SEMICONDUCTOR

# SR20200LCT

## LOW VF SCHOTTKY BARRIER RECTIFIER

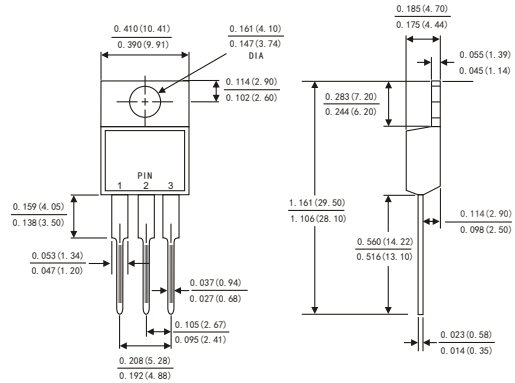
Reverse Voltage - 200 Volts
Forward Current - 20.0Amperes

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU


Pb
RoHS
COMPLIANT

TO-220AB




Dimensions in inches and (millimetrers)

## MECHANICAL DATA

- Case: JEDEC TO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any
-

| PRIMARY CHARACTERISTICS | |
|---|---|
| $I_{F(AV)}$ | 20.0 A |
| $V_{RRM}$ | 200V |
| $I_{FSM}$ | 200A |
| VF at IF=10.0A Per Leg | 0.71V |
| $T_{JMAX}$ | 150℃ |

## TYPICAL APPLICATIONS

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

## MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified )

| Parameter | | Symbol | SR20200LCT | Unit |
|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | | $V_{RRM}$ | 200 | V |
| Maximum average forward rectified current (see fig.1) | Per leg | $I_{F(AV)}$ | 10.0 | A |
| | Total device | | 20.0 | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | | $I_{FSM}$ | 200 | A |
| Operating junction temperature range | | $T_J$ | -55 to+150 | ℃ |
| Storage temperature range | | $T_{stg}$ | -55 to+150 | ℃ |

# RATINGS AND CHARACTERISTIC OF SR20200LCT

## ELECTRICAL CHARACTERISTCS（$T_A$=25℃ Unless otherwise noted）

| Parameter | Test Conditions | | Symbol | TYP. | MAX. | Unit |
|---|---|---|---|---|---|---|
| Instaneous forward voltage | Per leg IF=10. 0A | $T_A$=25℃ | $V_F$ 1) | – | 0. 86 | V |
| | | $T_A$=100℃ | | 0. 73 | – | |
| | | $T_A$=125℃ | | 0. 71 | – | |
| | Per leg IF=5. 0A | $T_A$=25℃ | | 0. 77 | – | |
| | | $T_A$=100℃ | | 0. 66 | – | |
| | | $T_A$=125℃ | | 0. 63 | – | |
| Reverse current | VR=140V | $T_A$=25℃ | $I_R$ 2) | 0.1 | 1 | μA |
| | VR=200V | $T_A$=25℃ | | 2 | 5 | μA |
| | VR=200V | $T_A$=125℃ | | 0. 6 | 1 | mA |
| Typical junction capacitance | 4V, 1MHz | | CJ | 570 | | pF |

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

2.Pulse test: pulse width≤40ms

## THERMAL CHARACTERISTCS（$T_A$=25℃ Unless otherwise noted）

| Parameter | Symbol | SR20200LCT | Unit |
|---|---|---|---|
| Typical thermal resistance 3) | RθJC | 2. 5 | ℃/W |

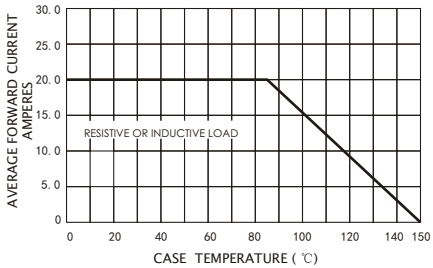
3.Thermal resistance from junction to case

## AVAILABALE PACK INFORMATION

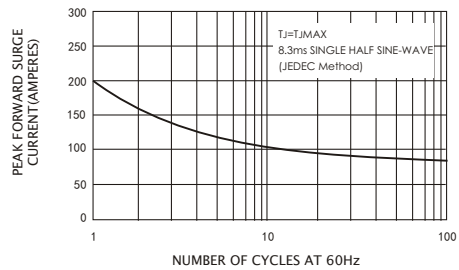
| Product code | Package | Box Size L×W×H(mm) | Quantity(pcs/box) | Carton SizeL×W×H(mm) | Quantity(box/carton) |
|---|---|---|---|---|---|
| SR20200LCT-TO-220AB | P/T | 558×148×38 | 1000 | 565×225×170 | 5 |

# RATINGS AND CHARACTERISTIC OF SR20200LCT

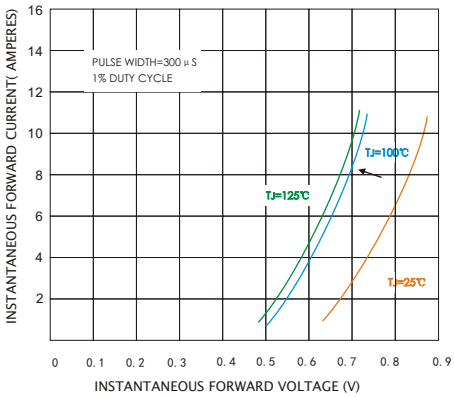
## FIG.1-FORWARD CURRENT DERATING CURVE



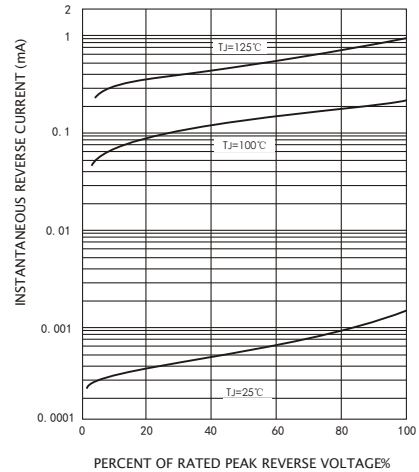

## FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT




## FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS




## FIG.4-TYPICAL REVERSE CHARACTERISTICS




## FIG.5-TYPICAL JUNCTION CAPACITANCE