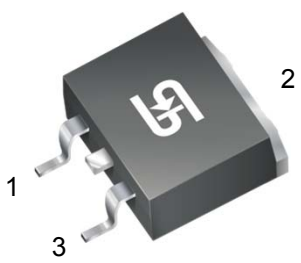
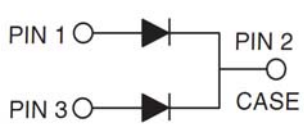
Trench Schottky Rectifier

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-263AB (D^2PAK)



Pb-Free

RoHS COMPLIANT

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-263AB (D^2PAK)

Molding compound meets UL 94 V-0 flammability rating

Packing code with suffix "G" menas 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			$R_{\theta JC}$	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

ORDER INFORMATION (EXAMPLE)

TSD30H100CW C0G

- C0G → Green compound code
- G → Packing code
- TSD30H100CW → Part no.

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

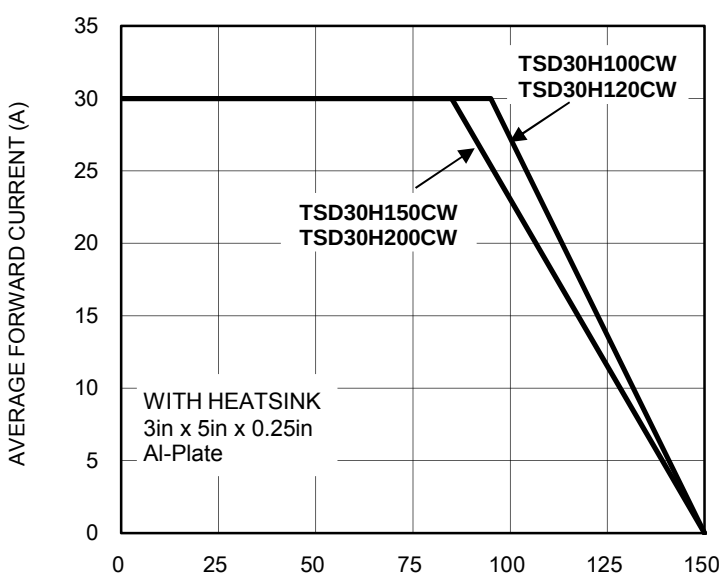


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

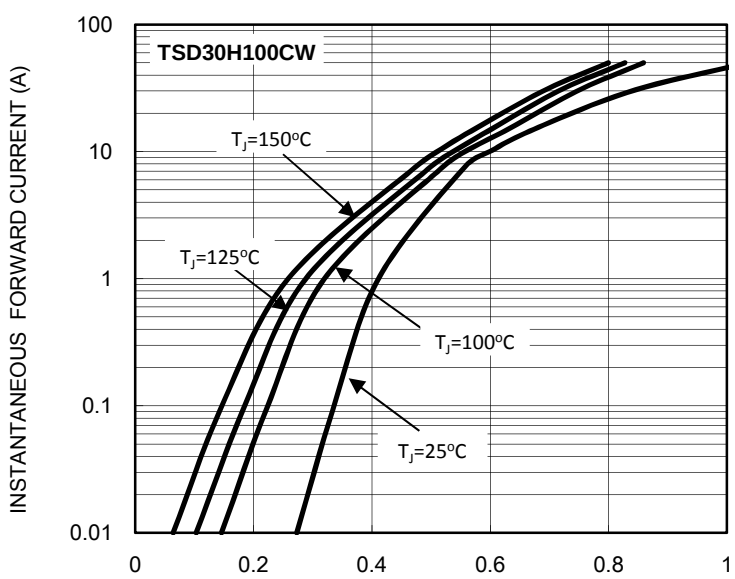


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

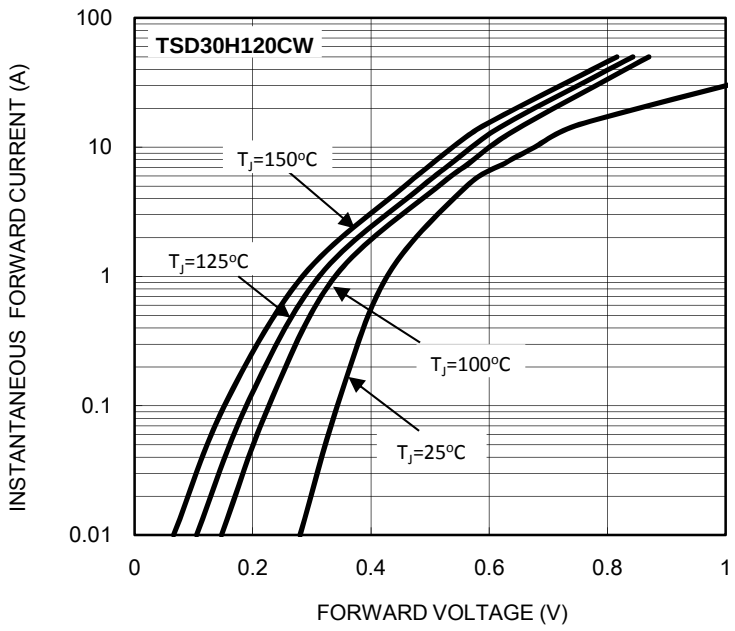


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

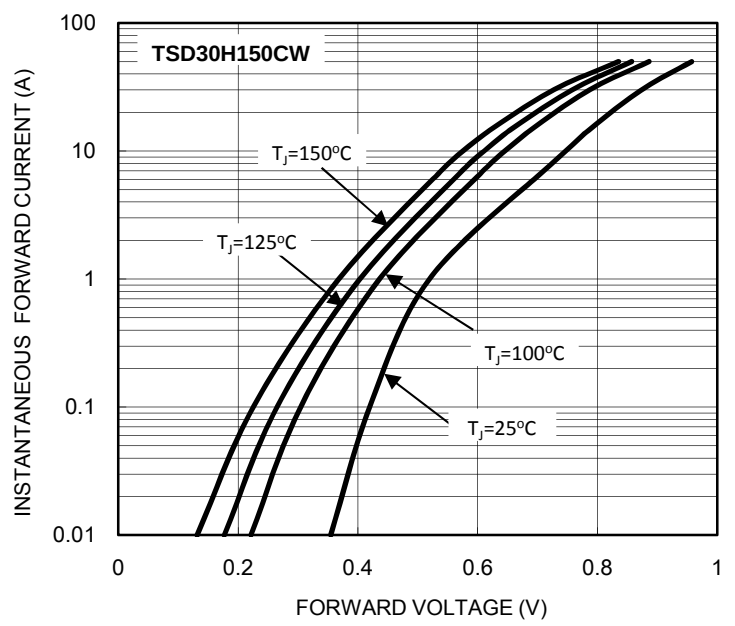


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

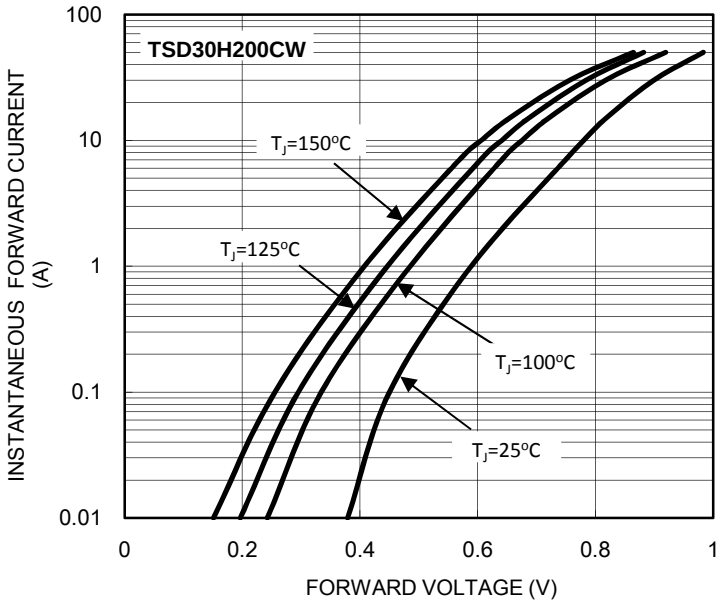


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

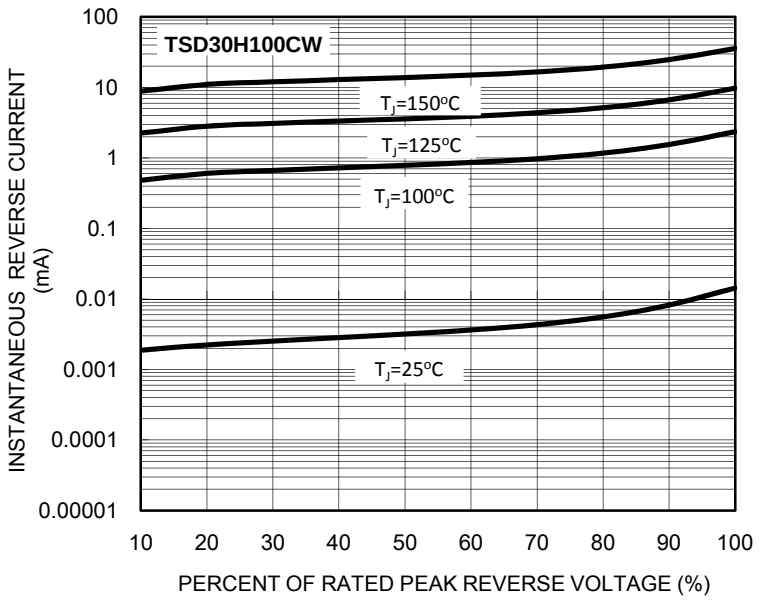


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

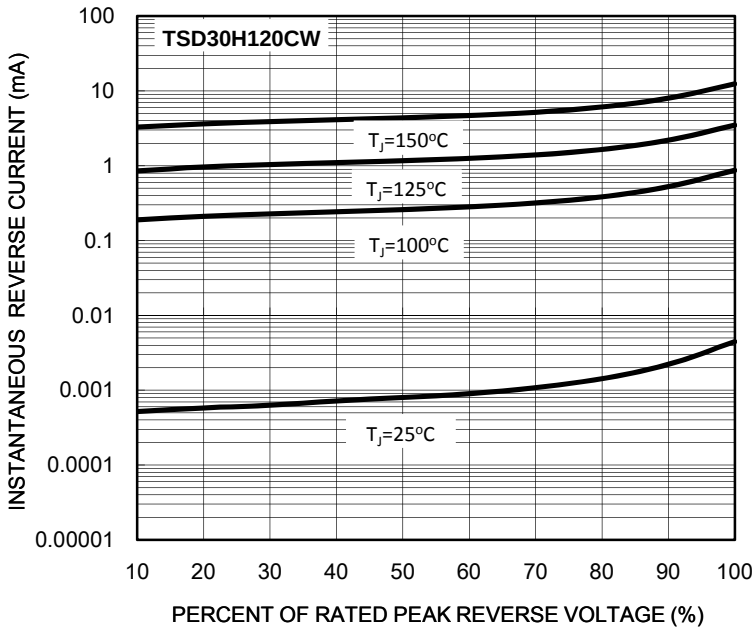


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

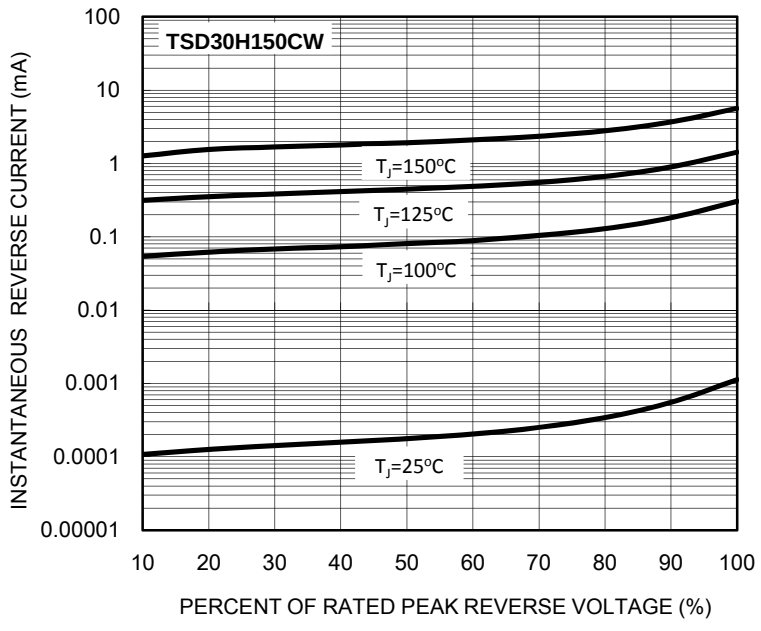


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

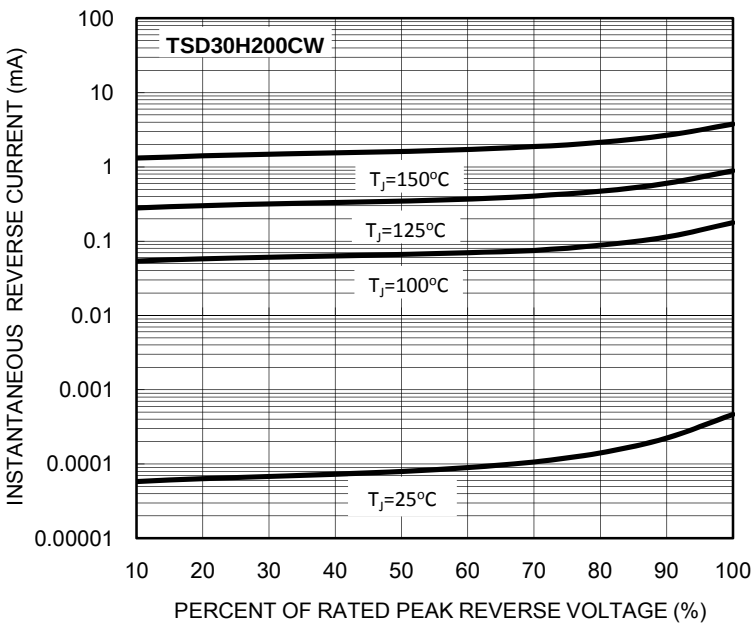
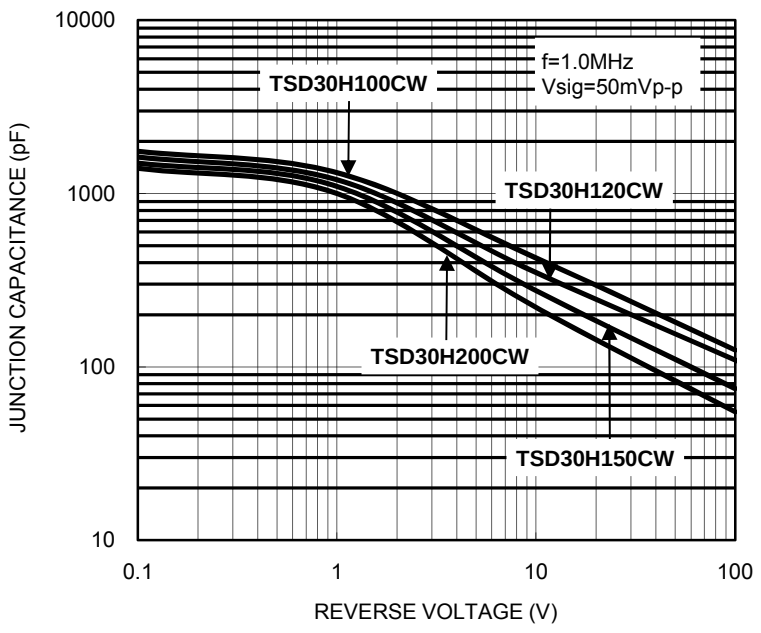
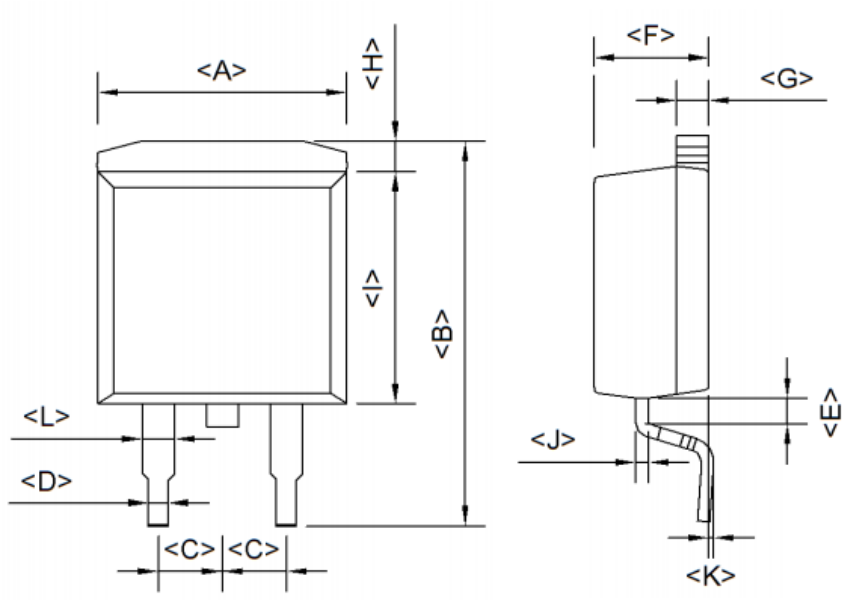


FIG. 10 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

TO-263AB (D^2PAK)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	9.600	10.050	0.378	0.396
B	14.920	15.520	0.587	0.611
C	2.540 (TYP)		0.100 (TYP)	
D	0.675	0.975	0.027	0.038
E	1.778 (TYP)		0.070 (TYP)	
F	4.390	4.790	0.173	0.189
G	1.150	1.450	0.045	0.057
H	1.600 (TYP)		0.063 (TYP)	
I	9.170	9.370	0.361	0.369
J	0.400	0.600	0.016	0.024
K	0.254 (TYP)		0.010 (TYP)	
L	1.150	1.550	0.045	0.061

MARKING DIAGRAM

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

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