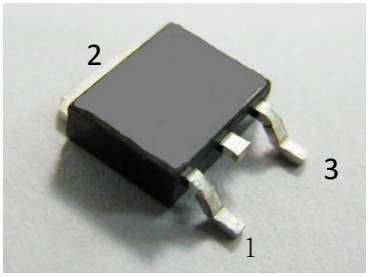
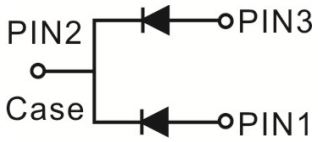
TSP20L45D

Trench MOS Barrier Schottky Rectifier

TSP20L45D
TO-252





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

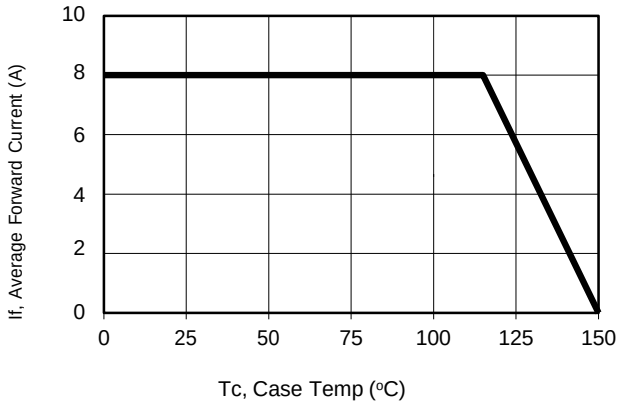
Maximum ratings and electrical characteristics (TJ = 25°C unless otherwise noted)

Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V_{RRM}	45		V
Maximum average forward rectified current			$I_{F(AV)}$	20		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I_{FSM}	180		A
Operating junction and storage temperature range			T_J, T_{STG}	-65 to +150		°C
Typical thermal resistance per diode (Mounted on FR-4 PCB)	TO-252		$R_{\Theta JC}$	6		°C/W
Instantaneous forward voltage			$V_{F(1)}$	TYP.	MAX.	V
	I_F=5A	TJ=25°C		0.37		
	I_F=5A	TJ=125°C		0.31	-	
	I_F=10A	TJ=25°C		0.44	0.49	
	I_F=10A	TJ=125°C		0.39	-	
Instantaneous reverse current per diode at rated reverse voltage		T_J=25°C	$I_{R(2)}$	-	280	uA
		T_J=125°C		-	100	mA

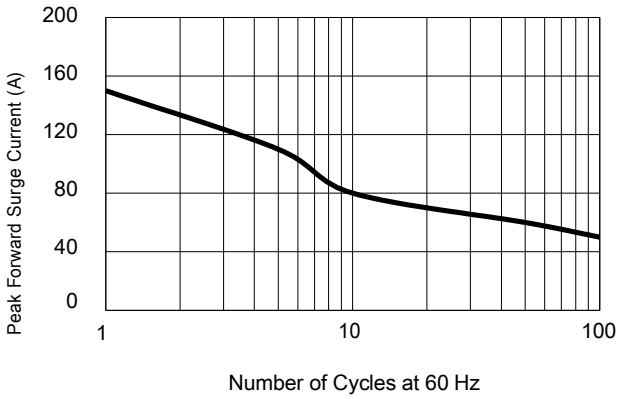
Notes:
(1) Pulse test: 300 μs pulse width, 1 % duty cycle
(2) Pulse test: Pulse width ≦ 40 ms

TSP20L45D

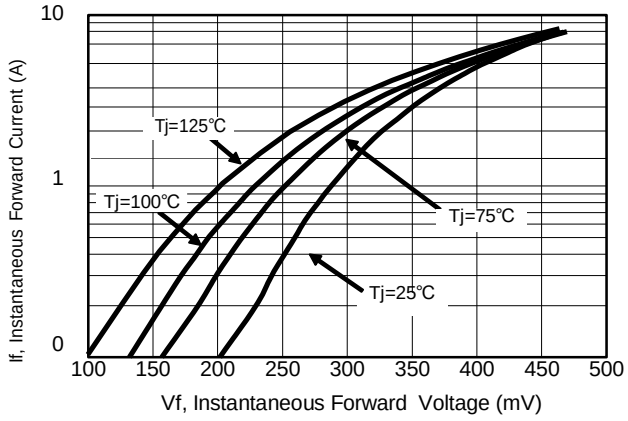
RATINGS AND CHARACTERISTICS CURVES (TA = 25 ˚C unless otherwise noted)



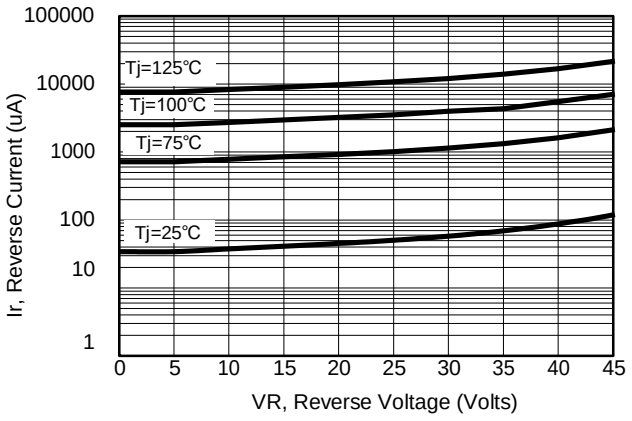
Current Derating, Case



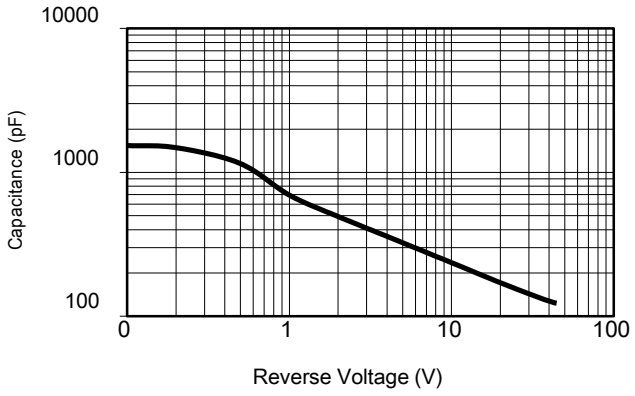
Maximum Repetitive Surge Current



Typical Forward Voltage



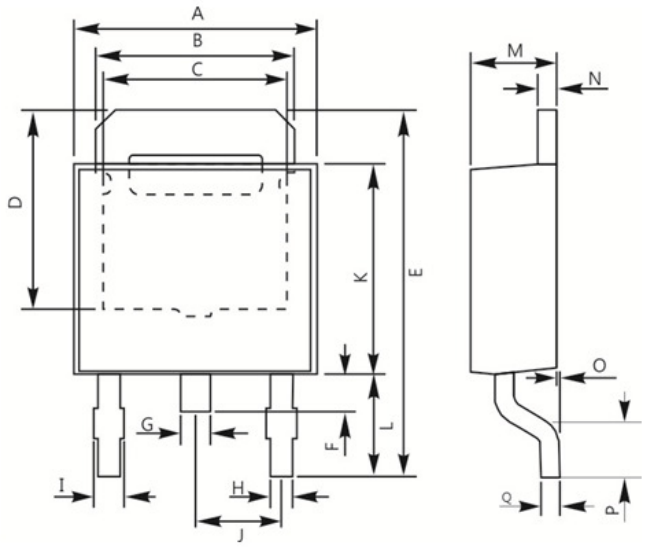
Typical Reverse Current



Typical Junction Capacitance

TSP20L45D

PACKAGE OUTLINE



Dim.	Min.	Max.
A	6.40	6.80
B	5.20	5.50
C	3.80	-----
D	4.75	-----
E	9.40	10.20
F	0.80	1.20
G	0.70	0.90
H	0.50	0.70
I	0.60	0.90
J	2.30 Ref.	
K	5.40	5.80
L	2.40	3.00
M	2.20	2.40
N	0.45	0.55
O	-----	0.15
P	1.40	1.77
Q	0.508 Typ.	

All Dimensions in millimeter