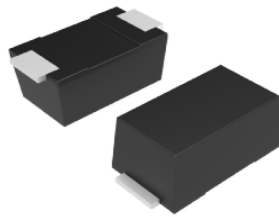


Trench MOS Barrier Schottky Rectifier

TSP5V100AF
SMAF



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_J = 25°C unless otherwise noted)

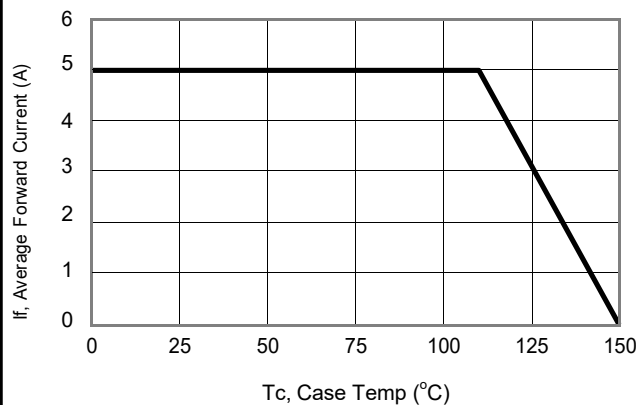
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			VRRM	100		V
Maximum average forward rectified current			IF(AV)	5		A
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode			IFSM	80		A
Operating junction and storage temperature range			TJ, TSTG	-50 to +150		°C
Typical thermal resistance per diode (Mounted on FR-4 PCB)			RθJC	20		°C/W
Instantaneous forward voltage			VF(1)	TYP.	MAX.	V
	IF=1A	TJ=25°C		0.44	0.50	
	IF=1A	TJ=125°C		0.39	-	
	IF=5A	TJ=25°C		0.65	0.70	
	IF=5A	TJ=125°C		0.59	-	
Instantaneous reverse current per diode at rated reverse voltage		TJ=25°C	IR(2)	10	100	μA
		TJ=125°C		10	-	mA

Notes:

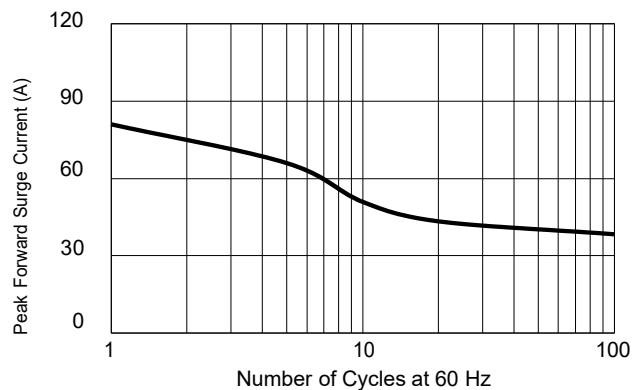
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

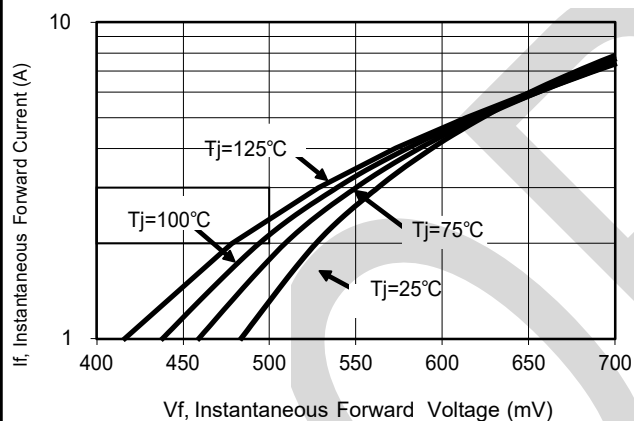
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



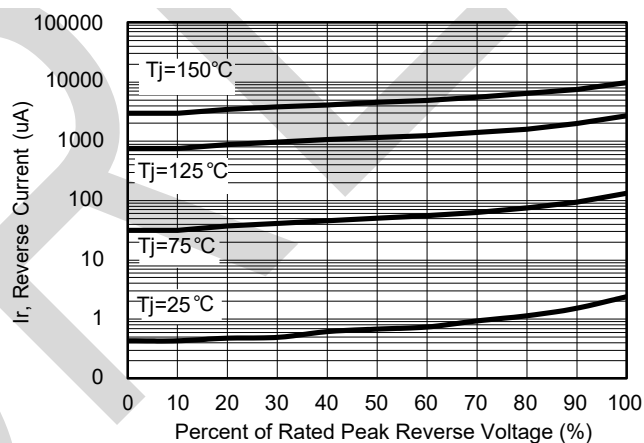
Current Derating, Case



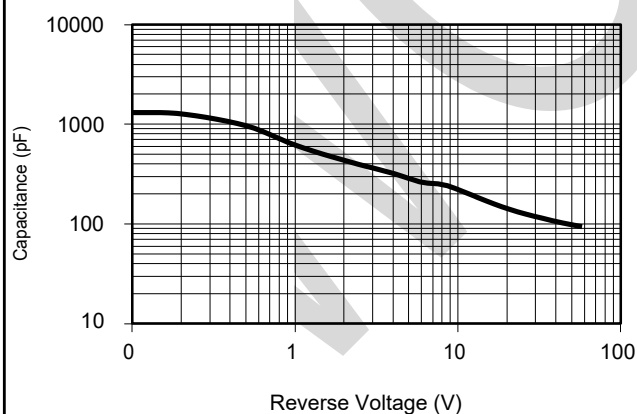
Maximum Repetitive Surge Current



Typical Forward Voltage



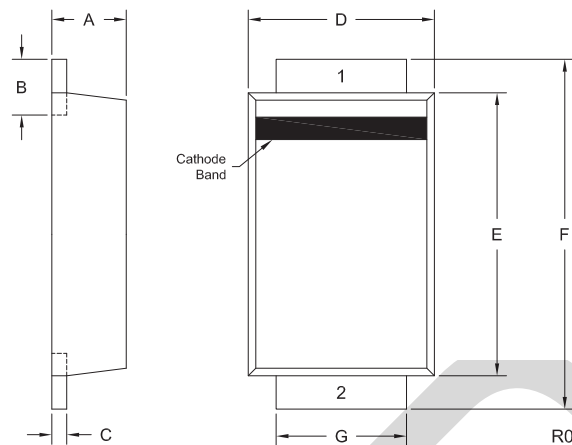
Typical Reverse Current



Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS

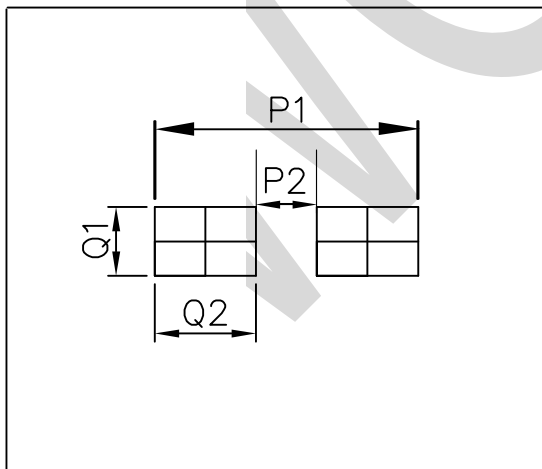
SMAF



SMAF mechanical data

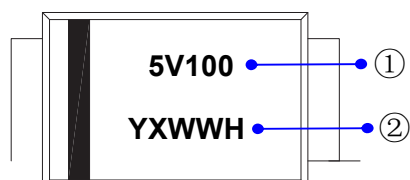
UNIT		A	B	C	D	E	F	G
mm	max	1.10	0.95	0.25	2.8	3.9	4.9	1.65
	min	0.85	0.50	0.11	2.2	3.2	4.2	1.20
mil	max	43.30	37.40	9.84	110.24	153.54	192.91	64.96
	min	33.46	19.68	4.33	86.61	125.98	165.35	47.24

SMAF Suggested Pad Layout



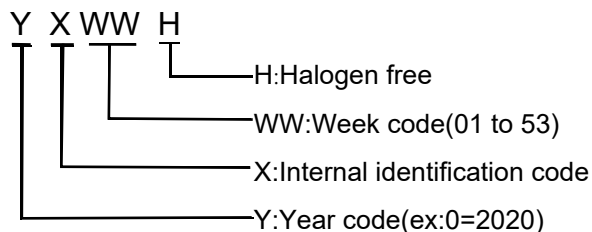
UNIT		P1	P2	Q1	Q2
mm	min	5.10	1.50	1.7	1.8
mil	min	200.8	59.05	67.0	70.87

Marking Information



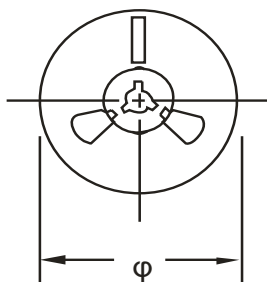
①Product model : TSP5V100AF is abbreviated to 5V100

②PDC information:

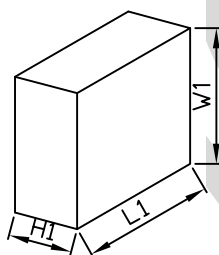


Packaging Information

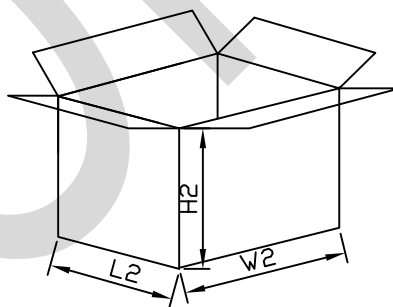
1.Reel Dimensions



2.Inside Box



3.Outside Box



Packaging Information

NO	UNIT	Reel Dimensions			Inside Box			Outside Box		
Size	mm	φ	A	B	L1	W1	H1	L2	W2	H2
		178	55	11	180	183	120	270	375	235
QTY	PCS	Smallest package,3000PCS/reel			30,000PCS,10reel in total			120,000PCS/carton,4boxes in total		
Note	Tolerance ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm									