

Trench Schottky Rectifier

FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ High efficiency
- High forward surge capability
- 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-263AA (D²PAK)



TYPICAL APPLICATIONS

Trench Schottky barrier rectifier are designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.

MECHANICAL DATA

Case: TO-263AA (D²PAK)

Molding compound meets UL 94 V-0 flammability rating

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: As marked

Weight: 1.6 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)												
PARAMETER			SYMBOL	TSD30H 100CW		TSD30H 120CW		TSD30H 150CW		TSD30H 200CW		UNIT
Maximum repetitive peak reverse voltage			V _{RRM}	100		120		150		200		V
Maximum average forward rectified current	per device		I _{F(AV)}	30								A
	per diode			15								
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	200								A
Voltage rate of change (Rated V _R)			dV/dt	10000								V/μs
				TYP.	MAX.	TYP.	MAX.	TYP.	MAX.	TYP.	MAX.	
Instantaneous forward voltage per diode (Note1)	I _F = 15A	T _J = 25°C	V _F	0.69	0.78	0.75	0.84	0.81	0.90	0.84	0.92	V
		T _J = 125°C		0.61	0.68	0.64	0.73	0.68	0.77	0.70	0.79	
Instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R	-	250	-	250	-	150	-	150	μA
		T _J = 125°C		10	35	10	35	3	20	3	20	mA
Typical thermal resistance per diode			R _{θJC}	2.8								°C/W
Operating junction temperature range			T _J	- 55 to +150								°C
Storage temperature range			T _{STG}	- 55 to +150								°C

Note 1: Pulse test with pulse width=300μs, 1% duty cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSD30HXXCW (Note 1)	C0	G	D ² PAK	50 / Tube

Note 1: "XXX" defines voltage from 100V (TSD30H100CW) to 200V (TSD30H200CW)

EXAMPLE				
PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSD30H120CW C0G	TSD30H120CW	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

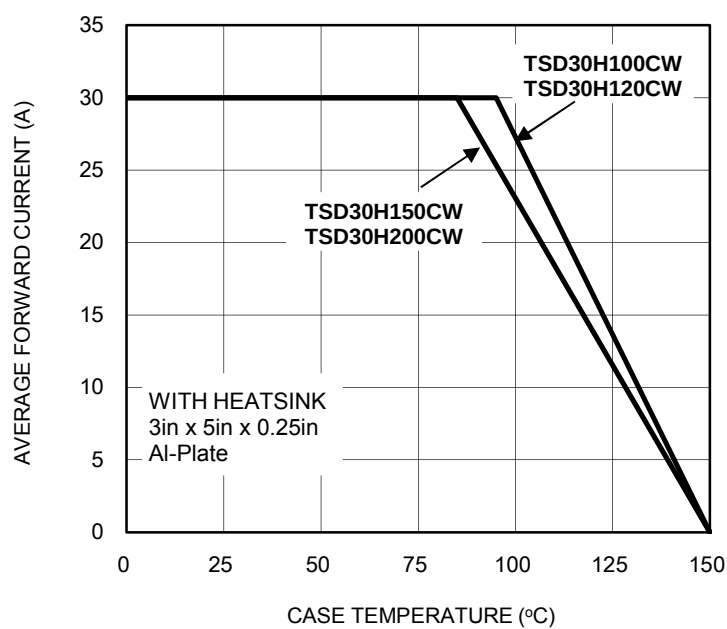


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

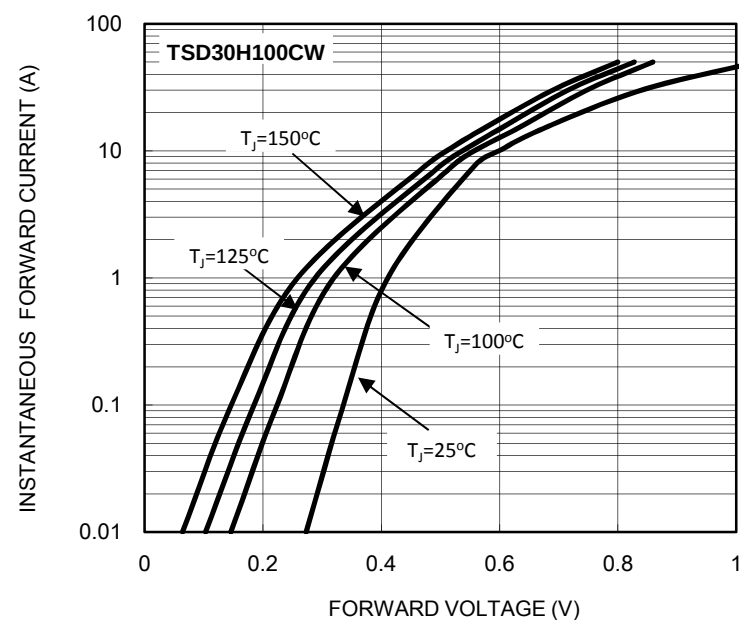


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

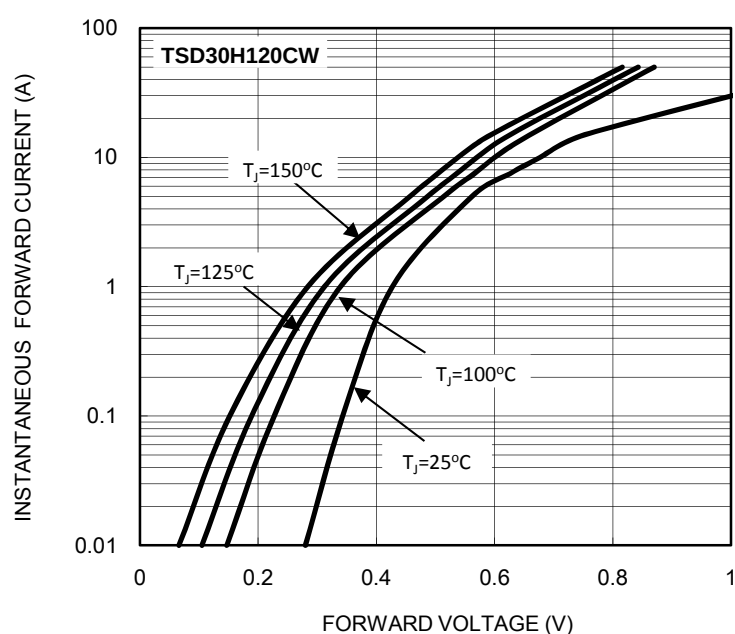


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

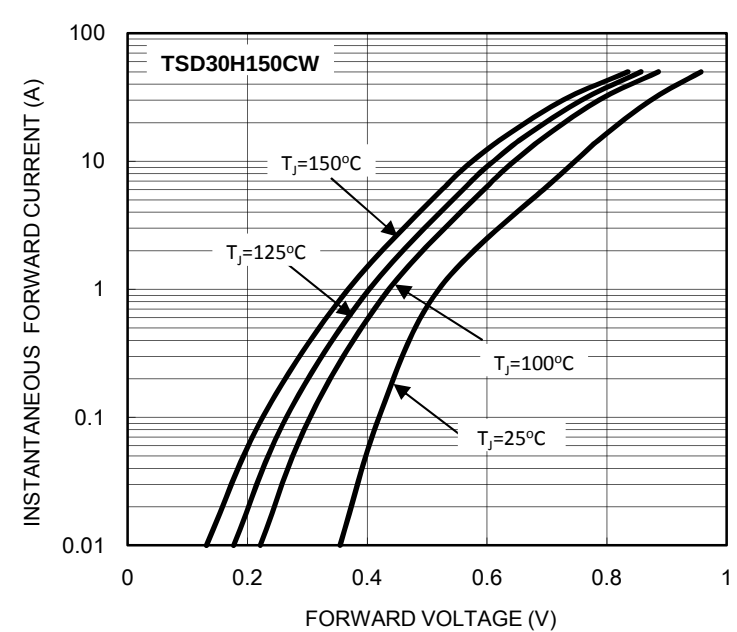


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

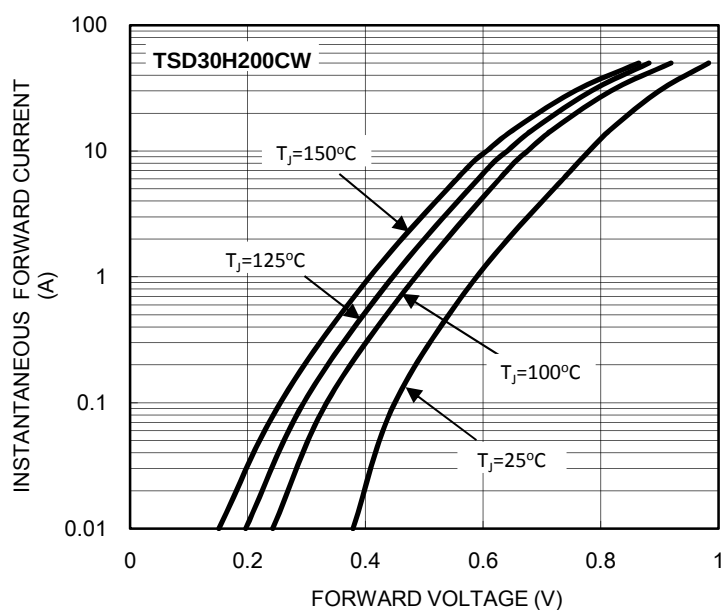


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

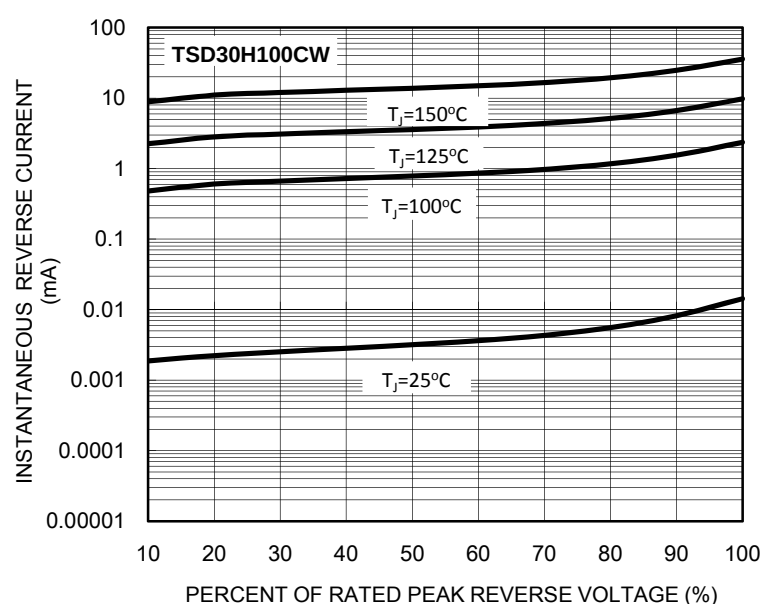


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

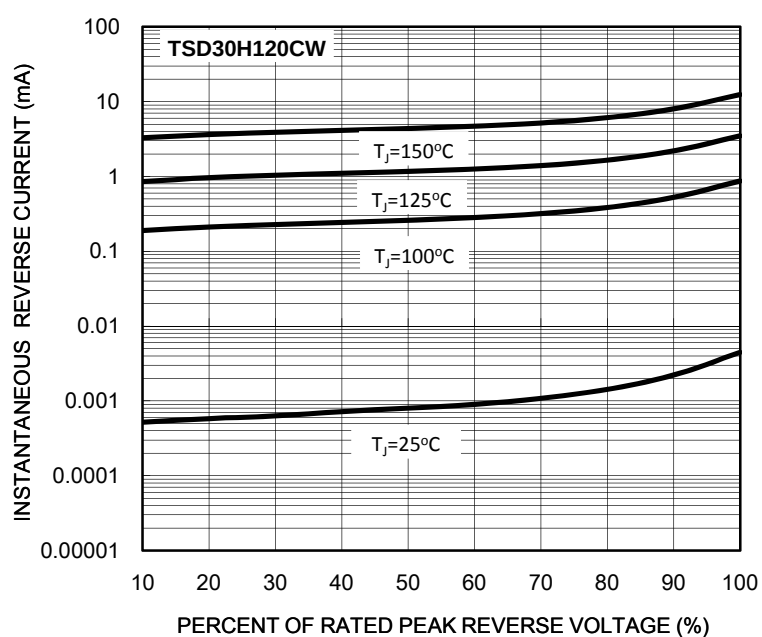


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

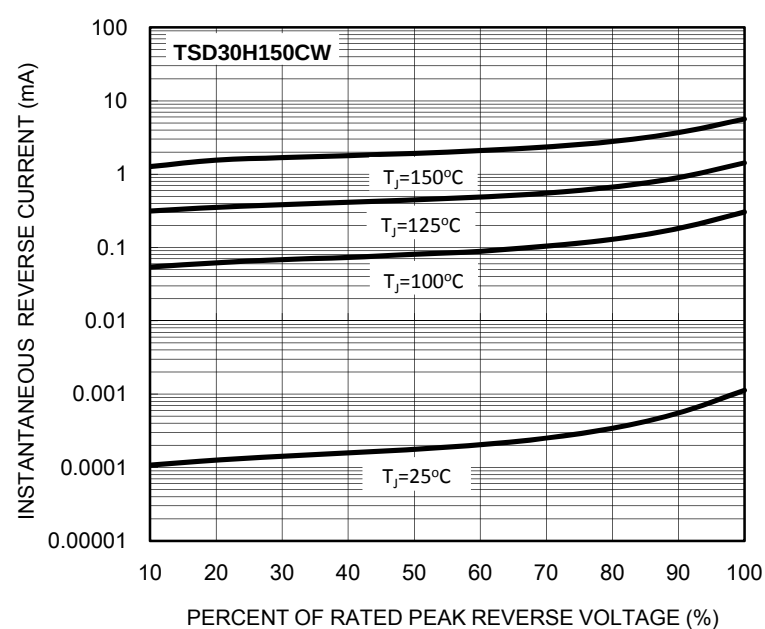


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

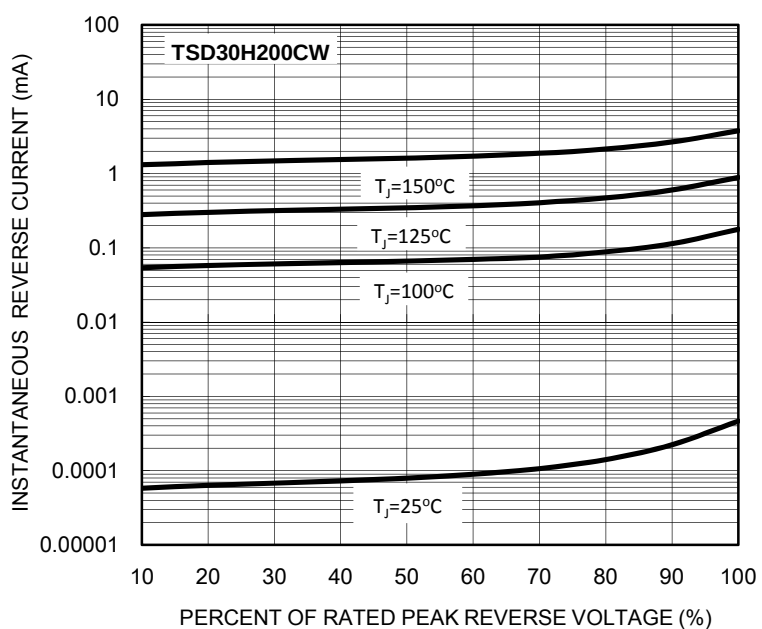
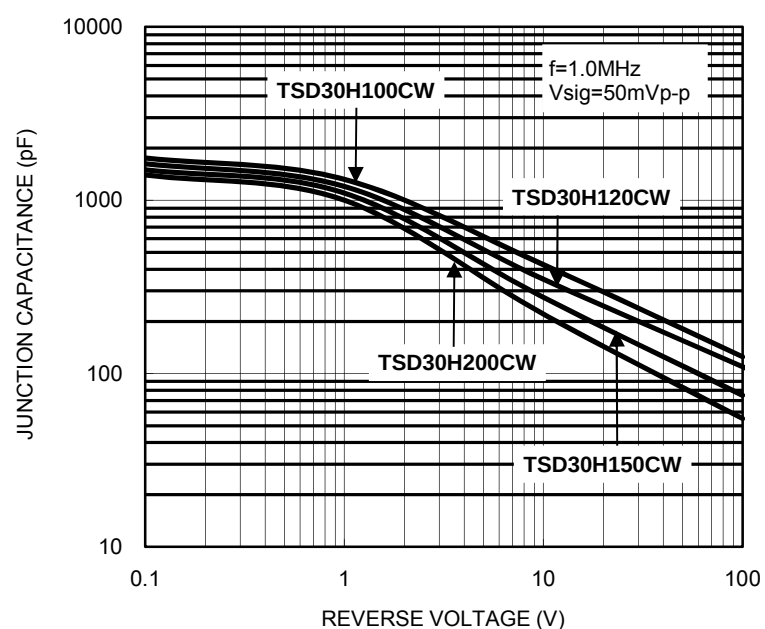
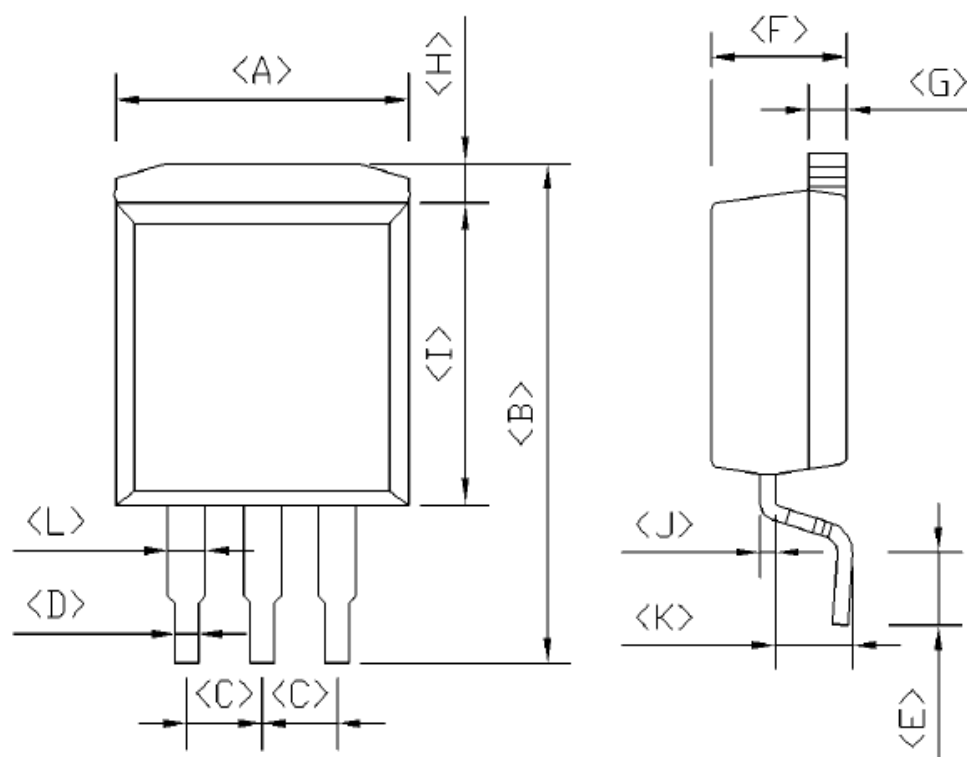


FIG. 10 TYPICAL JUNCTION CAPACITANCE

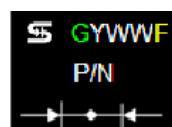


PACKAGE OUTLINE DIMENSIONS
TO-263AA (D²PAK)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.40	4.70	0.173	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110
L	0.95	1.45	0.037	0.057

MARKING DIAGRAM



P/N = Specific Device Code
G = Green Compound
YWW = Date Code
F = Factory Code

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