)	-	1.0	uA
		TJ=125°C		-	5	mA

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≦ 40 ms

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

Fig.1 Current Derating, Case

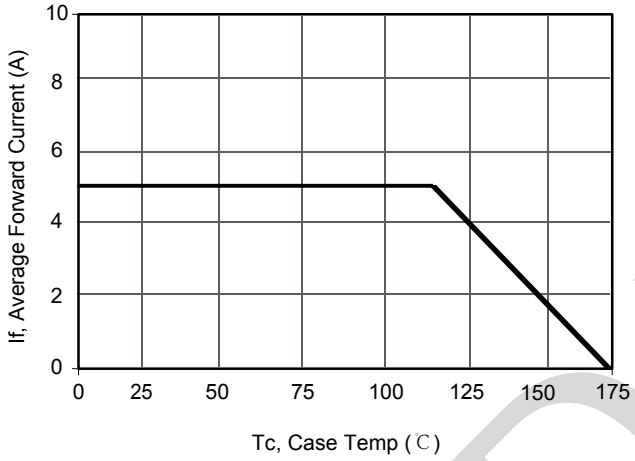


Fig.2 Maximum Non-Repetitive Peak Forward Surage Current

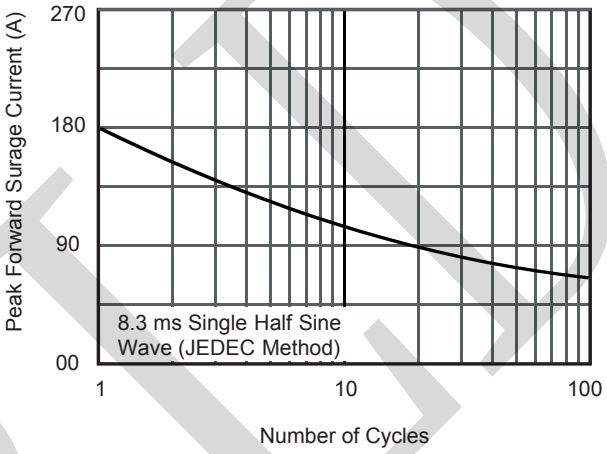


Fig.3 Typical Forward Voltage

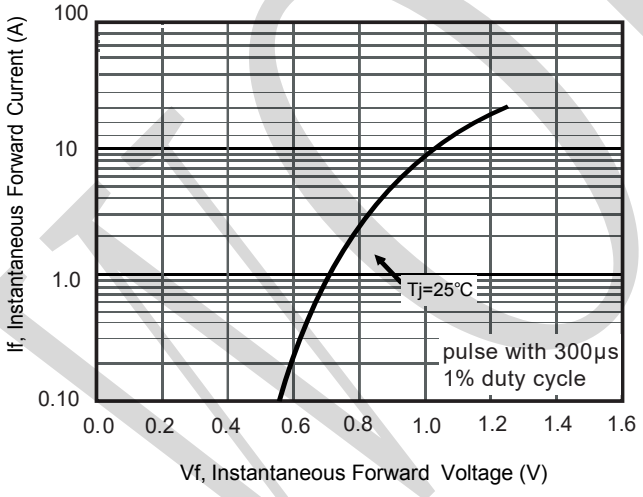
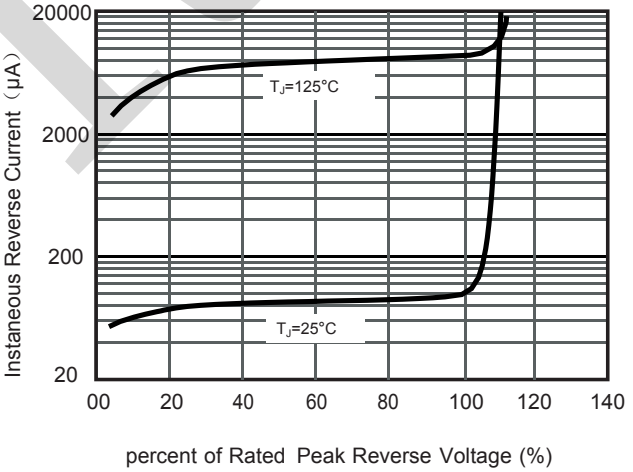
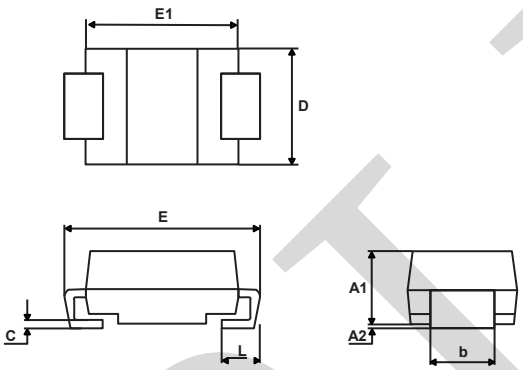


Fig.4 Typical Reverse Characteristics



PACKAGE OUTLINE DIMENSIONS

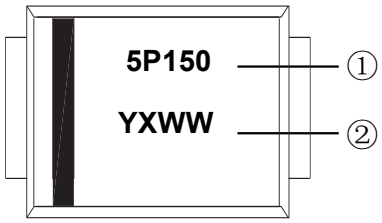
SMB dimension definitions



SMB dimension values

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A1	1.90	2.45	0.075	0.096
A2	0.05	0.20	0.002	0.008
b	1.95	2.20	0.077	0.087
c	0.15	0.40	0.006	0.016
D	3.30	3.95	0.130	0.156
E	5.10	5.60	0.201	0.220
E1	4.05	4.60	0.159	0.181
L	0.75	1.50	0.030	0.059

Marking Information



①Product model :TSP5P150B Referred to as 5P150

②PDC information：