



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



10A, 20V - 200V Dual Common Cathode Schottky Rectifier

FEATURES

- Low power loss, high efficiency
- Guard ring for over-voltage protection
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

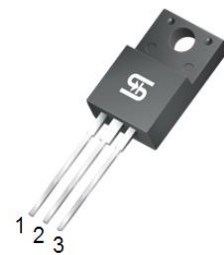
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Monitor
- TV

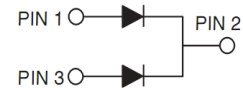
MECHANICAL DATA

- Case: ITO-220AB
- Molding compound meets UL 94V-0 flammability rating
- Part no. with suffix "H" means AEC-Q101 qualified
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Mounting torque: 0.56 Nm max
- Weight: 1.7 g (approximately)

| KEY PARAMETERS | | |
|----------------|-----------|------|
| PARAMETER | VALUE | UNIT |
| $I_{F(AV)}$ | 10 | A |
| V_{RRM} | 20 - 200 | V |
| I_{FSM} | 120 | A |
| Package | ITO-220AB | |
| Configuration | Dual die | |



ITO-220AB



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

| PARAMETER | SYMBOL | SRF 1020 | SRF 1030 | SRF 1040 | SRF 1050 | SRF 1060 | SRF 1090 | SRF 10100 | SRF 10150 | SRF 10200 | UNIT |
|---|--------------|--------------|----------|----------|----------|--------------|----------|-----------|-----------|-----------|------------------|
| Marking code on the device | | SRF 1020 | SRF 1030 | SRF 1040 | SRF 1050 | SRF 1060 | SRF 1090 | SRF 10100 | SRF 10150 | SRF 10200 | |
| Repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | 200 | V |
| Reverse voltage, total rms value | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | 63 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | 200 | V |
| Forward current | $I_{F(AV)}$ | 10 | | | | | | | | | A |
| Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode | I_{FSM} | 120 | | | | | | | | | A |
| Junction temperature | T_J | - 55 to +125 | | | | - 55 to +150 | | | | | $^\circ\text{C}$ |
| Storage temperature | T_{STG} | - 55 to +150 | | | | | | | | | $^\circ\text{C}$ |

| THERMAL PERFORMANCE | | | | |
|-------------------------------------|---|-----------------|--------------|----------------------|
| PARAMETER | | SYMBOL | LIMIT | UNIT |
| Junction-to-case thermal resistance | SRF1020 SRF1030 SRF1040 SRF1050 SRF1060 | $R_{\theta JC}$ | 3.5 | $^{\circ}\text{C/W}$ |
| | SRF1090 SRF10100 SRF10150 SRF10200 | | 4 | $^{\circ}\text{C/W}$ |

| ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}\text{C}$ unless otherwise noted) | | | | | | |
|---|---|---|---------------|------------|------------|-------------|
| PARAMETER | | CONDITIONS | SYMBOL | TYP | MAX | UNIT |
| Forward voltage per diode ⁽¹⁾ | SRF1020 SRF1030 SRF1040 | $I_F = 5\text{A}, T_J = 25^{\circ}\text{C}$ | V_F | - | 0.55 | V |
| | SRF1050 SRF1060 | | | - | 0.70 | V |
| | SRF1090 SRF10100 | | | - | 0.90 | V |
| | SRF10150 SRF10200 | | | - | 1.00 | V |
| Reverse current @ rated V_R per diode ⁽²⁾ | SRF1020 SRF1030 SRF1040 SRF1050 SRF1060 | $T_J = 25^{\circ}\text{C}$ | I_R | - | 0.5 | mA |
| | SRF1090 SRF10100 SRF10150 SRF10200 | | | - | 0.1 | mA |
| Reverse current @ rated V_R per diode ⁽²⁾ | SRF1020 SRF1030 SRF1040 | $T_J = 100^{\circ}\text{C}$ | I_R | - | 15 | mA |
| | SRF1050 SRF1060 | | | - | 10 | mA |
| | SRF1090 SRF10100 SRF10150 SRF10200 | | | - | - | mA |

| ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | | |
|---|---|---------------------------|---------------|------------|------------|-------------|
| PARAMETER | | CONDITIONS | SYMBOL | TYP | MAX | UNIT |
| Reverse current @ rated V_R per diode ⁽²⁾ | SRF1020 SRF1030 SRF1040 SRF1050 SRF1060 | $T_J = 125^\circ\text{C}$ | I_R | - | - | mA |
| | SRF1090 SRF10100 SRF10150 SRF10200 | | | - | 5 | mA |

Notes:

1. Pulse test with $PW=0.3$ ms
2. Pulse test with $PW=30$ ms

| ORDERING INFORMATION | | | | | |
|-----------------------------|------------------------|---------------------|----------------------------|----------------|----------------|
| PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING |
| SRF10xx (Note 1) | H | C0 | G | ITO-220AB | 50 / Tube |

Note:

1. "xx" defines voltage from 20V (SRF1020) to 200V (SRF10200)

| EXAMPLE P/N | | | | | |
|--------------------|-----------------|------------------------|---------------------|----------------------------|--------------------------------------|
| EXAMPLE P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
| SRF1020HC0G | SRF1020 | H | C0 | G | AEC-Q101 qualified Green compound |

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

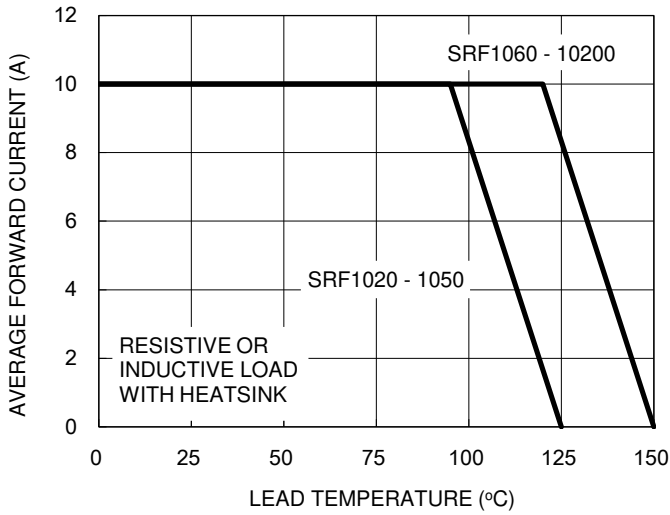


Fig.2 Typical Junction Capacitance

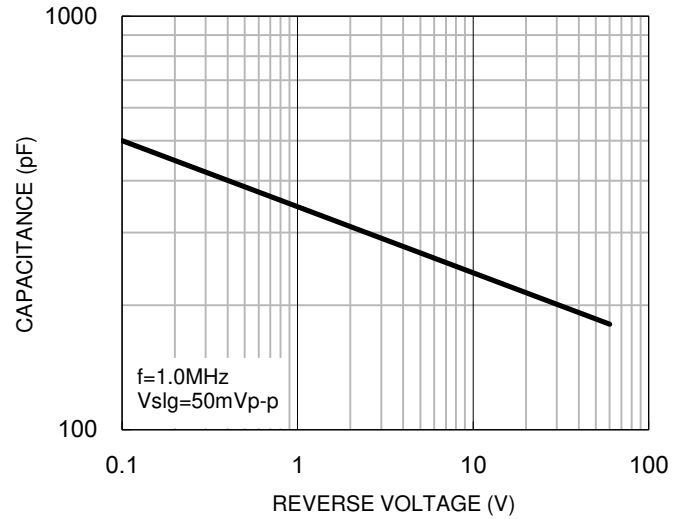


Fig.3 Typical Reverse Characteristics

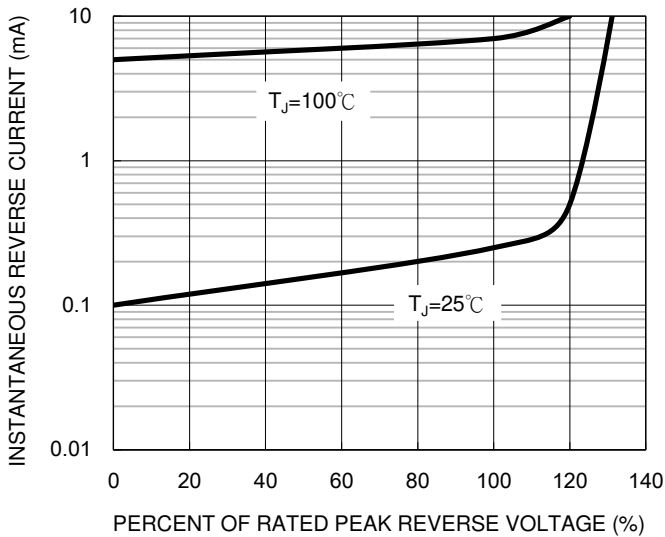
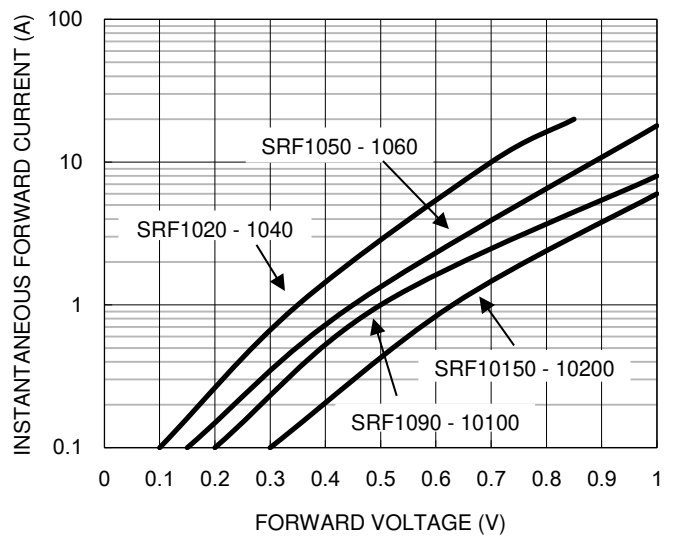


Fig.4 Typical Forward Characteristics

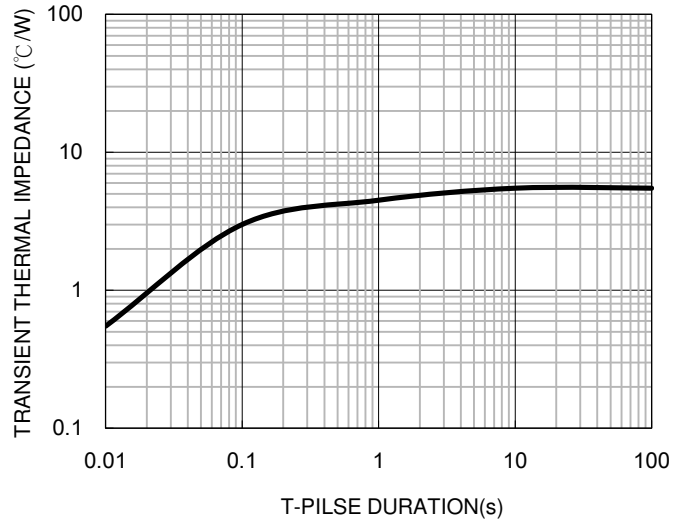
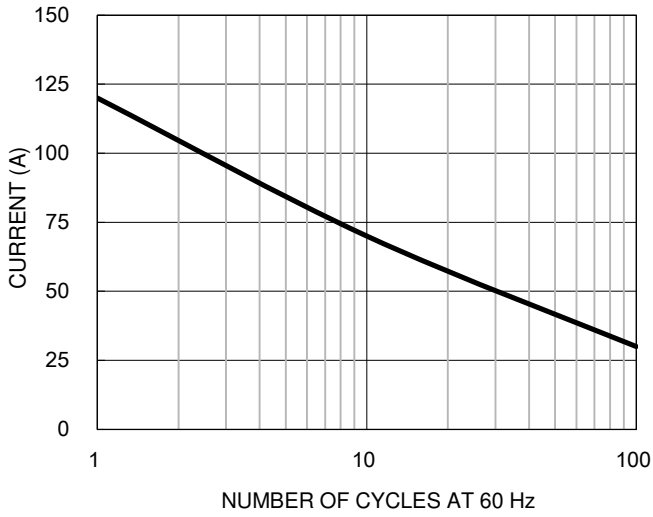


CHARACTERISTICS CURVES

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

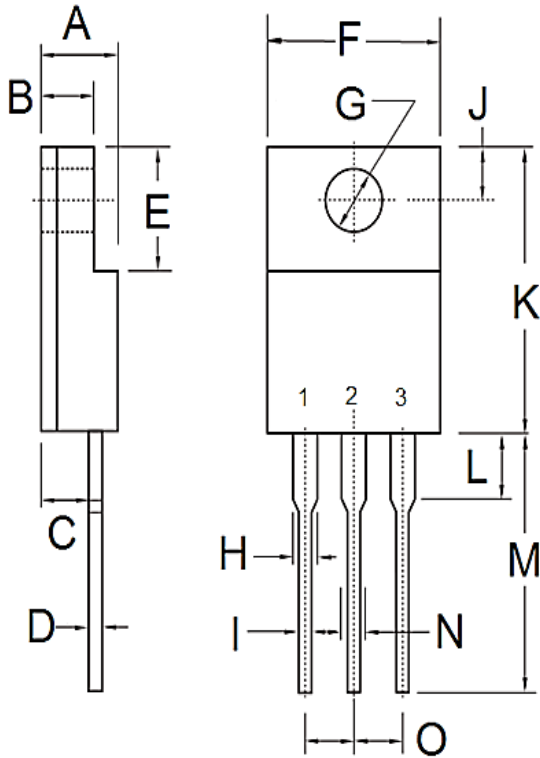
Fig.5 Maximum Non-repetitive Forward Surge Current

Fig.6 Typical Transient Thermal Characteristics



PACKAGE OUTLINE DIMENSIONS

ITO-220AB



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | 4.30 | 4.70 | 0.169 | 0.185 |
| B | 2.50 | 3.16 | 0.098 | 0.124 |
| C | 2.30 | 2.96 | 0.091 | 0.117 |
| D | 0.46 | 0.76 | 0.018 | 0.030 |
| E | 6.30 | 6.90 | 0.248 | 0.272 |
| F | 9.60 | 10.30 | 0.378 | 0.406 |
| G | 3.00 | 3.40 | 0.118 | 0.134 |
| H | 0.95 | 1.45 | 0.037 | 0.057 |
| I | 0.50 | 0.90 | 0.020 | 0.035 |
| J | 2.40 | 3.20 | 0.094 | 0.126 |
| K | 14.80 | 15.50 | 0.583 | 0.610 |
| L | - | 4.10 | - | 0.161 |
| M | 12.60 | 13.80 | 0.496 | 0.543 |
| N | - | 1.80 | - | 0.071 |
| O | 2.41 | 2.67 | 0.095 | 0.105 |

MARKING DIAGRAM



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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.