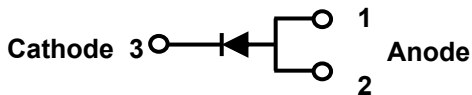


Trench MOS Barrier Schottky Rectifier

TSP1045SP

TO-277



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)

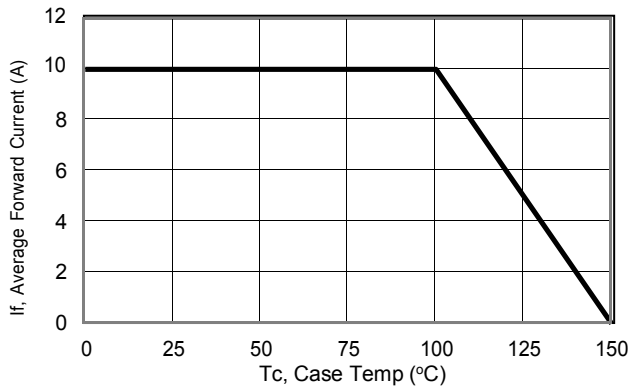
Parameter	Symbol	Limit	Unit		
Maximum repetitive peak reverse voltage	VRRM	45	V		
Maximum average forward rectified current	IF(AV)	10	A		
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode	IFSM	120	A		
Operating junction and storage temperature range	TJ, TSTG	-50 to +150	°C		
Typical thermal resistance per diode(Mounted on FR-4 PCB)	RθJC	72	°C/W		
Instantaneous forward voltage per diode	VF(1)	TYP.	MAX.	V	
		IF=2A TJ=25°C	0.41		0.46
		IF=2A TJ=125°C	0.36		-
		IF=10A TJ=25°C	0.52		0.58
		IF=10A TJ=125°C	0.45		-
Instantaneous reverse current per diode at rated reverse voltage	IR(2)	TJ=25°C	5	50	uA
		TJ=125°C	5	-	mA

Notes:

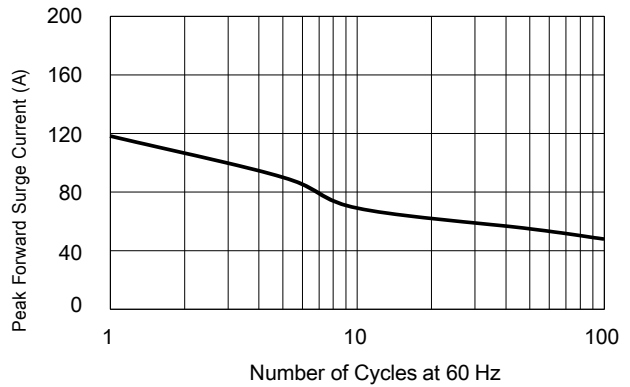
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≦ 40 ms

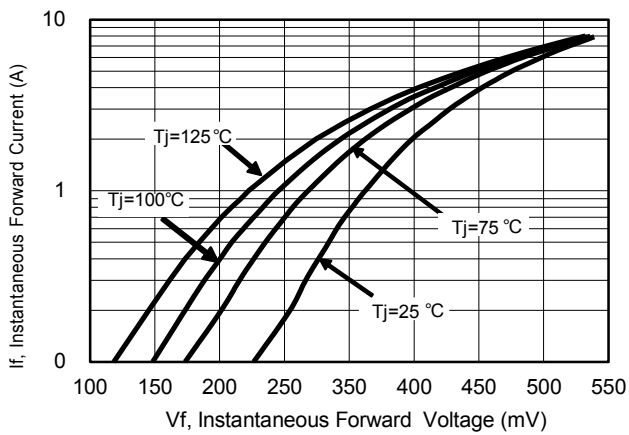
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



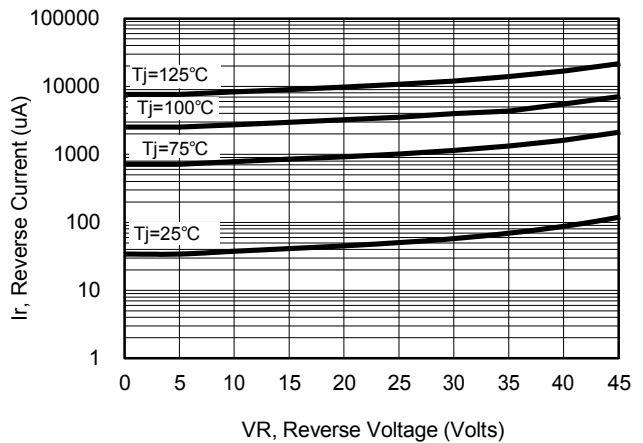
Current Derating, Case



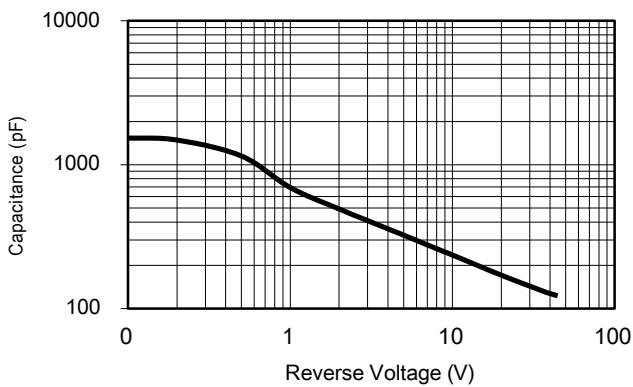
Maximum Repetitive Surge Current



Typical Forward Voltage



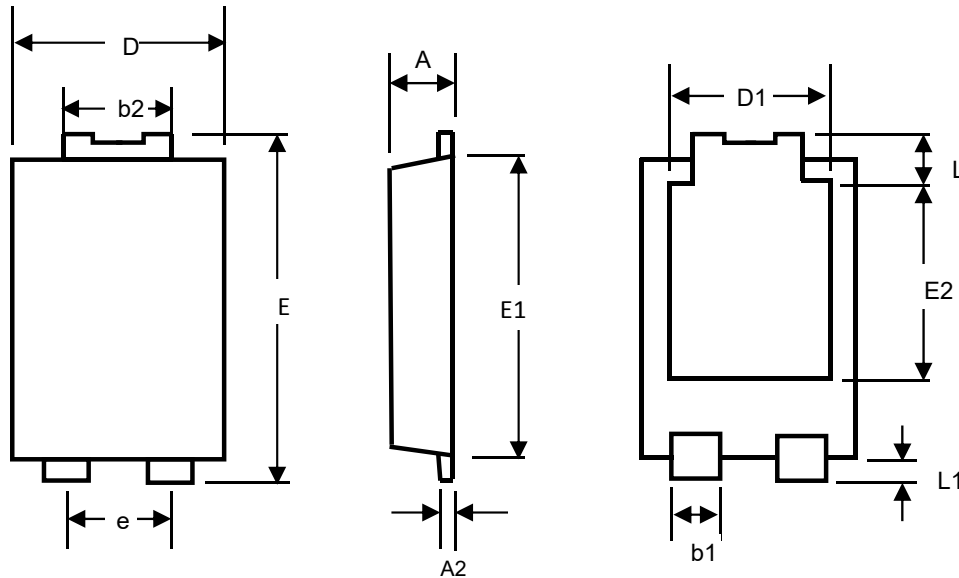
Typical Reverse Current



Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS

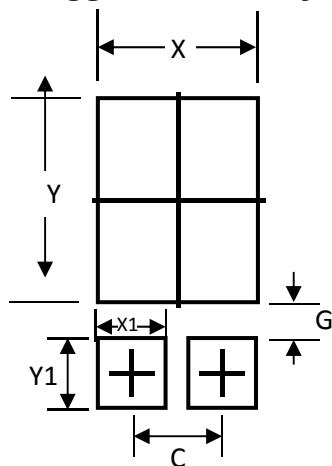
TO-277



TO-277 Mechanical Data

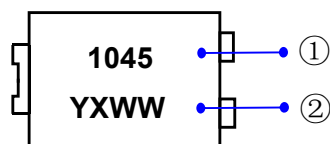
UNIT		A	A2	b1	b2	D	D1	E	E1	E2	L	L1
mm	max	1.3	0.4	1.0	1.9	4.3	3.05	6.6	5.75	3.55	1.0	0.7
	min	1.1	0.2	0.8	1.7	3.9		6.4	5.3		0.8	0.5
mil	max	51.18	15.75	39.37	74.80	169.3	120.0	259.8	226.3	139.7	39.37	27.55
	min	43.30	7.87	31.49	66.93	153.5		252.0	208.6		31.49	19.69

TO-277 Suggested Pad Layout



UNIT		C	G	X	X1	Y	Y1
mm	min	1.80	0.90	3.4	1.4	4.9	1.4
mil	min	78.86	35.43	133.86	35.43	192.91	55.12

Marking Information



① Product model :TSP1045SP Referred to as 1045

② PDC information :

Y X WW

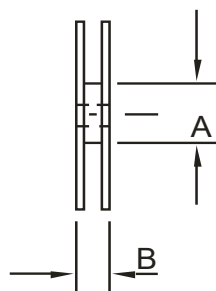
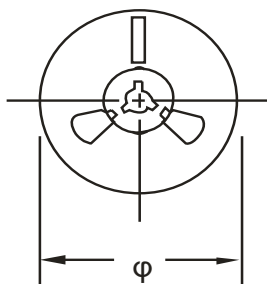
WW:Week code(01 to 53)

X:Internal identification code

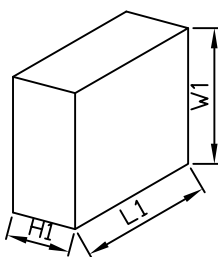
Y:Year code(ex:0=2020)

Packaging Information

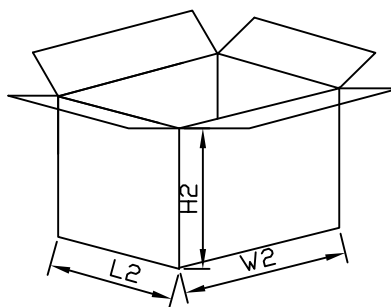
1.Reel Dimensions



2.Inside Box



3.Outside Box



Packaging Information

NO	UNIT	Reel Dimensions			Inside Box			Outside Box		
		φ	A	B	L1	W1	H1	L2	W2	H2
Size	mm	330	70	15	335	335	43	360	360	360
QTY	PCS	Smallest package,5000PCS/reel			10,000PCS,2 reel in total			80,000PCS/carton,8 boxes in total		
Note	Tolerance ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm									