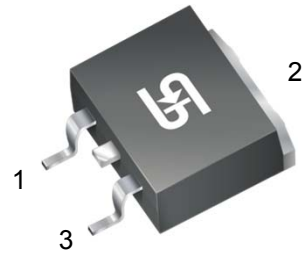


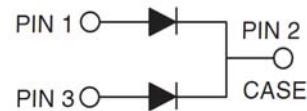
## 30A, 100V - 200V Trench Schottky Rectifiers

### 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



**TO-263AB (D<sup>2</sup>PAK)**



### TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is 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<sup>2</sup>PAK)

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 <sub>A</sub> = 25°C unless otherwise noted)																				
PARAMETER		SYMBOL	TSD30H 100CW		TSD30H 120CW		TSD30H 150CW		TSD30H 200CW		UNIT									
Maximum repetitive peak reverse voltage		V <sub>RRM</sub>	100		120		150		200		V									
Maximum average forward rectified current	per device	I <sub>F(AV)</sub>	30									A								
	per diode		15																	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode		I <sub>FSM</sub>	200									A								
Voltage rate of change (Rated V <sub>R</sub> )		dV/dt	10000									V/μs								
Instantaneous forward voltage per diode (Note1)	I <sub>F</sub> = 15A	V <sub>F</sub>	T <sub>J</sub> = 25°C	TYP	0.69	MAX	0.78	TYP	0.75	MAX	0.84	TYP	0.81	MAX	0.90	TYP	0.84	MAX	0.92	V
			T <sub>J</sub> = 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		I <sub>R</sub>	T <sub>J</sub> = 25°C	-	250	-	250	-	150	-	150	-	150	-	150	-	150	μA		
			T <sub>J</sub> = 125°C	10	35	10	35	3	20	3	20									
Typical thermal resistance per diode		R <sub>θJC</sub>	2.8									°C/W								
Operating junction temperature range		T <sub>J</sub>	- 55 to +150									°C								
Storage temperature range		T <sub>STG</sub>	- 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 <sup>2</sup> 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<sub>A</sub> = 25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

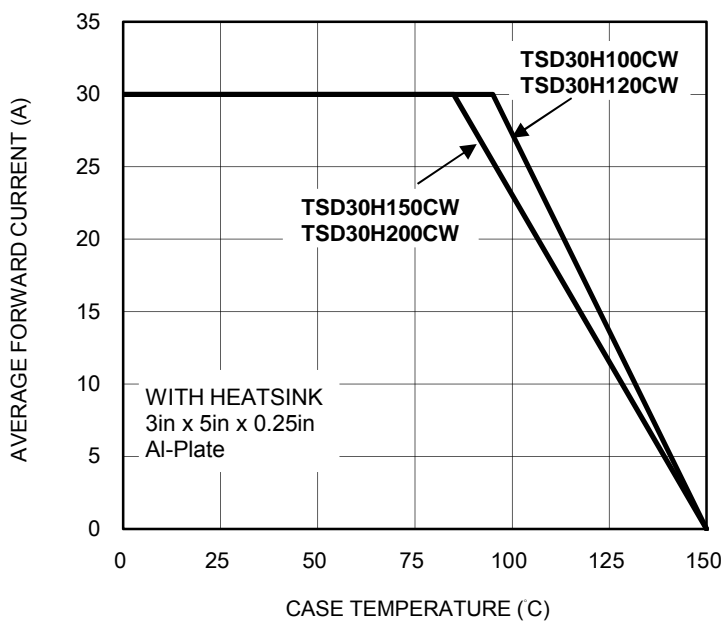


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

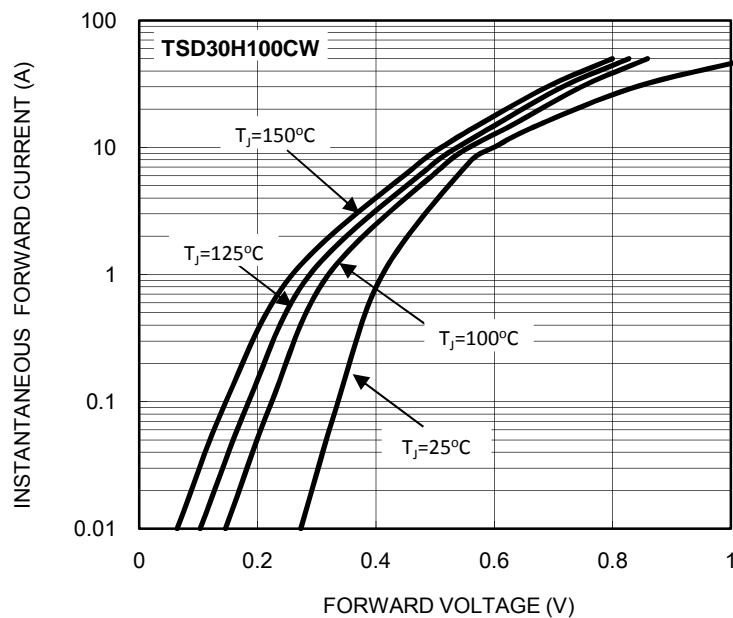


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

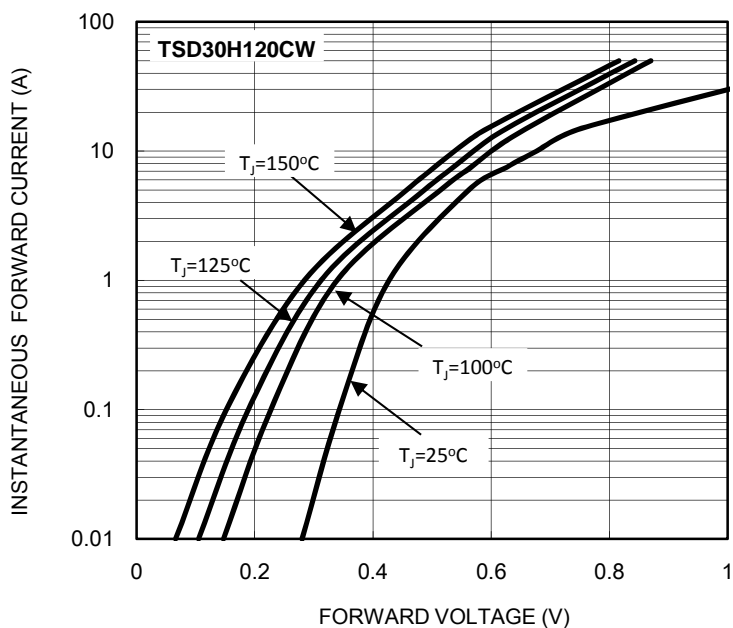


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

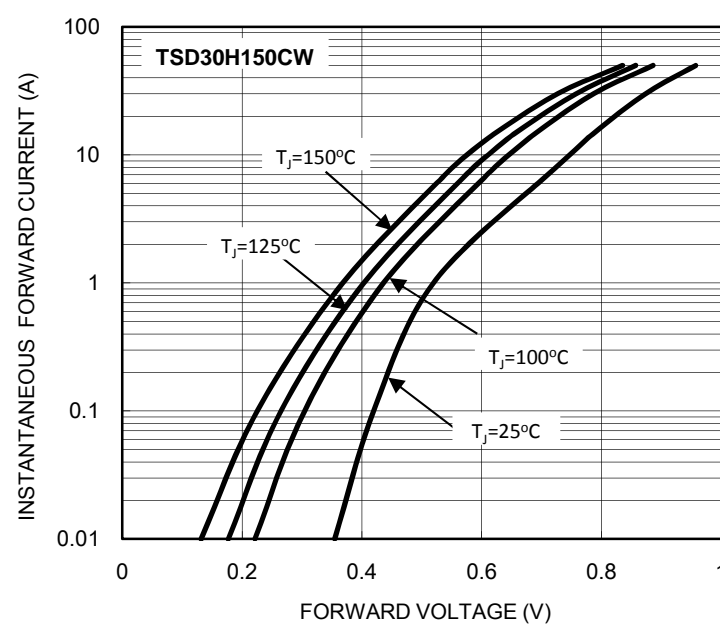


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

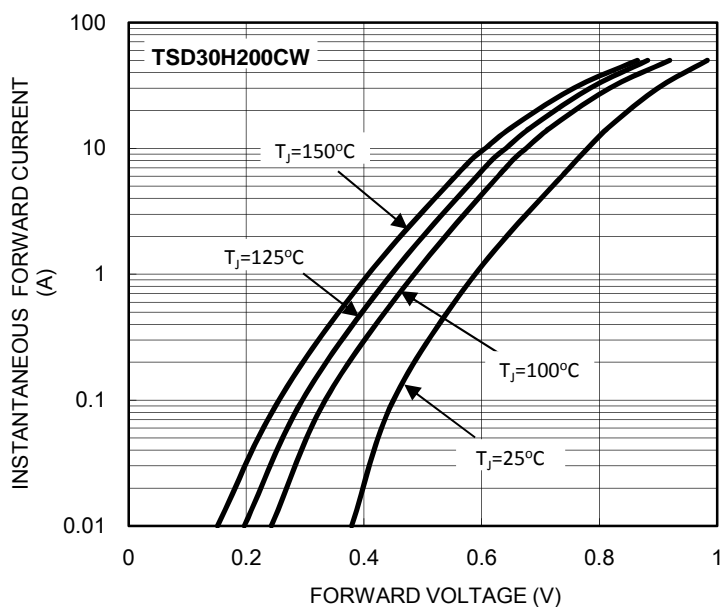


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

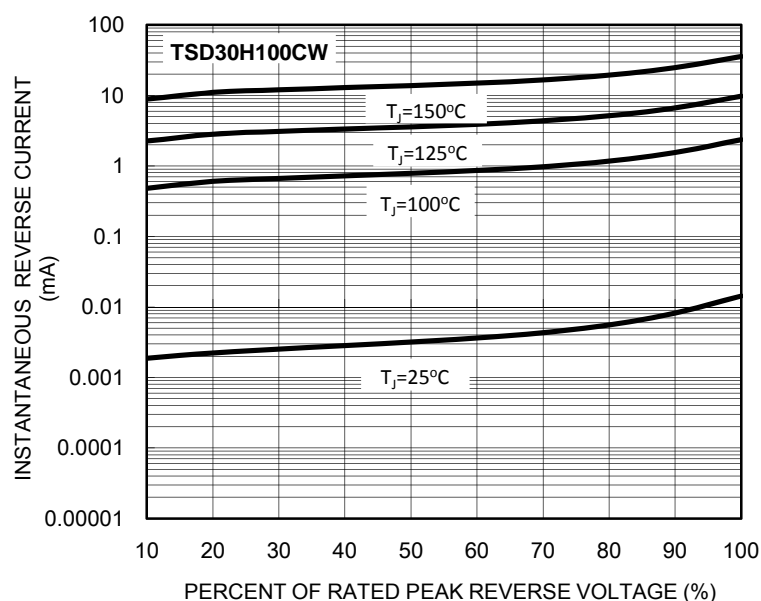


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

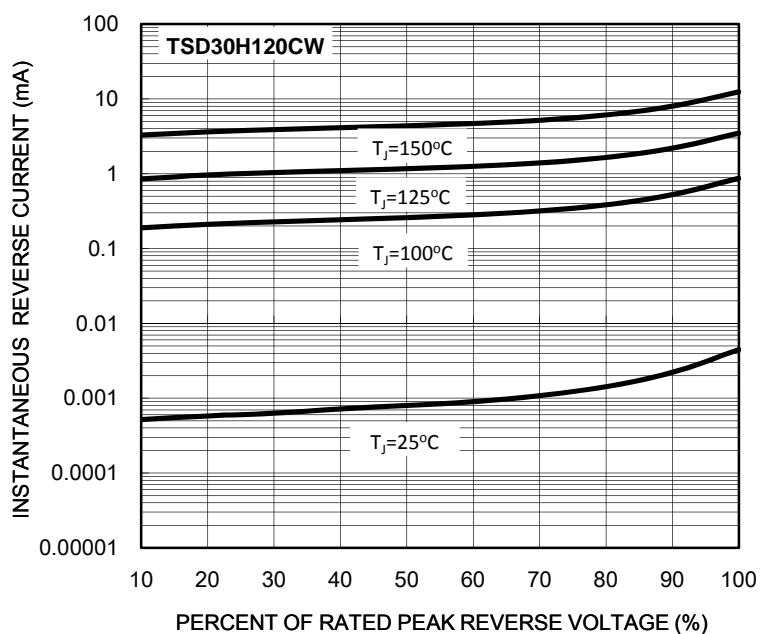


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

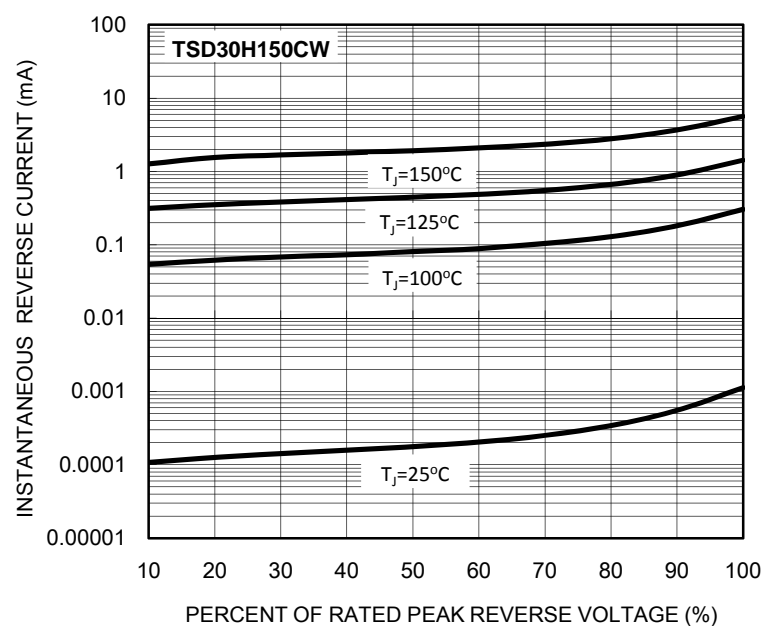


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

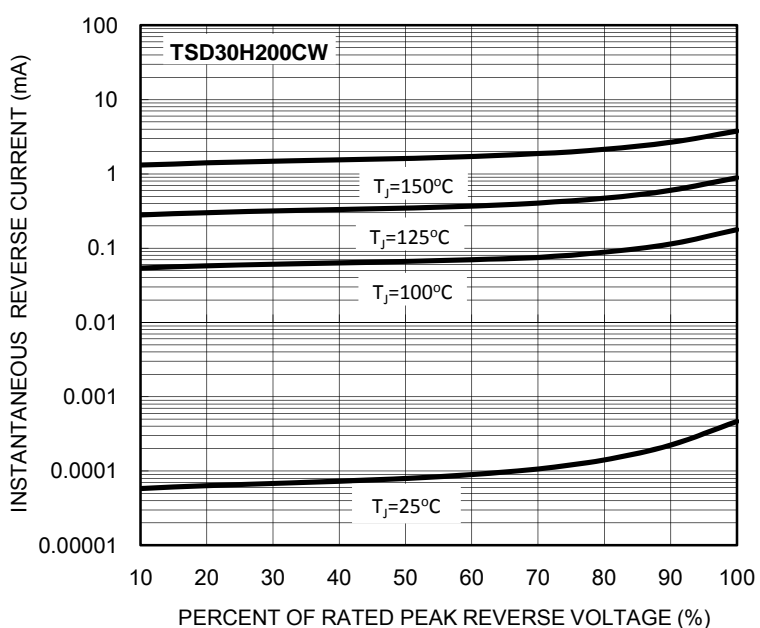
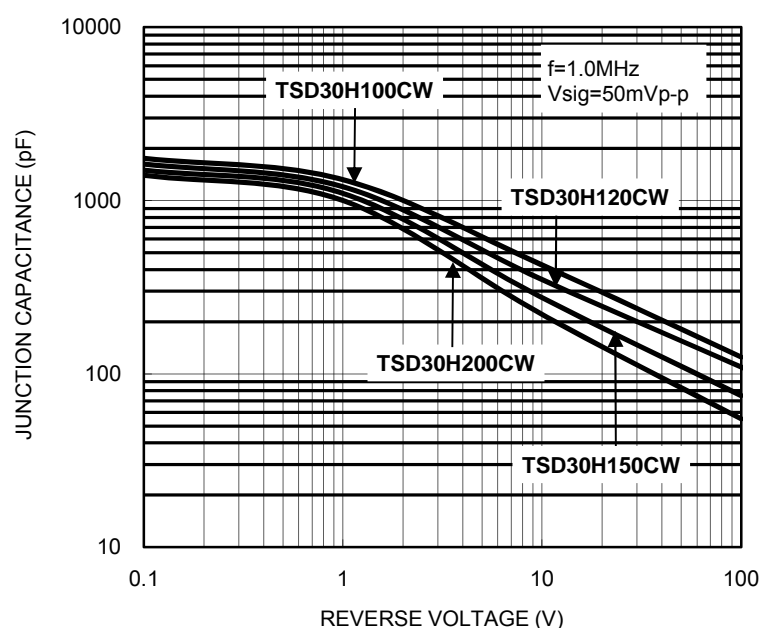
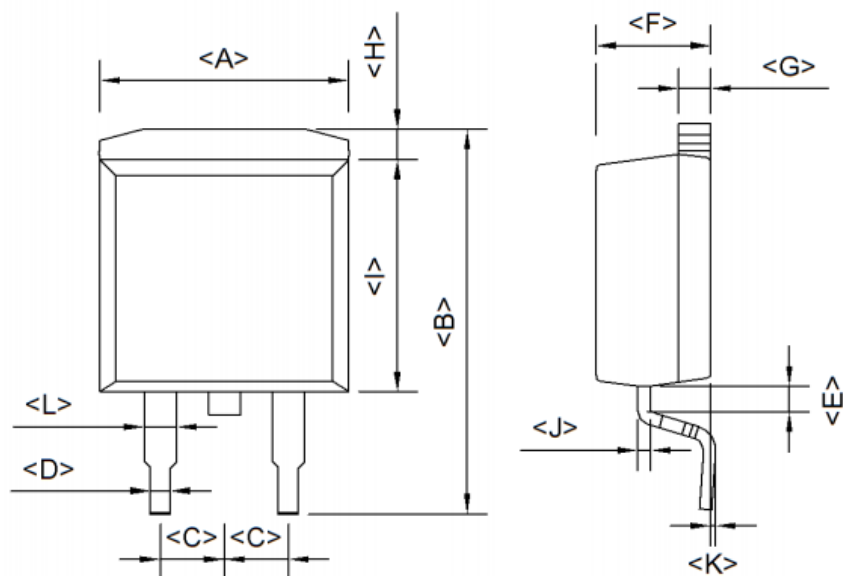


FIG. 10 TYPICAL JUNCTION CAPACITANCE

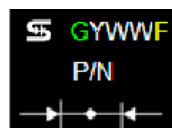


PACKAGE OUTLINE DIMENSIONS  
**TO-263AB (D<sup>2</sup>PAK)**



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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