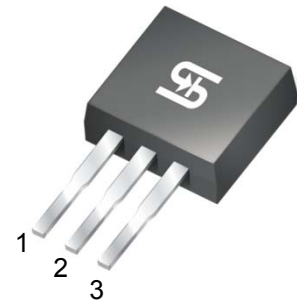


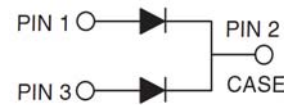
10A, 100V - 200V Trench Schottky Rectifiers

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 definition



I²PAK



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: I²PAK

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

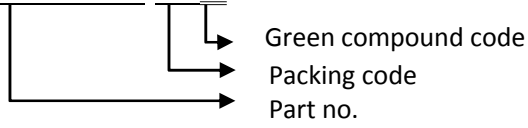
Weight: 1.6 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted) | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------|------------------------|------------------------|--------------------|----------------|----------------|----------------|----------------|------|------|------|------|------|
| PARAMETER | | | SYMBOL | TS10H 100CW | TS10H 120CW | TS10H 150CW | TS10H 200CW | | | | | UNIT |
| Maximum repetitive peak reverse voltage | | | V _{RRM} | 100 | 120 | 150 | 200 | | | | | V |
| Maximum average forward rectified current | per device | | I _{F(AV)} | 10 | | | | | | | | A |
| | per diode | | | 5 | | | | | | | | |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode | | | I _{FSM} | 100 | | | | | | | | 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 = 5A | T _J = 25°C | V _F | 0.62 | 0.70 | 0.69 | 0.79 | 0.78 | 0.88 | 0.81 | 0.91 | V |
| | I _F = 5A | T _J = 125°C | | 0.55 | 0.63 | 0.58 | 0.66 | 0.64 | 0.72 | 0.67 | 0.75 | |
| Instantaneous reverse current per diode at rated reverse voltage | T _J = 25°C | | I _R | - | 100 | - | 100 | - | 100 | - | 100 | μA |
| | T _J = 125°C | | | - | 15 | - | 15 | 1.5 | 10 | 1.5 | 10 | mA |
| Typical thermal resistance per diode | | | R _{θJC} | 3.2 | | | | | | | | °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)

TSI10H150CW C0G



RATINGS AND CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

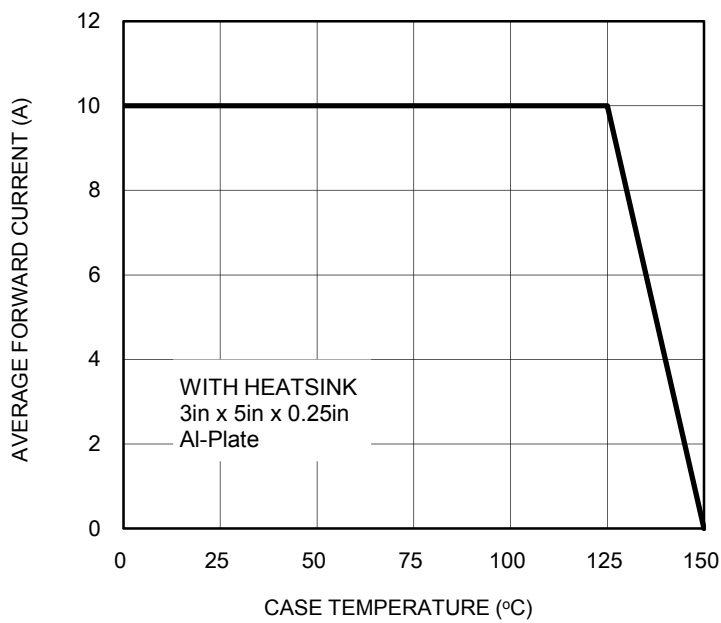


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

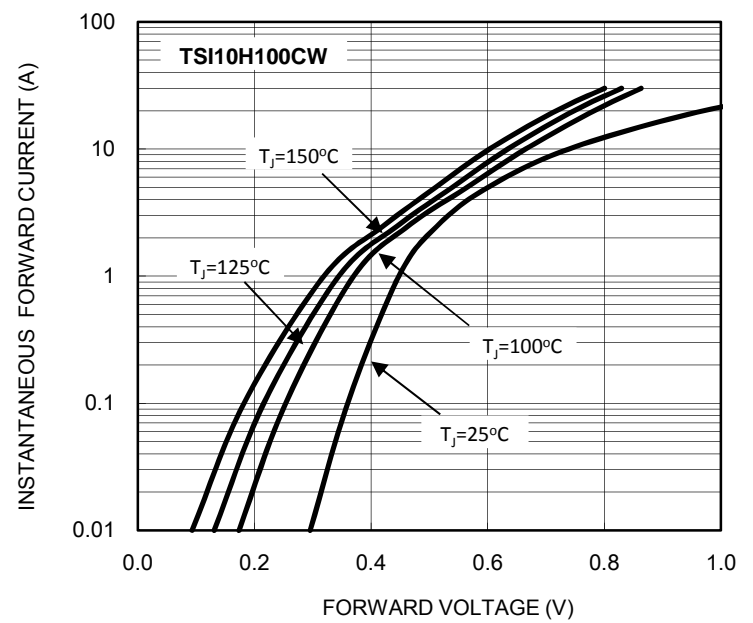


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

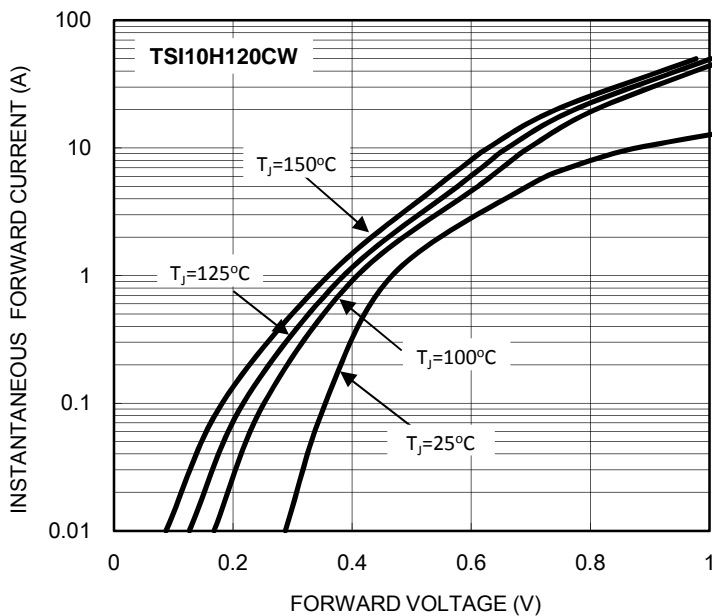


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

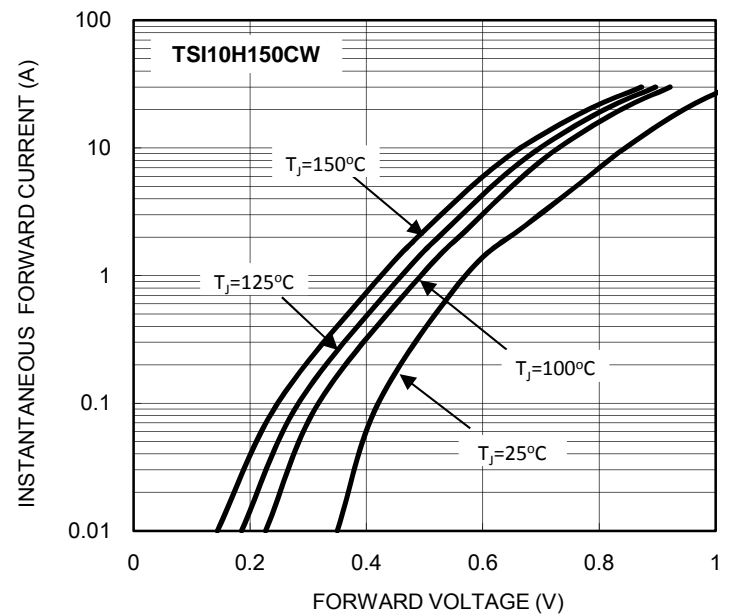


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

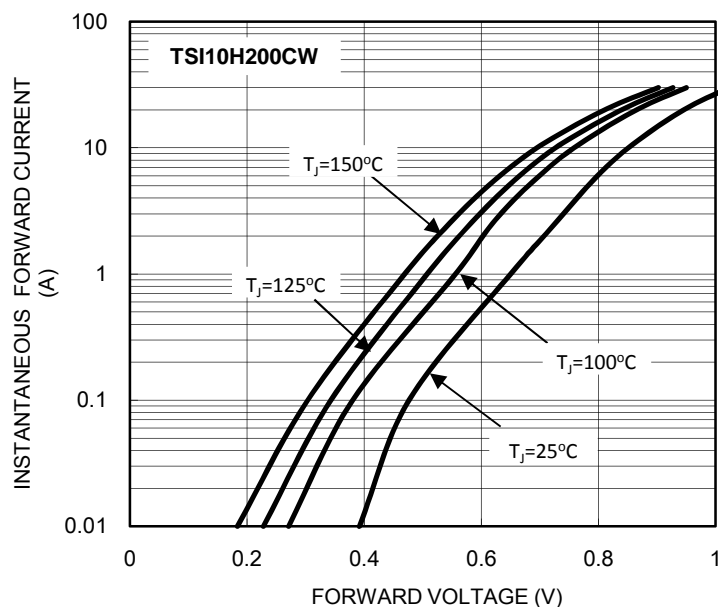


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

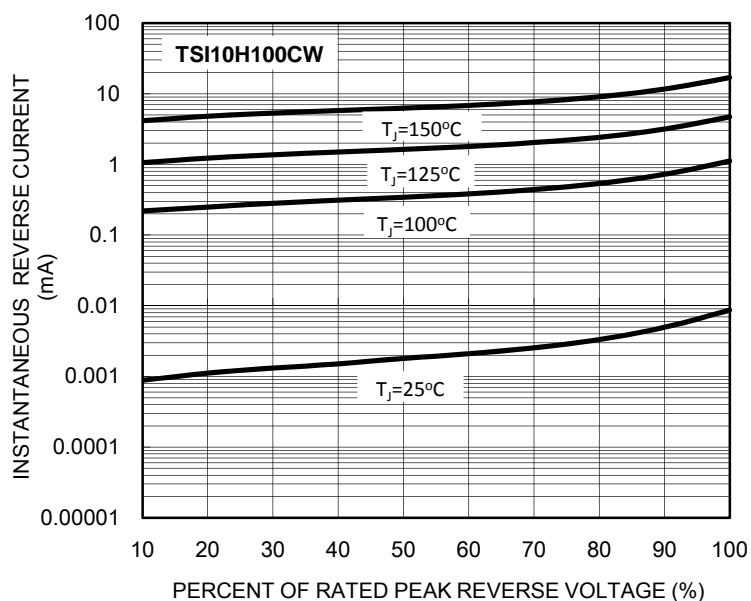


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

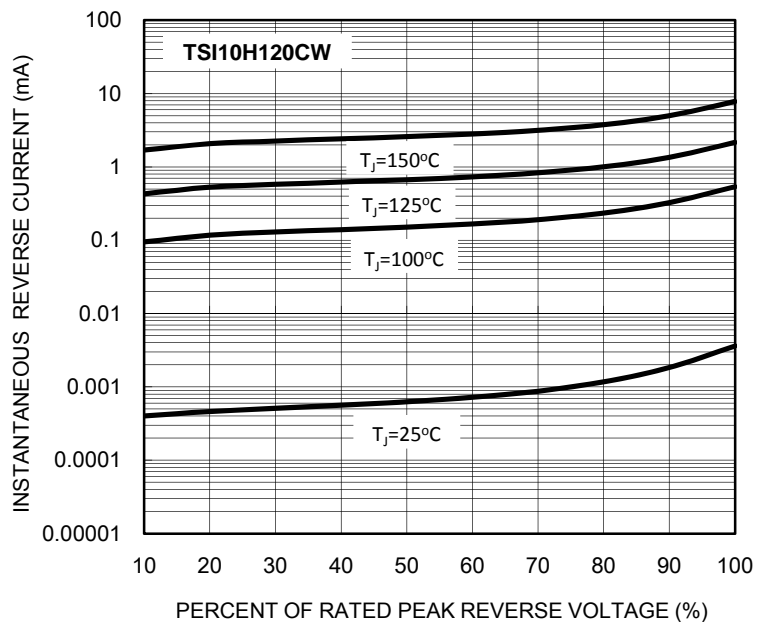


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

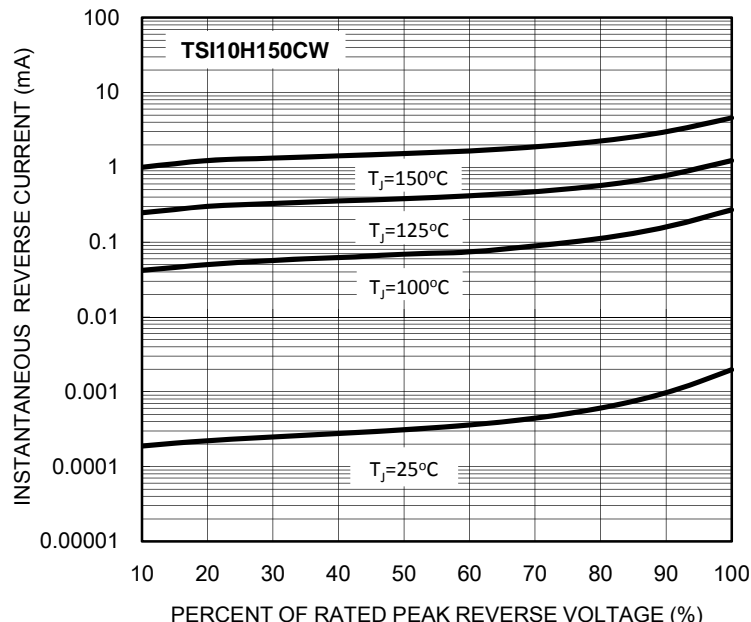


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

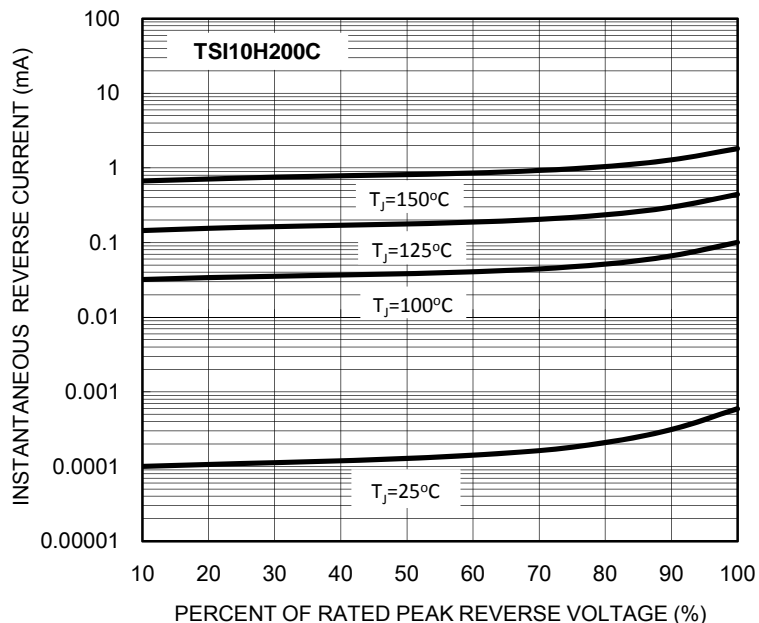
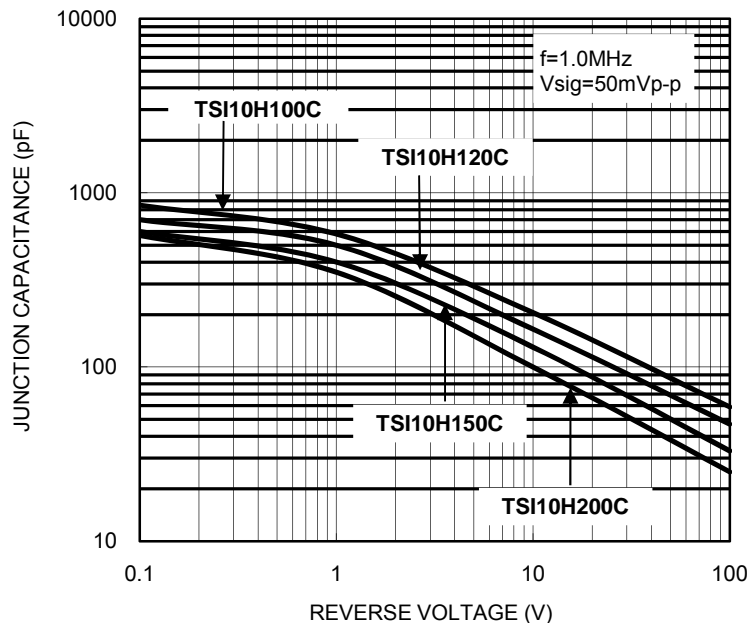
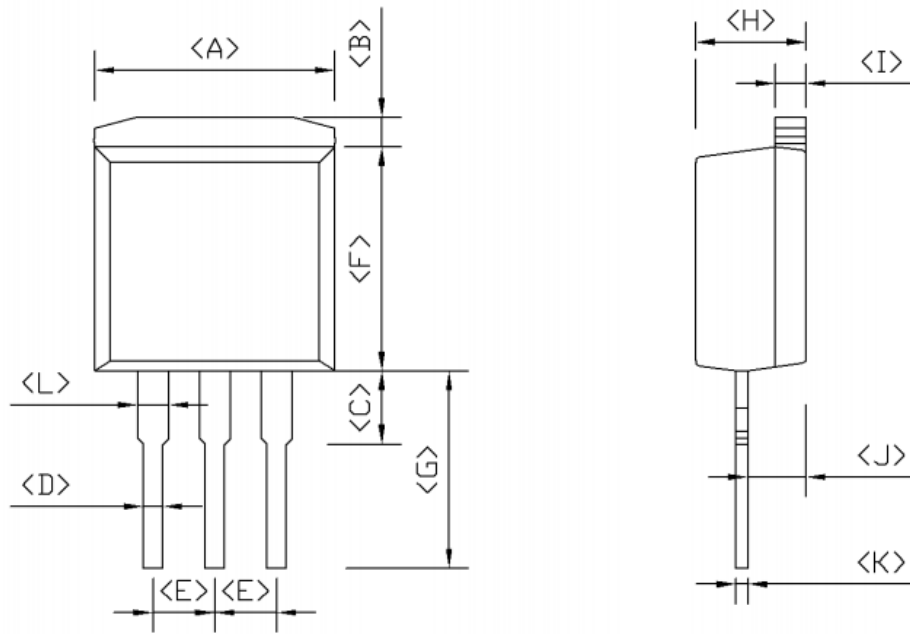


FIG. 10 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

I²PAK



| 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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