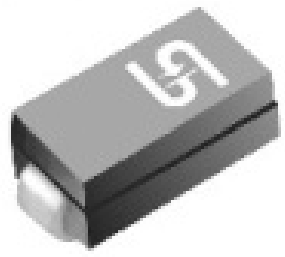
Trench MOS Barrier Schottky Rectifier

FEATURES

- Patented Trench MOS Barrier Schottky technology
- Low power loss, high efficiency
- Ideal for automated placement
- Guardring for overvoltage protection
- High surge current capability
- 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



DO-214AC(SMA)

MECHANICAL DATA

Case: DO-214AC(SMA)

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise noted)						
PARAMETER			SYMBOL	TSSA3U45		UNIT
Marking code				3U45		
Maximum repetitive peak reverse voltage			V_{RRM}	45		V
Maximum average forward rectified current			$I_{F(AV)}$	3		A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I_{FSM}	50		A
				Min.	TYP.	MAX.	
Maximum instantaneous forward voltage per diode (Note 1)	I_F = 3A	T_J = 25°C	V_F	-	0.42	0.48	V
		T_J = 125°C	V_F	-	0.30	0.40	
Maximum instantaneous reverse current per diode at rated reverse voltage		T_J = 25°C	I_R	-	-	500	μA
		T_J = 125°C		-	50	100	mA
Maximum DC reverse voltage			V_{DC}	32			V
Typical thermal resistance per diode			$R_{\theta jc}$	20			°C/W
Operating temperature range			T_J	- 55 to + 150			°C
Storage temperature range			T_{STG}	- 55 to + 150			°C

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

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
TSSA3U45	E3	Suffix "G"	Clip SMA	1800 / 7" Plastic reel
	E2		Clip SMA	7500 / 13" Plastic reel

Note: For TSSA3U45: Whole series with green compound

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
TSSA3U45 E3G	TSSA3U45	E3	G	Green compound

RATINGS AND CHATACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

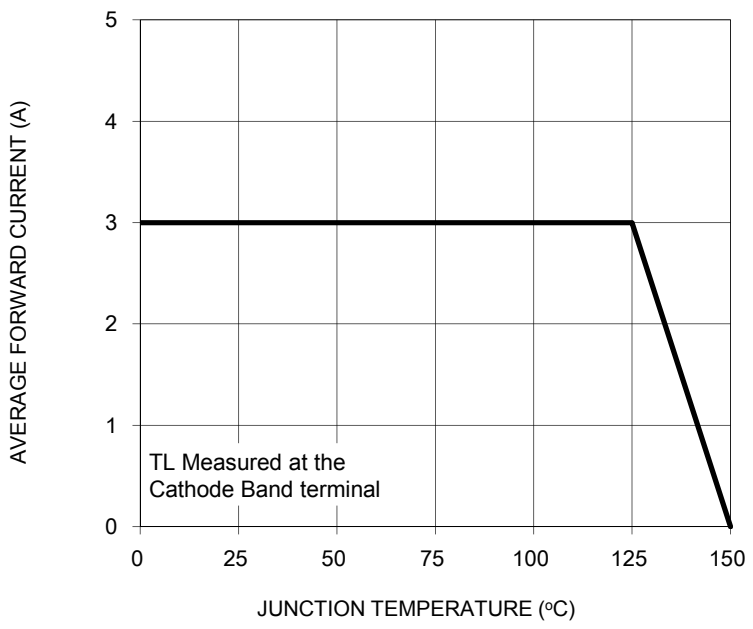


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

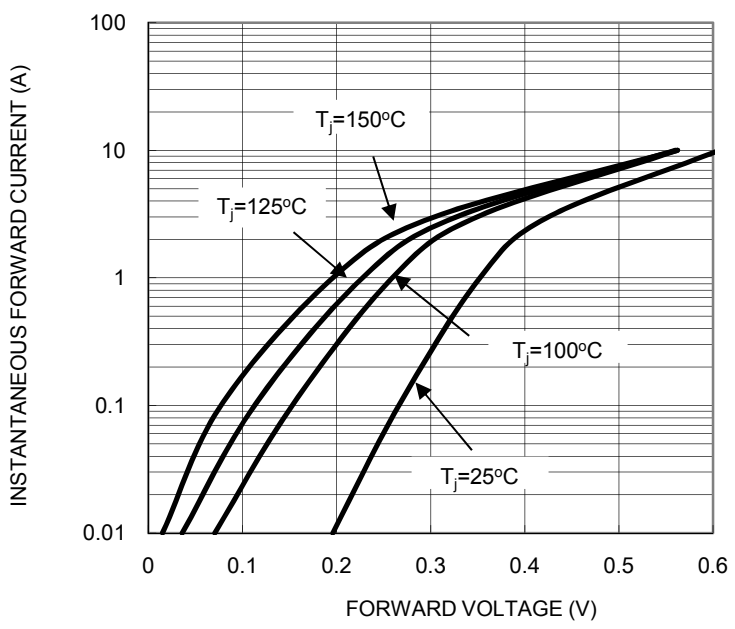


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

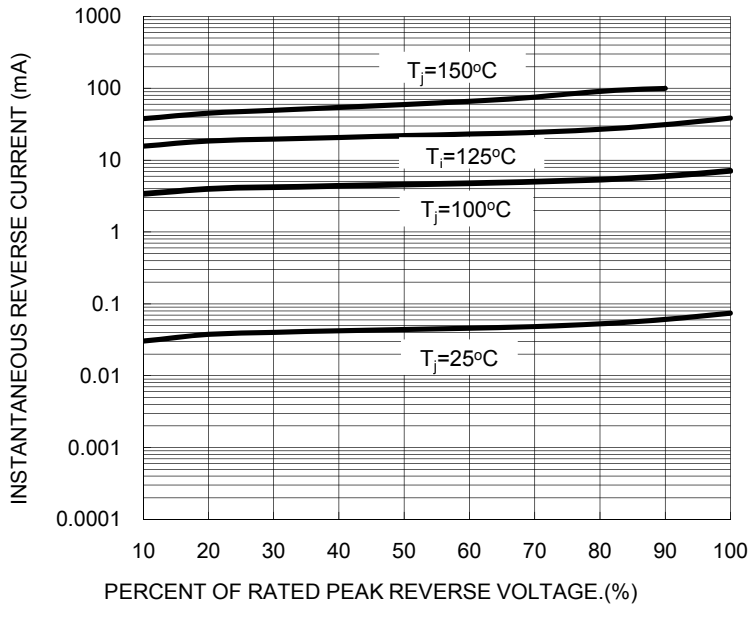
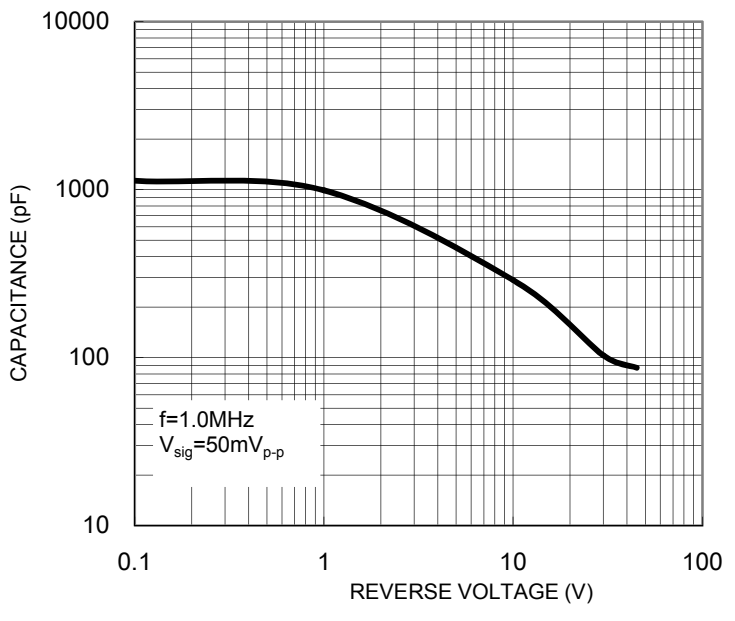
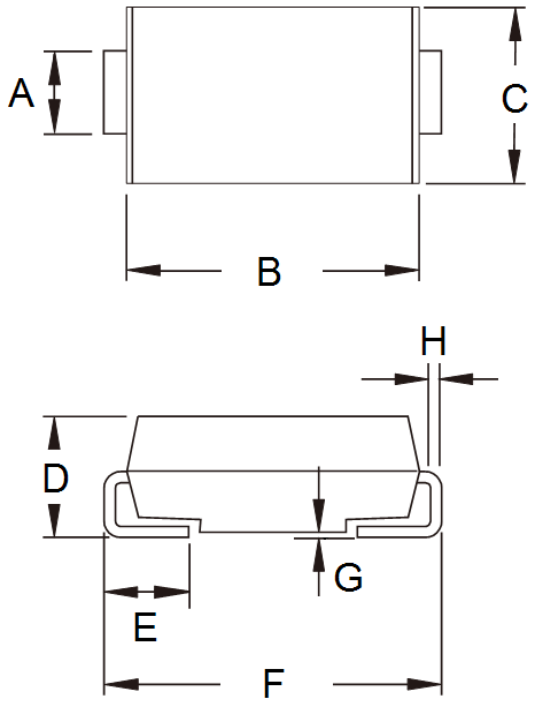


FIG. 4 TYPICAL JUNCTION CAPACITANCE

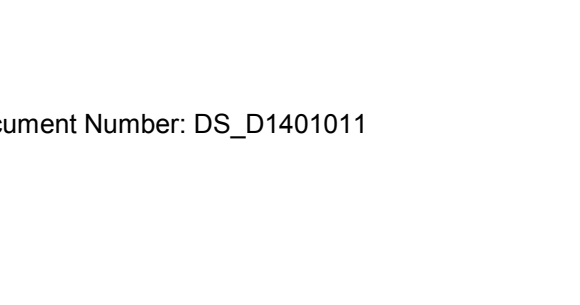


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.27	1.58	0.050	0.062
B	4.06	4.60	0.160	0.181
C	2.29	2.83	0.090	0.111
D	1.99	2.50	0.078	0.098
E	0.90	1.41	0.035	0.056
F	4.95	5.33	0.195	0.210
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.93	0.155
D	2.41	0.095
E	5.45	0.215

MARKING DIAGRAM

P/N = Marking Code
G = Green Compound
YW = Date Code
F = Factory Code