

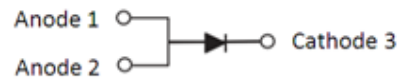
Trench MOS Barrier Schottky Rectifier

FEATURES

- Patented Trench MOS Barrier Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Lower power loss/ High efficiency
- High forward surge capability
- Ideal for automated placement
- Moisture sensitivity level : level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-277A(SMPC)



MECHANICAL DATA

Case : TO-277A(SMPC)

Molding compound, UL flammability classification rating 94V-0
Base P/N with suffix "G" on packing code - halogen-free, RoHS compliant

Terminal : Matte tin plated leads, solderable per JESD22-B102
Meet JESD 201 class 1A whisker test

Polarity : Indicated by cathode band

Weight : 0.095 gram (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS(T _A =25°C unless otherwise noted)							
PARAMETER			Symbol	TSP15U50S			UNIT
Marking code				15U50			
Maximum repetitive peak reverse voltage			V _{RRM}	50			V
Maximum average forward rectified current			I _{F(AV)}	15			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	200			A
Maximum instantaneous forward voltage per diode (Note 1)			V _F	MIN	TYP	MAX	V
	I _F = 5A	T _J = 25°C		-	0.37	-	
	I _F = 7.5A			-	0.40	-	
	I _F = 15A			-	0.48	0.56	
	I _F = 5A	T _J = 125°C		-	0.26	-	
	I _F = 7.5A			-	0.31	-	
	I _F = 15A			-	0.44	0.50	
Maximum instantaneous reverse current per diode at rated reverse voltage		I _R	-	140	2000	uA	
			-	60	140	mA	
Maximum DC reverse voltage			V _{DC}	35			V
Typical thermal resistance per diode			R _{θJC}	11			°C/W
Operating temperature range			T _J	- 40 to + 150			°C
Storage temperature range			T _{STG}	- 40 to + 150			°C

Note1 : Pulse Test with Pulse Width=300μs, 1% Duty Cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
TSP15U50S	S1	Suffix "G"	SMPC	1500/ 7" Plastic reel
	S2		SMPC	6000/ 13" Plastic reel

Note : For SMPC: Packing code (Whole series with green compound)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
TSP15U50S S1G	TSP15U50S	S1	G	Green compound

RATINGS AND CHATACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

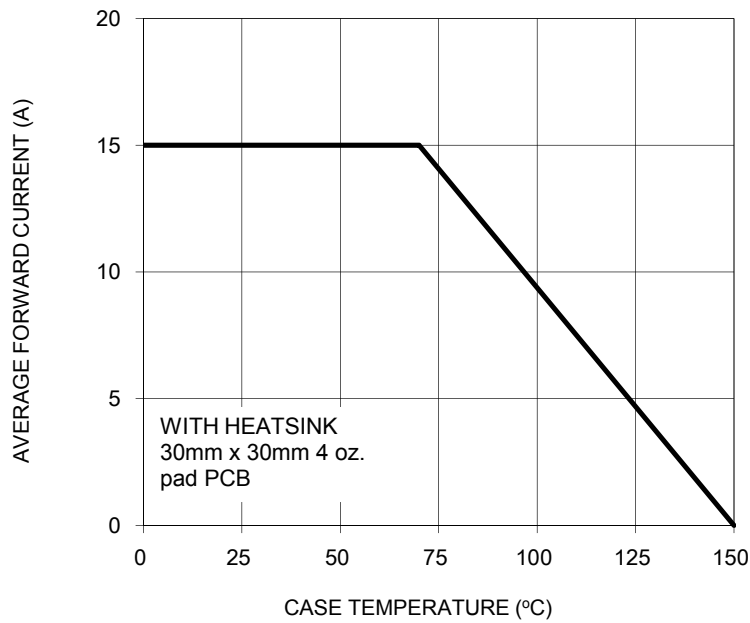


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

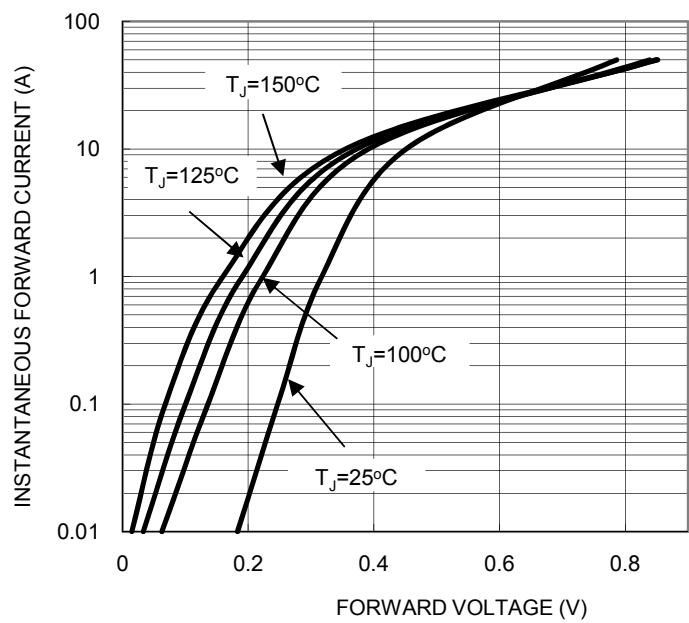


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

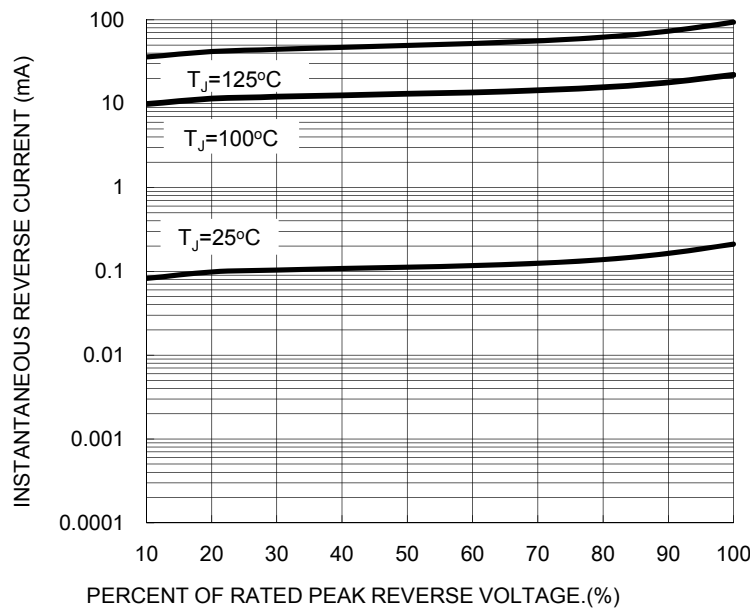
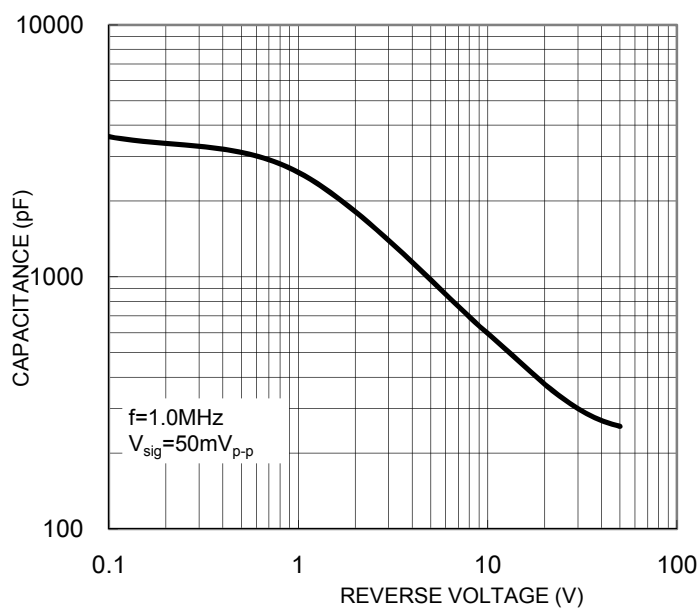
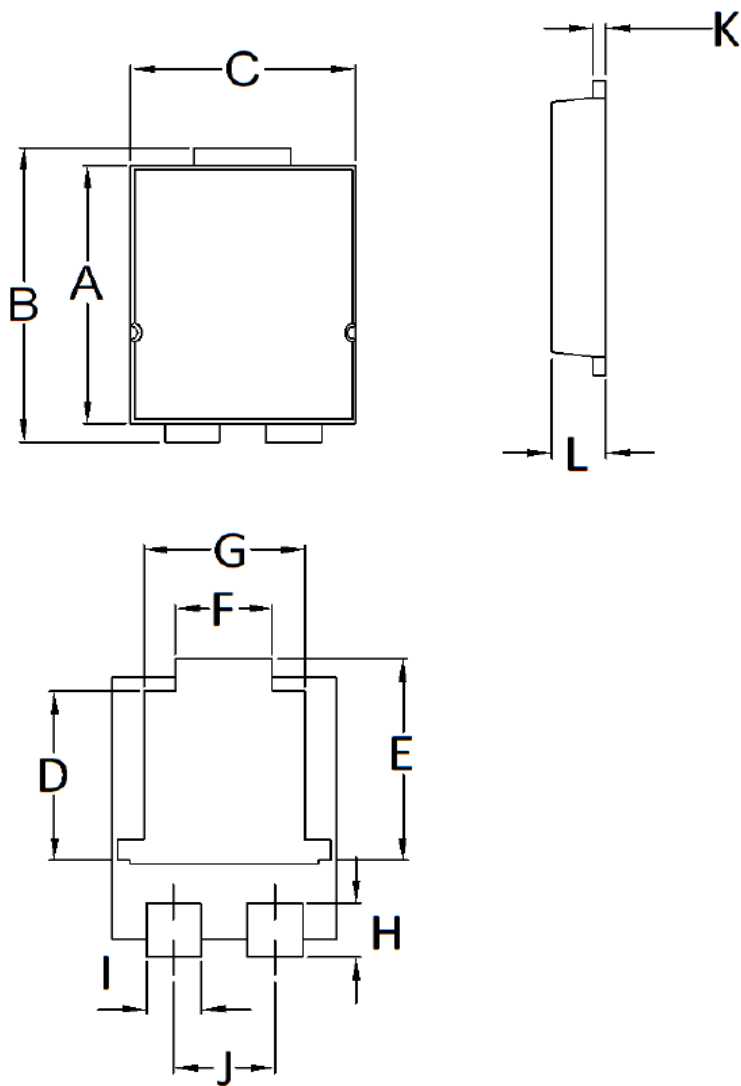


FIG. 4 TYPICAL JUNCTION CAPACITANCE

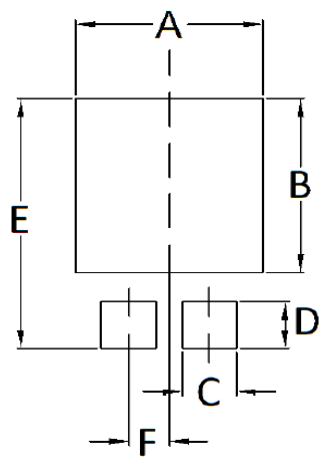


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	5.650	5.750	0.222	0.226
B	6.350	6.650	0.250	0.262
C	4.550	4.650	0.179	0.183
D	3.540	3.840	0.139	0.151
E	4.235	4.535	0.167	0.179
F	1.850	2.150	0.073	0.085
G	3.170	3.470	0.125	0.137
H	1.043	1.343	0.041	0.053
I	1.000	1.300	0.039	0.051
J	1.930	2.230	0.076	0.088
K	0.175	0.325	0.007	0.013
L	1.000	1.200	0.039	0.047

SUGGESTED PAD LAYOUT



Symbol	Unit(mm)
A	4.8
B	4.72
C	1.4
D	1.27
E	6.8
F	1.04

MARKING DIAGRAM

