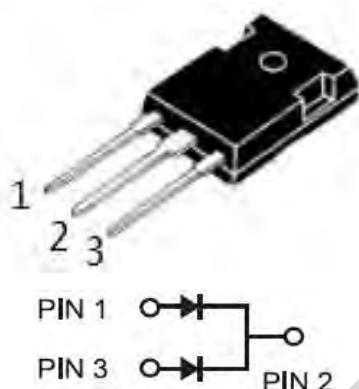


Trench MOS Barrier Schottky Rectifier

TO-247
TSR40L45PT



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	device	IF(AV)	40		A	
	per diode		20			
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode			IFSM	320		A
Operating junction and storage temperature range			TJ, TSTG	-50 to +150		°C
Typical thermal resistance per leg		TO-247	RθJC	2		°C/W
Instantaneous forward voltage per diode			VF(1)	TYP.	MAX.	V
	IF=5A	TJ=25°C		0.41	0.46	
	IF=5A	TJ=125°C		0.36	-	
	IF=20A	TJ=25°C		0.57	0.63	
	IF=20A	TJ=125°C		0.51	-	
Instantaneous reverse current per diode at rated reverse voltage		TJ=25°C	IR(2)	20	100	uA
		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)

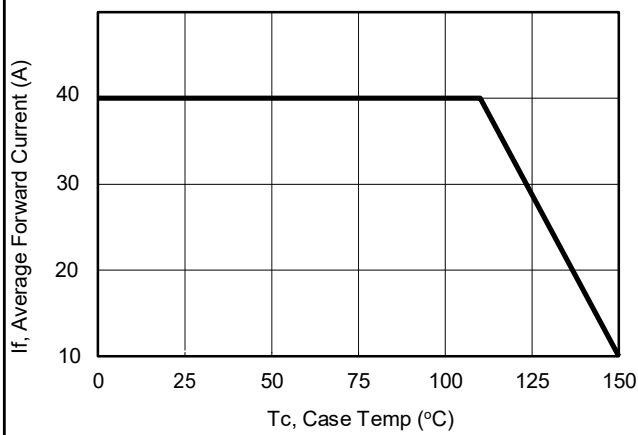


Figure 1: Current Derating, Case

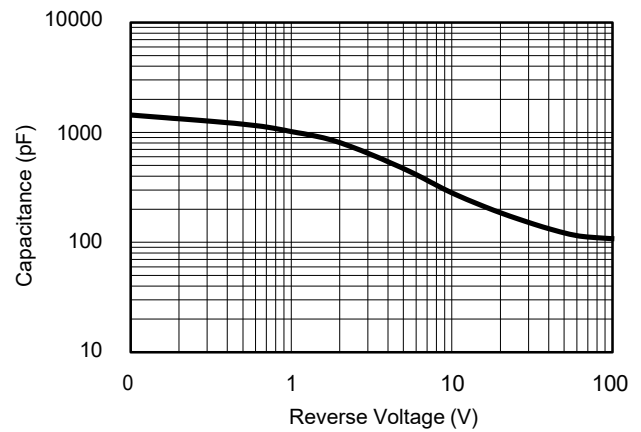
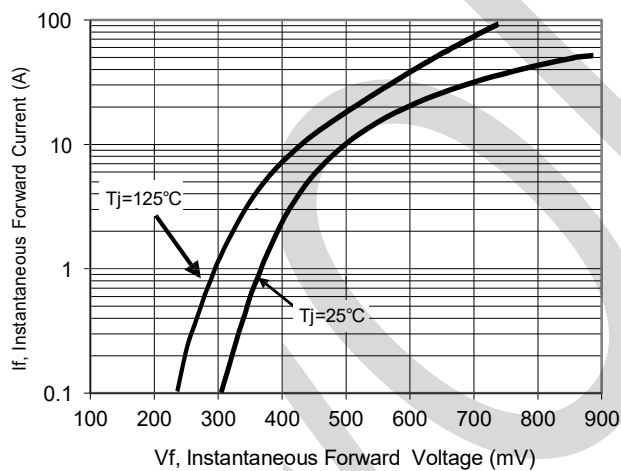
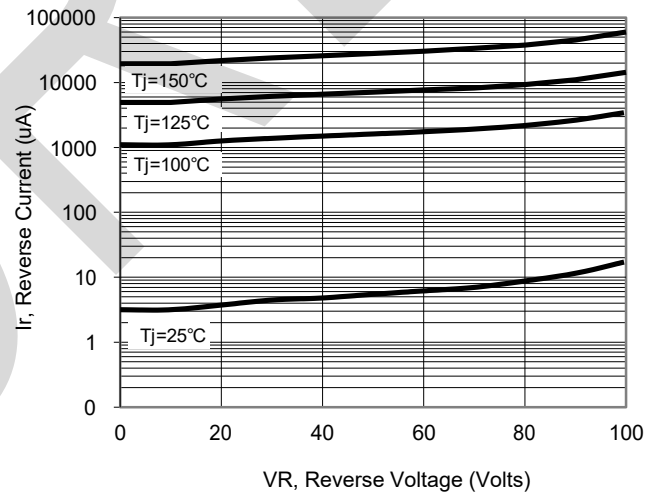


Figure 2: Typical Junction Capacitance



Typical Forward Voltage

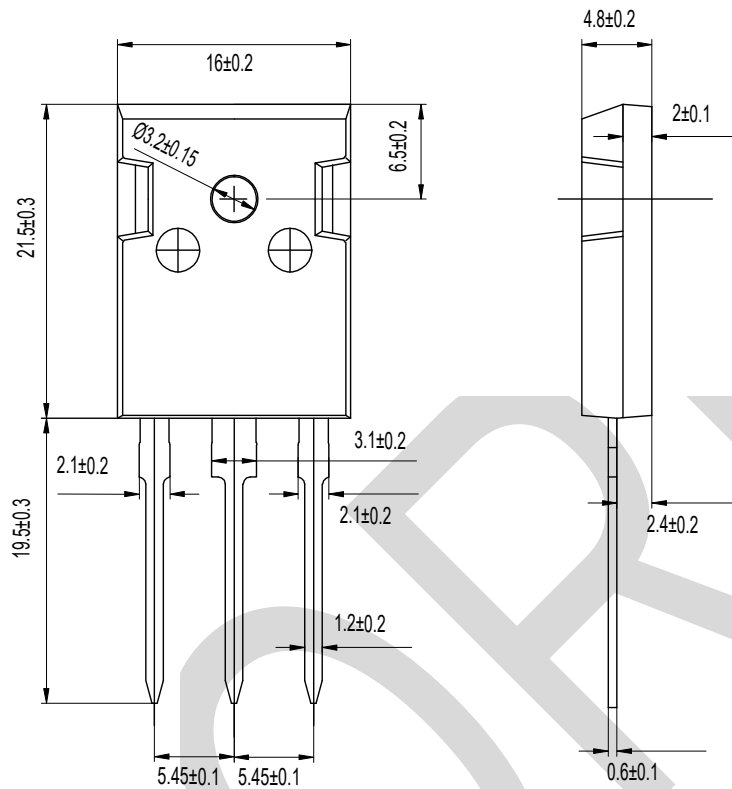


Typical Reverse Current

PACKAGE OUTLINE DIMENSIONS

Note:unit: mm

TO-247



Dimensions in millimeters