

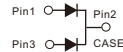
FEATURES

- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Meets MSL Level 1, per J-STD-020, LF MAX peak of 245°C (for TO-263 package)
- Solder bath temperature 275°C maximum, 10s, per JESD22-B106 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2011/65/EU



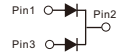
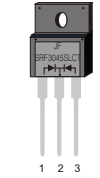
TO-220AB

SR3045SLCT



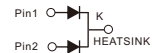
ITO-220AB

SRF3045SLCT



TO-263

SR3045SLD1



MECHANICAL DATA

- Case: JEDEC TO-220AB, ITO-220AB, TO-263
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked
- Mounting Torque: 10 in-lbs maximum

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|----------------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 45 | V |
| Maximum average forward rectified current (see fig.1) | Per leg | 15.0 | A |
| | Total device | 30.0 | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | I_{FSM} | 300 | A |
| Peak repetitive reverse current per diode at $t_p=2\mu s$ 1KHz | I_{RRM} | 1.0 | A |
| Operating junction and Storage temperature range | T_J, T_{stg} | -55 to+150 | °C |
| Isolation voltage (ITO-220AB only) from terminals to heatsink $t=1$ min | V_{AC} | 1500 | V |

| PRIMARY CHARACTERISTICS | |
|----------------------------------|-----------------------------|
| $I_r(AV)$ | 2×15A |
| V_{RRM} | 45V |
| I_{FSM} | 300A |
| VF at $I_r=15.0A$,Per leg,125°C | 0.43V |
| I_r | 80 μ A |
| $T_J(MAX)$ | 150°C |
| Package | TO-220AB, ITO-220AB, TO-263 |
| Diode variations | Common cathode |

RATINGS AND CHARACTERISTIC OF SR3045SLCT,SRF3045SLCT,SR3045SLD1

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

| Parameter | Test Conditions | | Symbol | Typ. | Max. | Unit |
|-------------------------------|---------------------|-----------------------|------------------------------|------|------|------|
| Instantaneous forward voltage | Per leg IF=15.0A | T _A =25°C | V _F ¹⁾ | 0.46 | 0.50 | V |
| | | T _A =100°C | | 0.44 | – | |
| | | T _A =125°C | | 0.43 | – | |
| | Per leg IF=5.0A | T _A =25°C | | 0.36 | 0.40 | |
| | | T _A =100°C | | 0.30 | – | |
| | | T _A =125°C | | 0.28 | – | |
| Reverse current | Per leg VR=45V | T _A =25°C | I _R ²⁾ | 80 | 200 | μA |
| | | T _A =100°C | | – | 12.5 | mA |
| | | T _A =125°C | | – | 50 | |
| Typical junction capacitance | 4V, 1MHz | | C _J | 800 | | pF |

Notes: 1.Pulse test: 300 μs pulse width, 1% duty cycle

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

| Parameter | Symbol | TO-220AB | ITO-220AB | TO-263 | Unit |
|--|------------------|----------|-----------|--------|------|
| Typical thermal resistance ³⁾ | R _{θjc} | 1.5 | 3.5 | 1.5 | °C/W |

3.Thermal resistance from junction to case

AVAILABLE PACK INFORMATION

| Product code | Pack | Box Size L×W×H(mm) | Quantity(pcs/box) | Carton SizeL×W×H(mm) | Quantity(box/carton) |
|-----------------------|------|--------------------|-------------------|----------------------|----------------------|
| SR3045SLCT-TO-220AB | P/T | 558×148×38 | 1000 | 565×225×170 | 5 |
| SRF3045SLCT-ITO-220AB | P/T | 558×148×38 | 1000 | 565×225×170 | 5 |
| SR3045SLD1-TO-263 | P/T | 558×148×38 | 1000 | 565×225×170 | 5 |

RATINGS AND CHARACTERISTIC OF SR3045SLCT,SRF3045SLCT,SR3045SLD1

FIG.1-FORWARD CURRENT DERATING CURVE

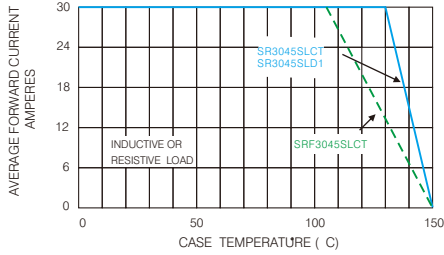


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

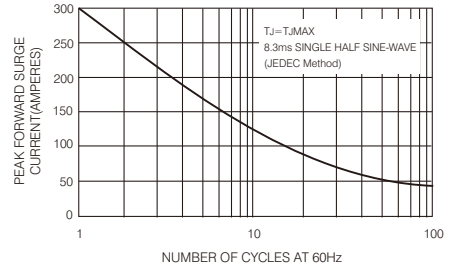


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

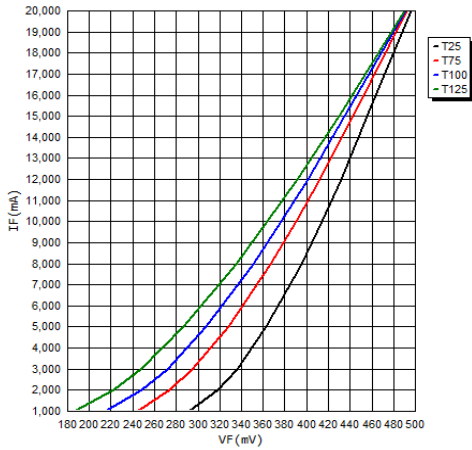


FIG.4-TYPICAL REVERSE CHARACTERISTICS

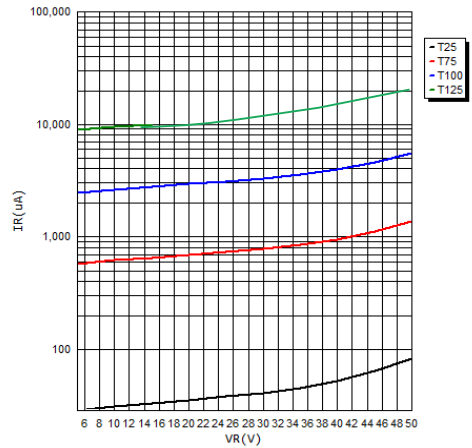
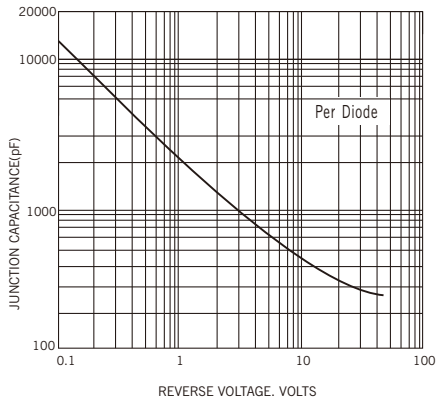
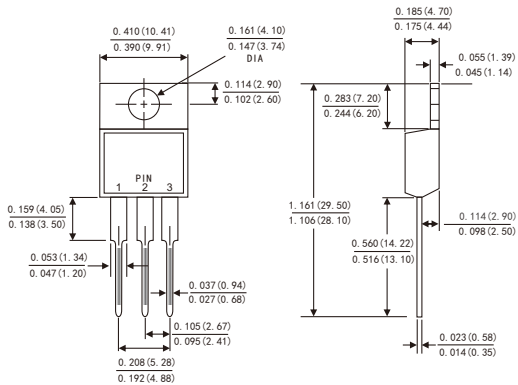


FIG.5-TYPICAL JUNCTION CAPACITANCE

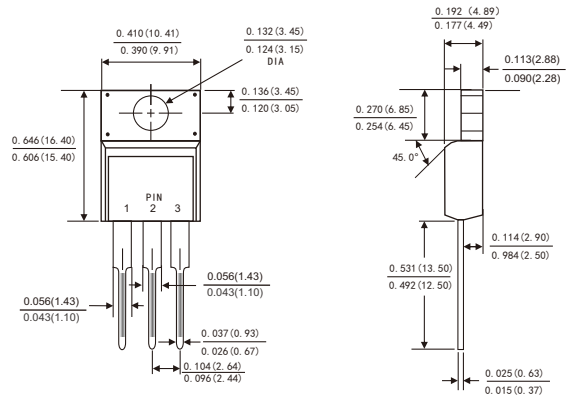


PACKAGE OUTLINE DIMENSIONS

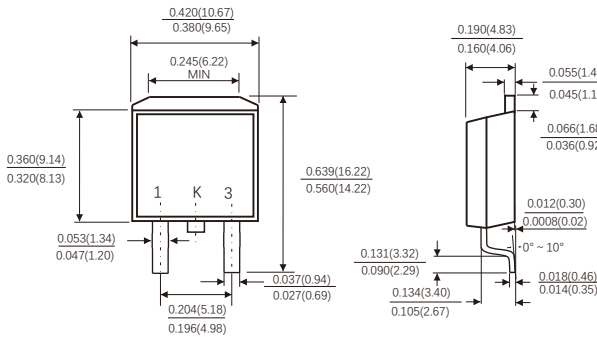
TO-220AB



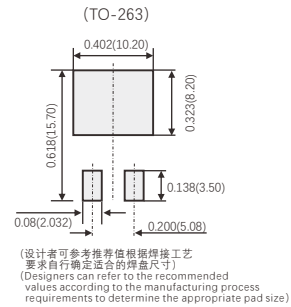
ITO-220AB



TO-263



Suggested Pad Layout



Dimensions in inches and (millimeters)

Friendship Reminder

- JiNan JingHeng (hereinafter referred to as JH) reserves the right to make changes to this document and its products and specifications at anytime without notice.
济南晶恒（以下简称JH）保留，未经通知变更本文件和与本文件相关的产品及规格的权利。
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
使用方应在使用、采购本产品之前获取并确认产品信息和规格书的最新版本。
- JH makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.
JH对其产品用于某特定用途的适用性，既不做任何保证、说明或担保、也不承担任何应用协助或使用方设计的法定责任。
- JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
JH不保证或承担任何责任，其产品被采购使用于任何非预期或授权的应用。
- No license is granted by implication or otherwise under any intellectual property rights of JH.
此规格书属于JH的知识产权，没有经过我司授权不得抄袭。
- JH's products are not authorized for use as critical components in life support devices or systems without express written approval of JH.
没有JH的书面授权，JH的产品不能在生命支撑设备或系统里作为关键零件使用。