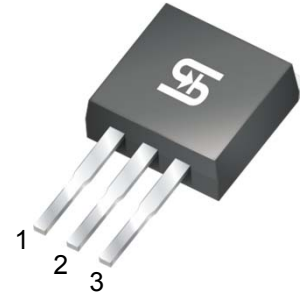


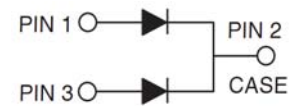
## 20A, 100V - 200V Trench Schottky Rectifiers

### 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



I<sup>2</sup>PAK



### TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is designed for high frequency switched mode power supplies such as adapters, lighting, and DC/DC converters.

### MECHANICAL DATA

**Case:** I<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	TSI20H 100CW	TSI20H 120CW	TSI20H 150CW	TSI20H 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>	20								A	
	per diode		10									
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode		I <sub>FSM</sub>	150								A	
Voltage rate of change (Rated V <sub>R</sub> )		dV/dt	10000								V/μs	
			TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX		
Instantaneous forward voltage per diode ( Note1 )	I <sub>F</sub> = 5A	T <sub>J</sub> = 25°C	V <sub>F</sub>	0.57	-	0.62	-	0.72	-	0.77	-	V
	I <sub>F</sub> = 10A			0.67	0.79	0.78	0.87	0.81	0.90	0.83	0.93	
	I <sub>F</sub> = 5A	T <sub>J</sub> = 125°C		0.50	-	0.53	-	0.58	-	0.62	-	
	I <sub>F</sub> = 10A			0.59	0.68	0.63	0.72	0.66	0.75	0.68	0.78	
Instantaneous reverse current per diode at rated reverse voltage	T <sub>J</sub> = 25°C		I <sub>R</sub>	-	200	-	200	-	100	-	100	μA
	T <sub>J</sub> = 125°C			8	25	8	25	3	15	3	15	mA
Typical thermal resistance per diode		R <sub>θJC</sub>	2.8								°C/W	
		R <sub>θJL</sub>	3.8								°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
TSI20HXXCW (Note 1, 2)	C0	G	I <sup>2</sup> PAK	50 / Tube

Note 1: "XXX" defines voltage from 100V (TSI20H100CW) to 200V (TSI20H200CW)

Note 2: Whole series with green compound

**EXAMPLE**

PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSI20H120CW C0G	TSI20H120CW	C0	G	Green compound

**RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

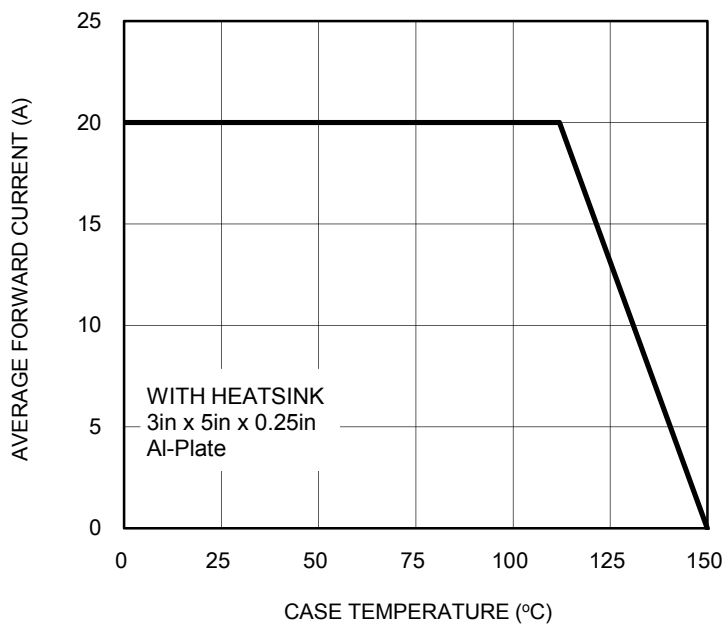


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

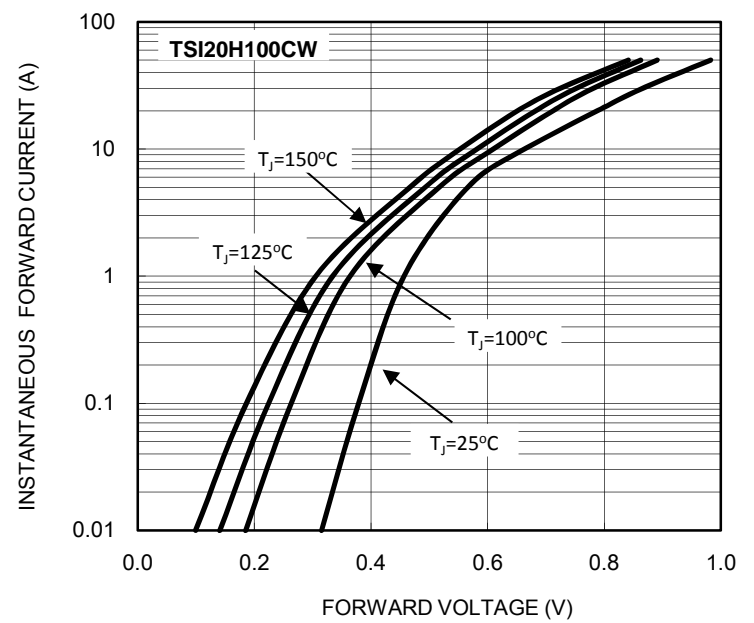


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

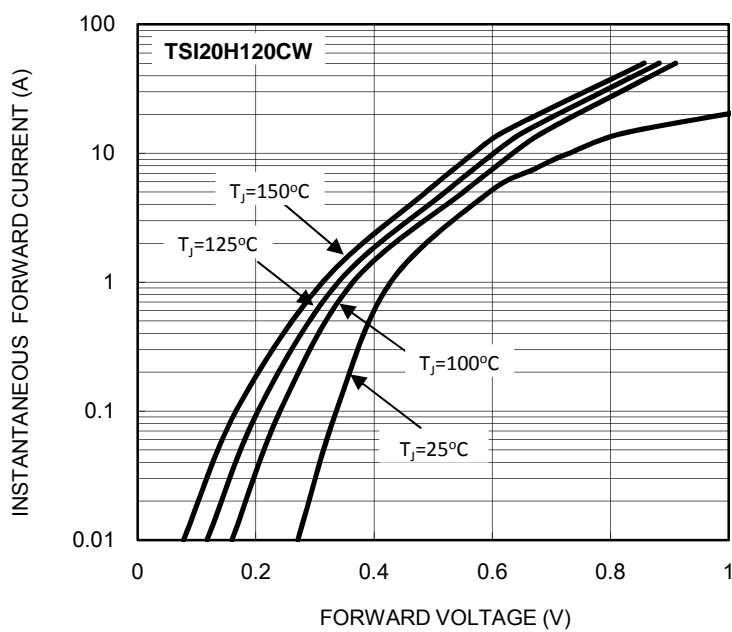


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

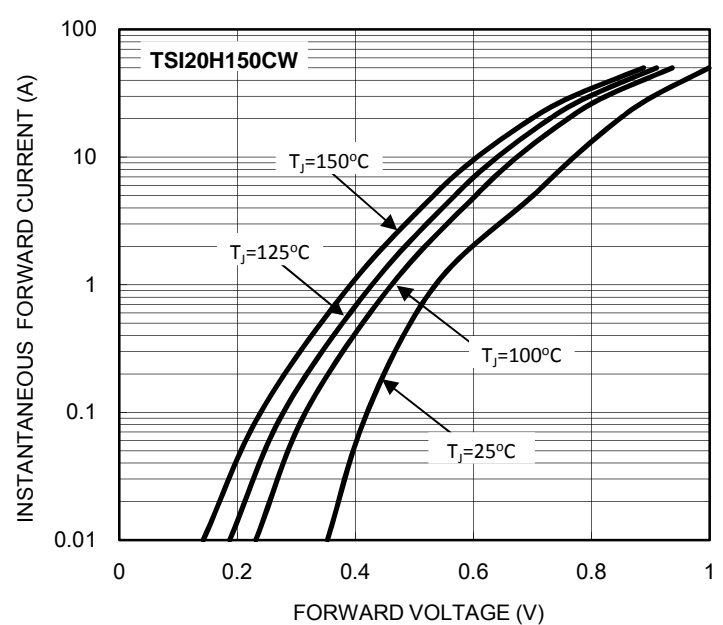


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

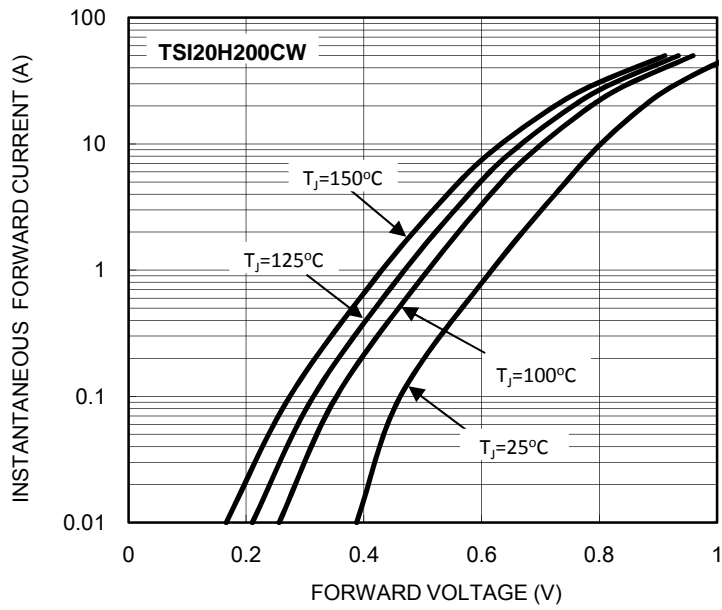


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

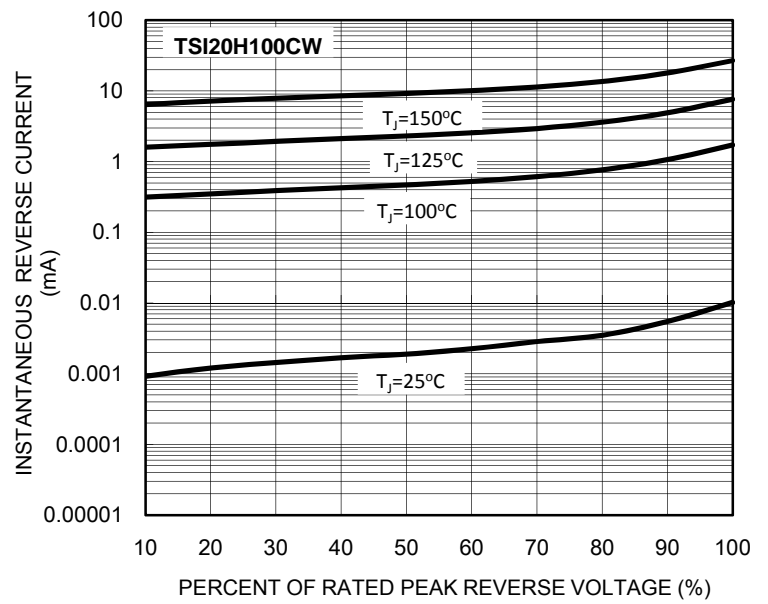


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

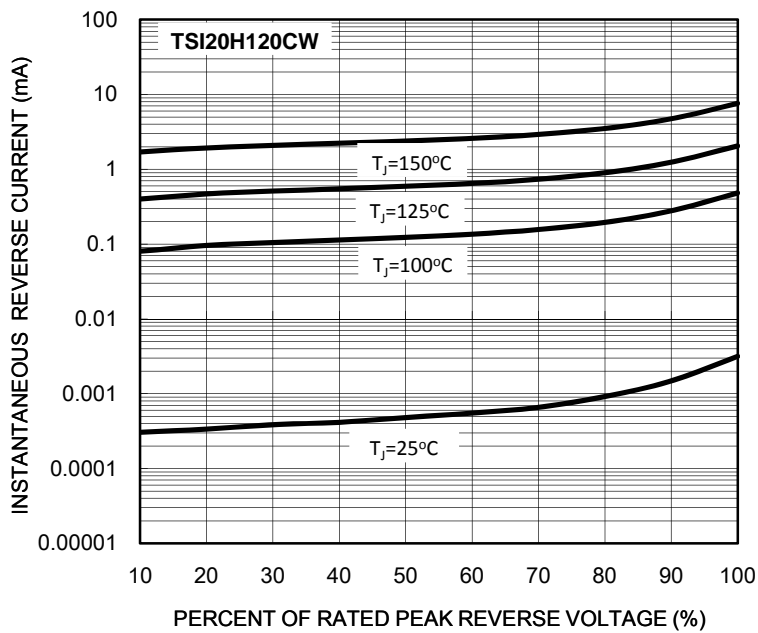


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

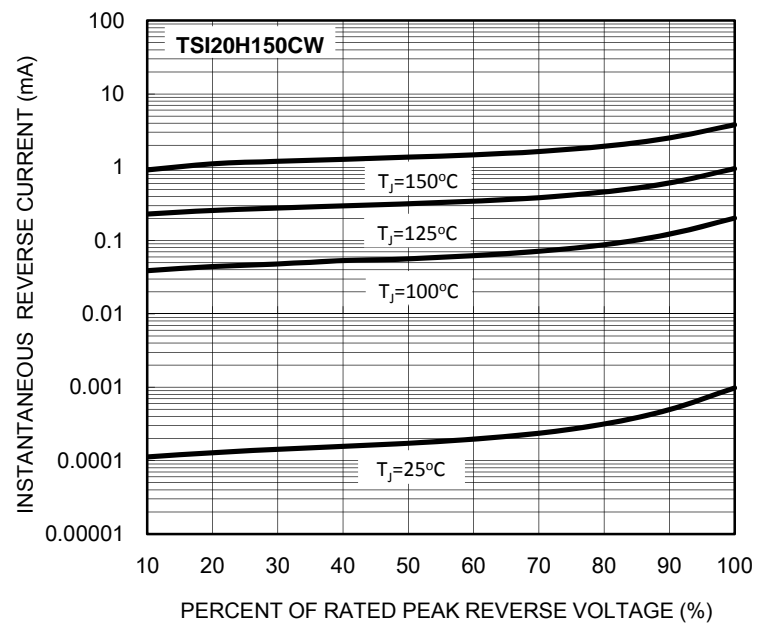


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

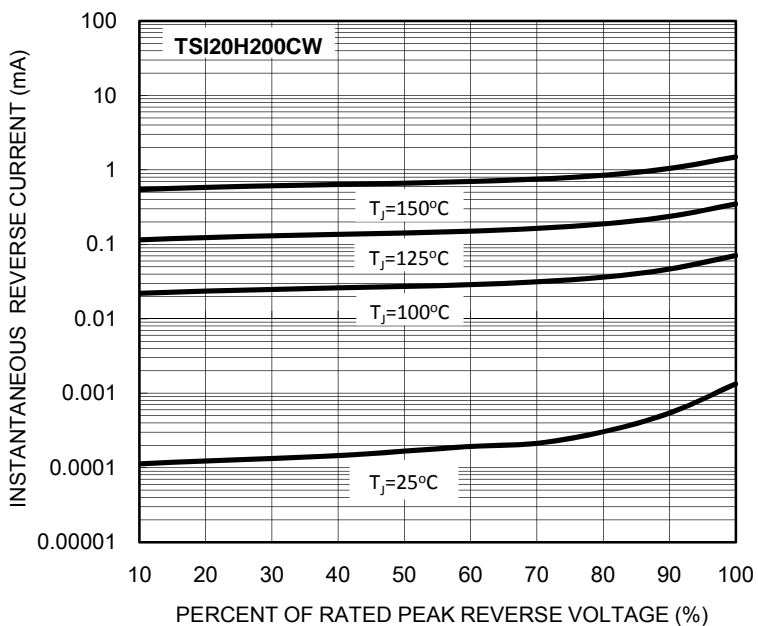
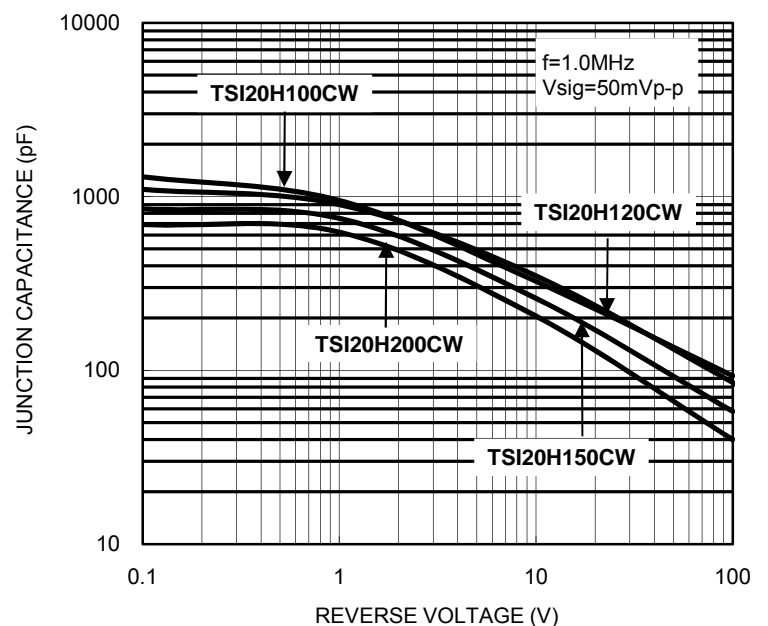
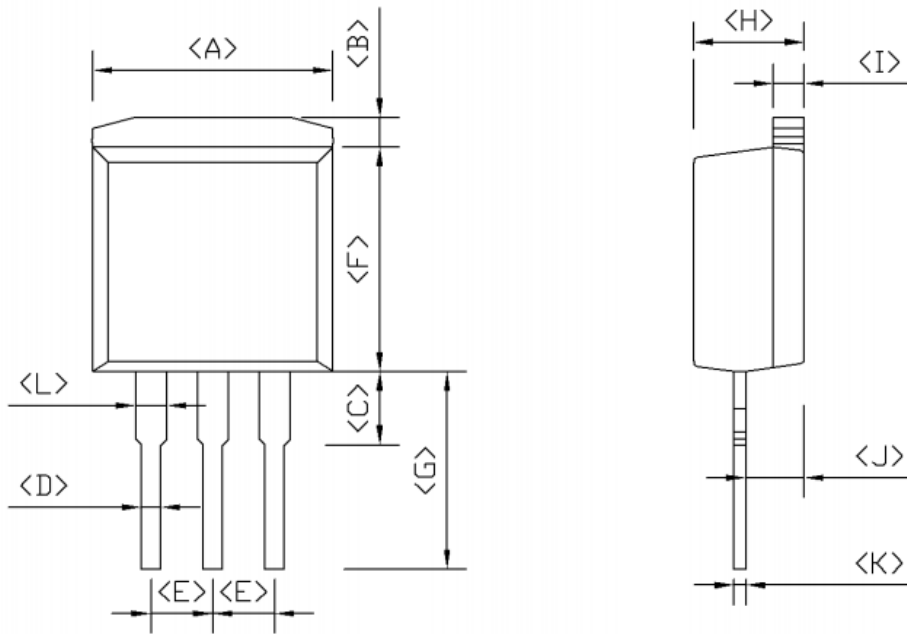


FIG. 10 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

**I<sup>2</sup>PAK**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	1.14	1.40	0.045	0.055
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	2.41	2.67	0.095	0.105
F	9.07	9.47	0.357	0.373
G	7.79	9.35	0.307	0.368
H	4.40	4.70	0.173	0.185
I	1.14	1.40	0.045	0.055
J	2.20	2.80	0.087	0.110
K	0.35	0.64	0.014	0.025
L	0.95	1.45	0.037	0.057

MARKING DIAGRAM



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

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