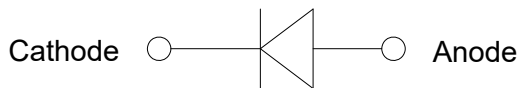
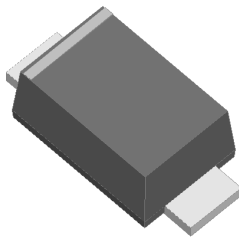


## Trench MOS Barrier Schottky Rectifier

**SOD-123**  
**TSP3P40FL**



### 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 (T<sub>J</sub> = 25°C unless otherwise noted)

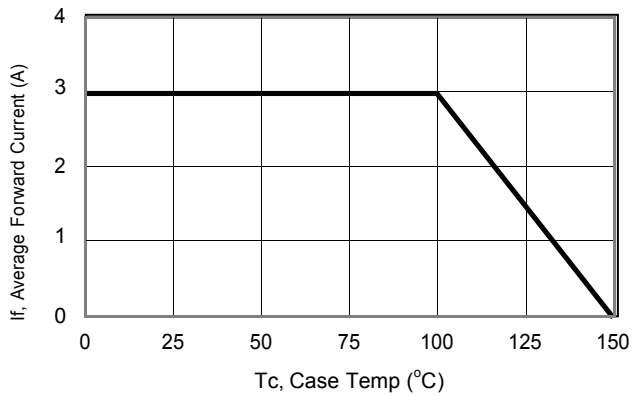
Parameter	Symbol	Limit	Unit		
Maximum repetitive peak reverse voltage	VRRM	40	V		
Maximum average forward rectified current	IF(AV)	3	A		
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode	IFSM	50	A		
Operating junction and storage temperature range	TJ, TSTG	-50 to +150	°C		
Typical thermal resistance per diode (Mounted on FR-4 PCB)	RθJC	150	°C/W		
Instantaneous forward voltage	VF(1)	TYP.	MAX.	V	
		IF=3A TJ=25°C	0.39		0.46
		IF=3A TJ=25°C	0.32		-
Instantaneous reverse current per diode at rated reverse voltage	IR(2)	TJ=25°C	100	500	µA
		TJ=125°C	20	-	mA

Notes:

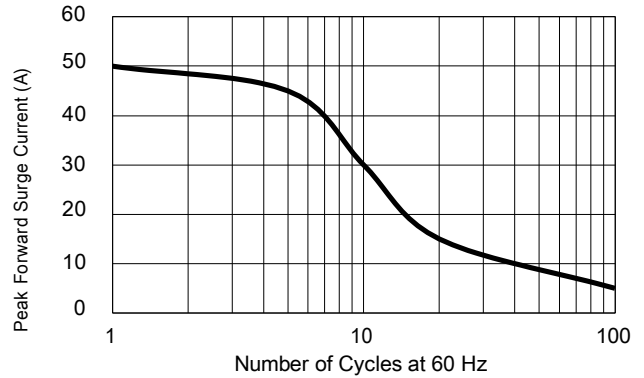
(1) Pulse test: 300 µs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

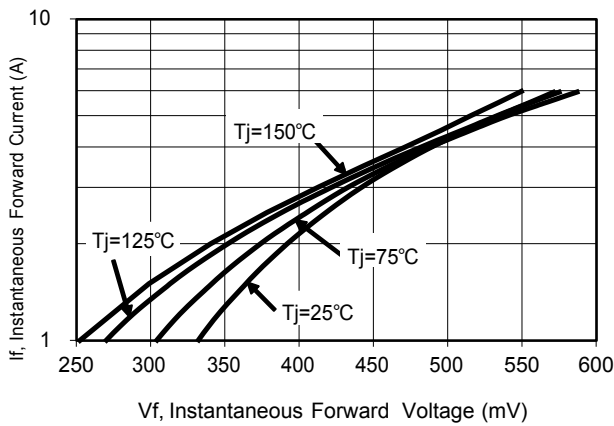
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



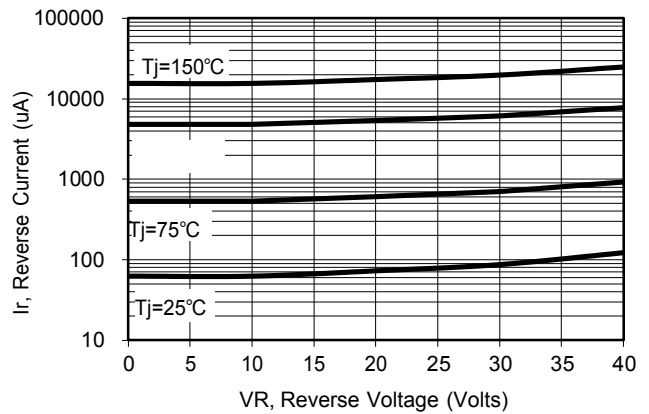
Current Derating, Case



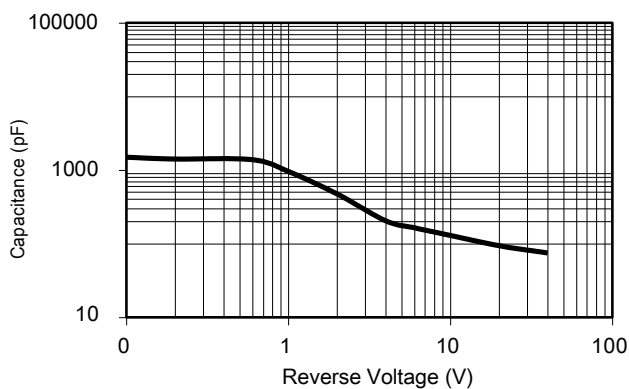
Maximum Repetitive Surge Current



Typical Forward Voltage



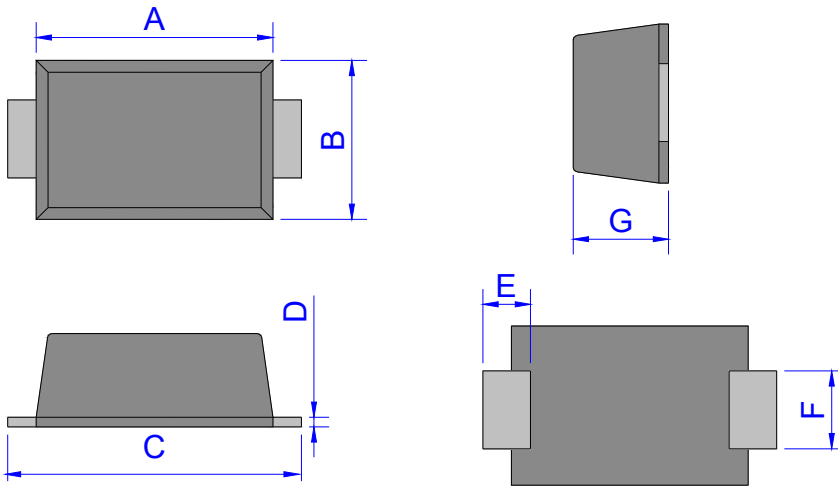
Typical Reverse Current



Typical Junction Capacitance

## PACKAGE OUTLINE DIMENSIONS

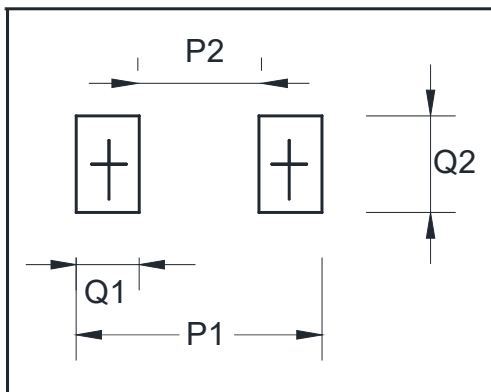
Note:unit mm(Mil)



## SOD-123 Mechanical Data

UNIT		A	B	C	D	E	F	G
mm	max	3.0	2.0	3.95	0.25	0.9	1.2	1.35
	min	2.6	1.6	3.45	0.1	0.3	0.8	0.95
mil	max	118.1	78.7	155.5	9.8	35.4	47.2	53.1
	min	102.4	63.0	135.8	3.93	11.8	31.5	37.4

## SOD-123 Suggested Pad Layout



UNIT		P1	Q1	Q2
mm	min	1.5	1.3	1.3
mil	min	59.0	51.2	51.2