TSP5S150B

11-NOV-2020

Trench MOS Barrier Schottky Rectifier

TSP5S150B

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)

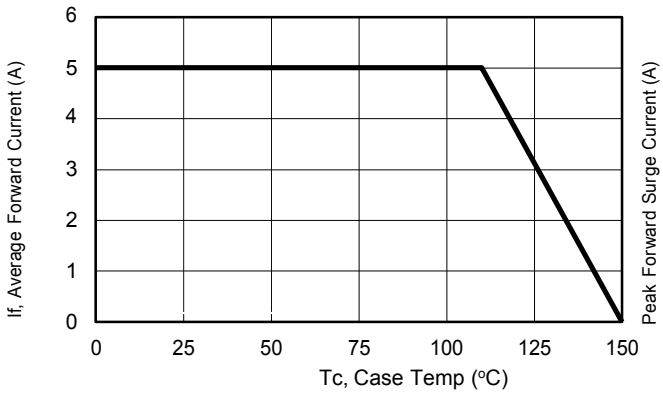
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			VRRM	150		V
Maximum average forward rectified current			IF(AV)	5		A
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode			IFSM	120		A
Operating junction and storage temperature range			TJ, TSTG	-50 to +150		°C
Typical thermal resistance per diode(Mounted on FR-4 PCB)			RΘJC	22		°C/W
Instantaneous forward voltage per diode			VF(1)	TYP.	MAX.	
	IF=1A	TJ=25°C		0.53	0.60	V
	IF=1A	TJ=125°C		0.48	-	
	IF=5A	TJ=25°C		0.89	0.95	
	IF=5A	TJ=125°C		0.82	-	
Instantaneous reverse current per diode at rated reverse voltage		TJ=25°C	IR(2)	5	10	uA
		TJ=125°C		5	-	mA

Notes:

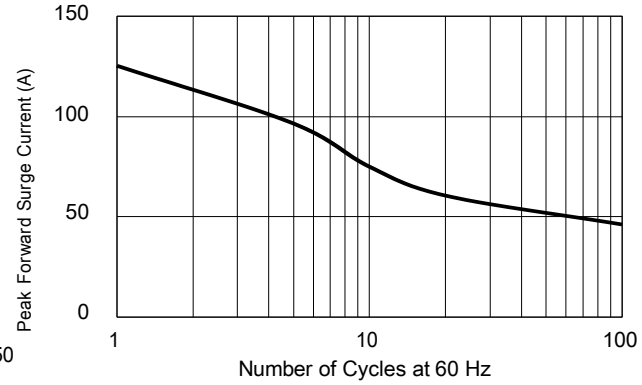
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≦ 40 ms

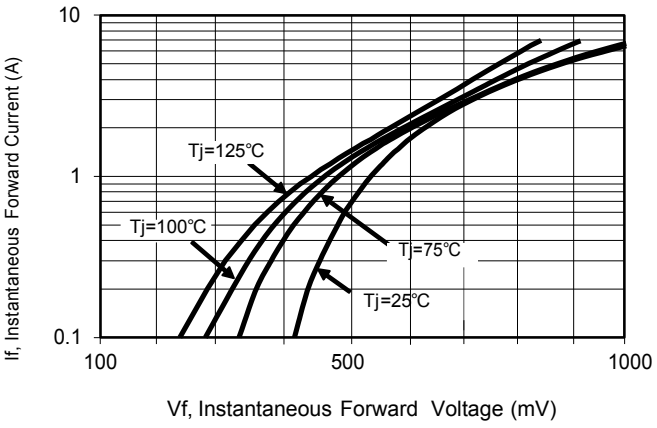
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



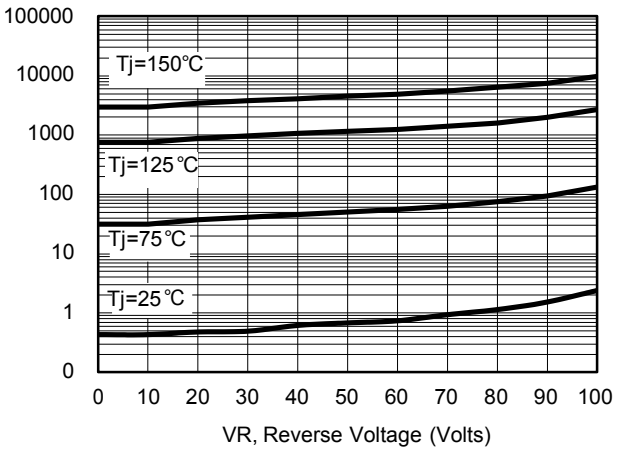
Current Derating, Case



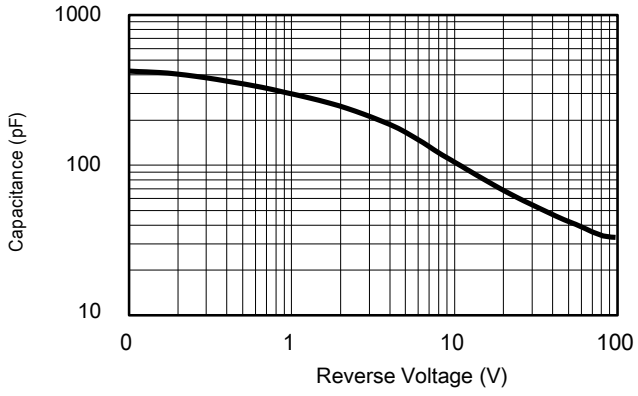
Maximum Repetitive Surge Current



Typical Forward Voltage



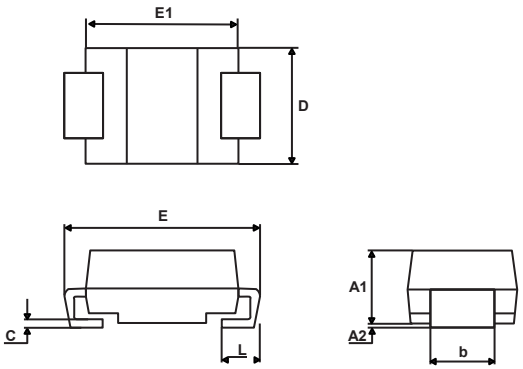
Typical Reverse Current



Typical Junction Capacitance

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