

Trench MOS Barrier Schottky Rectifier

TSP5V150B



SMB

(DO-214AA)

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

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

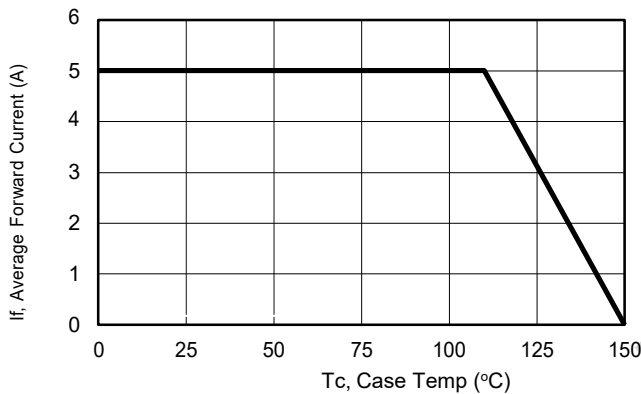
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V _{RRM}	150		V
Maximum average forward rectified current			I _{F(AV)}	5		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	120		A
Operating junction and storage temperature range			T _J , T _{STG}	-40 to +150		°C
Typical thermal resistance per diode (Mounted on FR-4 PCB)			R _{θJC}	22		°C/W
Instantaneous forward voltage	I _F =1A	T _J =25°C	V _{F(1)}	TYP.	MAX.	V
		T _J =125°C		0.63	0.70	
	I _F =1A	T _J =125°C		0.58	-	
	I _F =5A	T _J =25°C		0.71	0.79	
	I _F =5A	T _J =125°C		0.65	-	
Instantaneous reverse current per diode at rated reverse voltage		T _J =25°C	I _{R(2)}	1	10	uA
		T _J =125°C		-	5	mA

Notes:

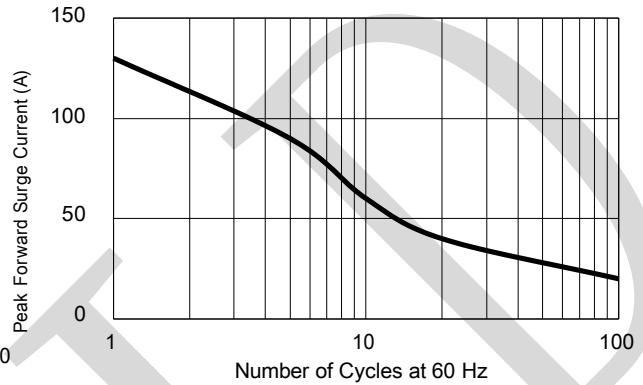
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

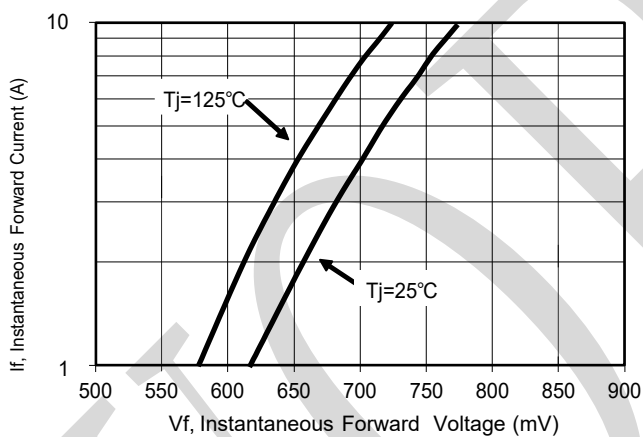
RATINGS AND CHARACTERISTICS CURVES



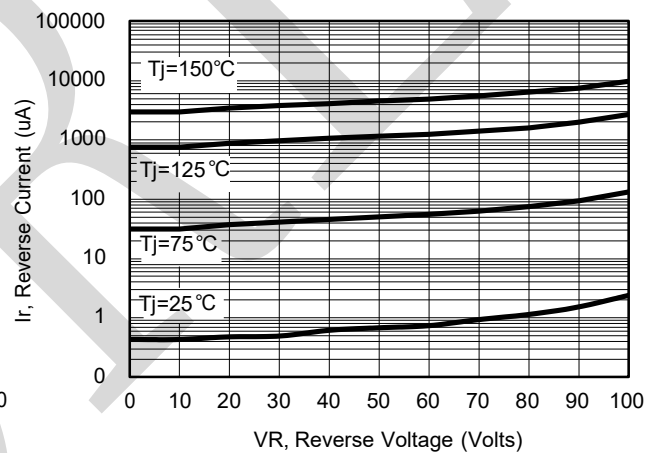
Current Derating, Case



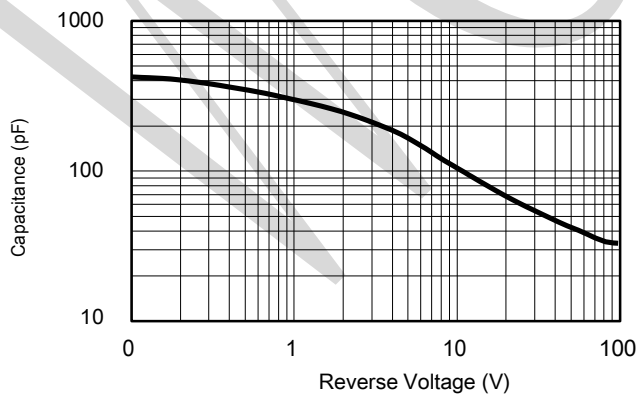
Maximum Repetitive Surge Current



Typical Forward Voltage



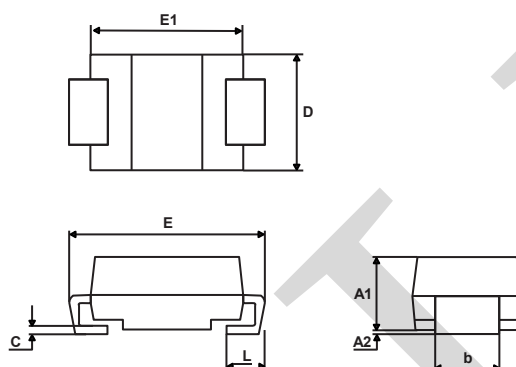
Typical Reverse Current



Typical Junction Capacitance

PACKAGE OUTLINE

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