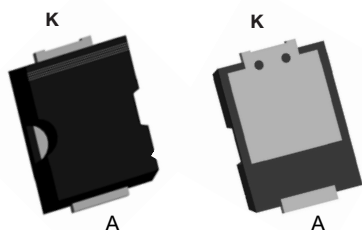


Trench MOS Barrier Schottky Rectifier

TSP20V80P6

SMP6



Cathode K  Anode A

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)

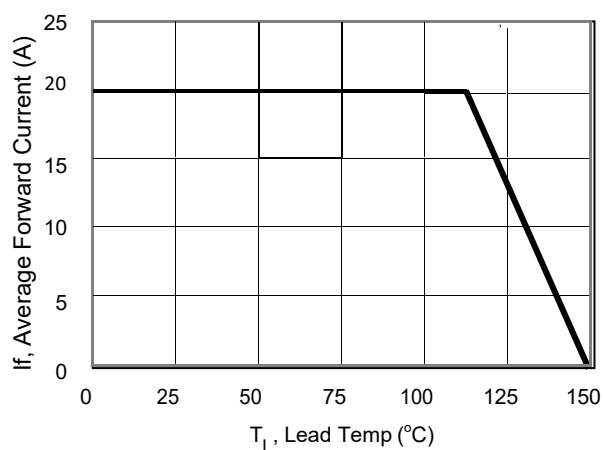
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			VRRM	80		V
Maximum average forward rectified current			IF(AV)	20		A
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode			IFSM	220		A
Operating junction and storage temperature range			TJ, TSTG	-50 to +150		°C
Typical thermal resistance per diode(Mounted on FR-4 PCB)			RθJC	25		°C/W
Instantaneous forward voltage per diode			VF(1)	TYP.	MAX.	V
	IF=2A	TJ=25°C		0.40	0.43	
	IF=2A	TJ=125°C		0.36	-	
	IF=20A	TJ=25°C		0.58	0.63	
	IF=20A	TJ=125°C		0.53	-	
Instantaneous reverse current per diode at rated reverse voltage		TJ=25°C	IR(2)	-	150	uA
		TJ=125°C		-	30	mA

Notes:

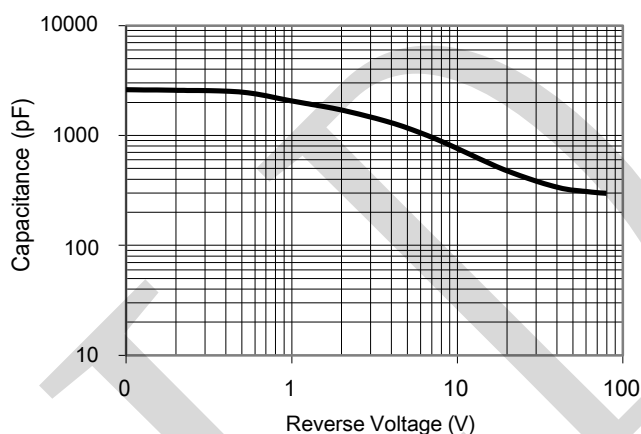
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

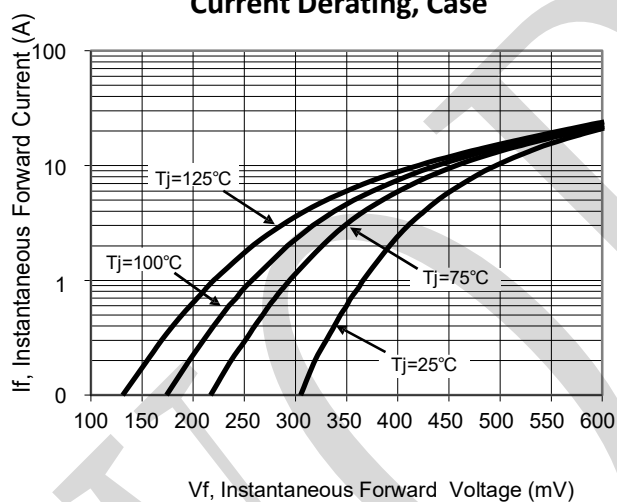
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



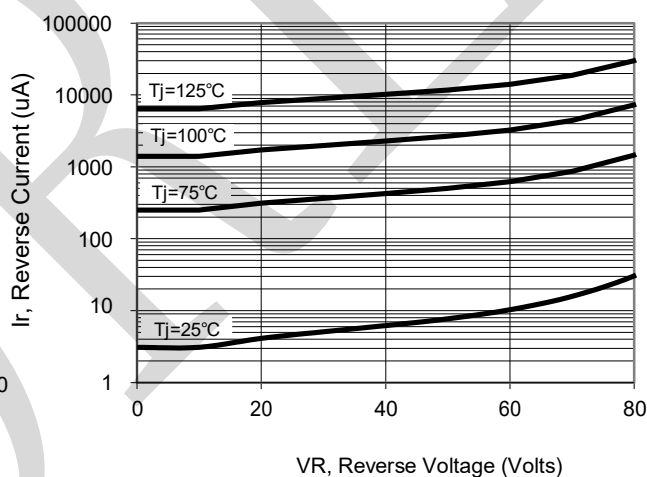
Current Derating, Case



Typical Junction Capacitance



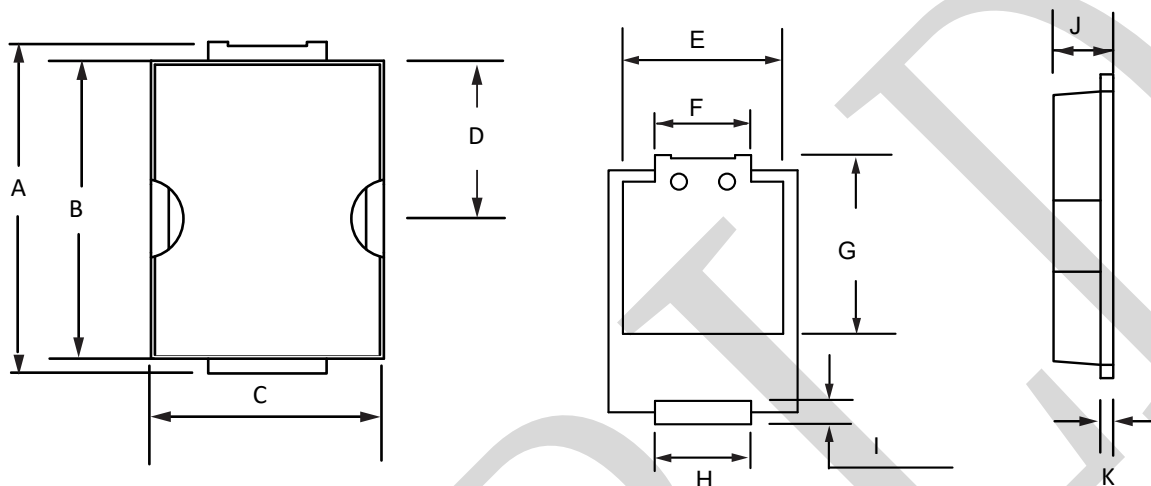
Typical Forward Voltage



Typical Reverse Current

PACKAGE OUTLINE DIMENSIONS

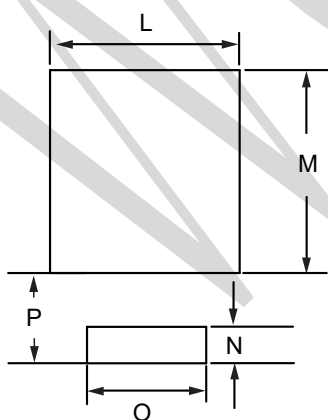
SMP6



SMP6 mechanical data

UNIT		A	B	C	D	E	F	G	H	I	J	K
mm	max	8.6	7.75	6.1	4.2	5.2	3.2	5.68	3.2	0.93	1.85	0.45
	min	8.0	7.35	5.7	3.8	4.8	2.8	5.28	2.8	0.53	1.45	0.25
mil	max	338.5	305.1	240.1	165.3	204.7	126.0	223.6	126.0	36.6	72.8	17.7
	min	314.9	289.3	224.4	149.6	188.9	110.2	207.8	110.2	20.8	57.1	9.8

SMP6 Suggested Pad Layout



UNIT		L	M	N	O	P
mm	min	5.40	5.78	1.0	3.4	1.8
mil	min	212.6	227.5	39.3	133.8	70.8