

20A 200V LOW VF SCHOTTKY RECTIFIER

Features:

- Super Low Forward Voltage (SLVF®) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Applications:

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications

KSR20200LCT



TO-220AB

KSRF20200LCT



ITO-220AB

KSRB20200LCT

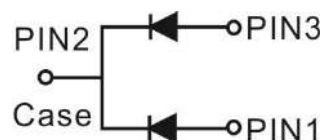


TO-262

KSRD20200LCT



TO-263



Major ratings and characteristics

| Characteristics | Values | Units |
|--------------------------------------|-------------|-------|
| $I_{F(AV)}$ Rectangular Waveform | 10 × 2 | A |
| V_{RRM} | 200 | V |
| $V_F@ 10A, T_j=125^\circ C$ | 0.70 | V |
| T_j Operating Junction Temperature | -65 to +150 | °C |

1. Characteristics

Maximum Ratings Characteristics

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

| Parameter | Symbol | Values | Units | | |
|---|----------------|------------------|-------------------------------|--------------|--------------------|
| DC Blocking Voltage | V_{RM} | 200 | Volts | | |
| Working Peak Reverse Voltage | V_{RWM} | | | | |
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | |
| Average Rectified Forward Current Per device | I_o | 20 | Amps | | |
| (Rated VR-20Khz Square Wave) - 50% duty cycle | | | | | |
| Peak Forward Surge Current - 1/2 60hz | I_{FSM} | 200 | Amps | | |
| Peak Repetitive Reverse Surge Current (2uS-1Khz) | I_{RRM} | 3 | Amps | | |
| Typical Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB Package = TO-262 Package = TO-263 | $R\theta_{JC}$ | 2 4 2 2 | $^{\circ}\text{C} / \text{W}$ | | |
| Isolation voltage (ITO-220 only) | | V_{AC} | | 1500 | V |
| Maximum Rate of Voltage Change (at Rated V_R) | | dv/dt | | 10000 | V/uS |
| Operating Junction Temperature | | T_J | | - 40 to +175 | $^{\circ}\text{C}$ |
| Storage Junction Temperature | T_{STG} | - 40 to +175 | | | |

Electrical Characteristics - (per leg)

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

| Parameter | Test Conditions | | Symbol | Typ. | Max. | Units |
|---|-----------------|-----------------------------|---------|-------|-------|---------------|
| Instantaneous Forward Voltage | IF = 5.0A | $T_J = 25^{\circ}\text{C}$ | V_F^* | 0.75 | ----- | Volts |
| | IF = 10 A | | | 0.80 | 0.85 | |
| | IF = 5.0A | $T_J = 125^{\circ}\text{C}$ | | 0.60 | ----- | |
| | IF = 10 A | | | ----- | 0.70 | |
| Instantaneous Reverse Current | At V_{RM} | $T_J = 25^{\circ}\text{C}$ | I_R^* | ----- | 10 | μA |
| | | $T_J = 125^{\circ}\text{C}$ | | ----- | 3 | mA |
| * Pulse width < 300 uS, Duty cycle < 2% | | | | | | |

| | | | |
|---|-------|-----|----|
| Typical Junction Capacitance ¹ | C_J | 300 | pF |
|---|-------|-----|----|

Notes:

1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.

2. Characteristics Curves

Ratings and Characteristics Curves

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

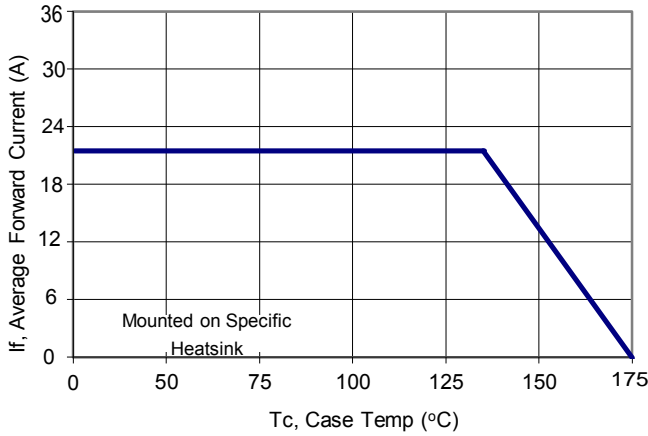


Figure 1: Current Derating, Case

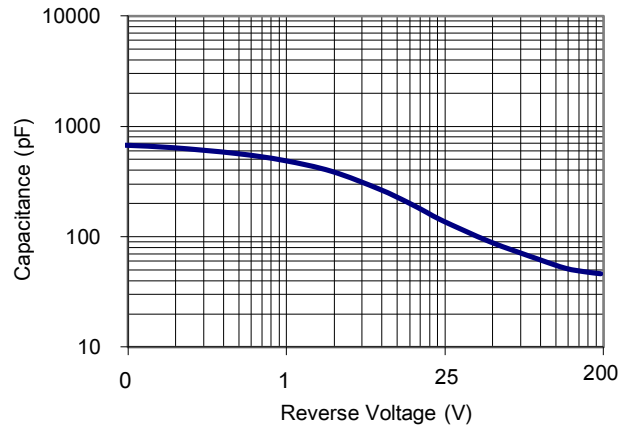


Figure 2: Typical Junction Capacitance

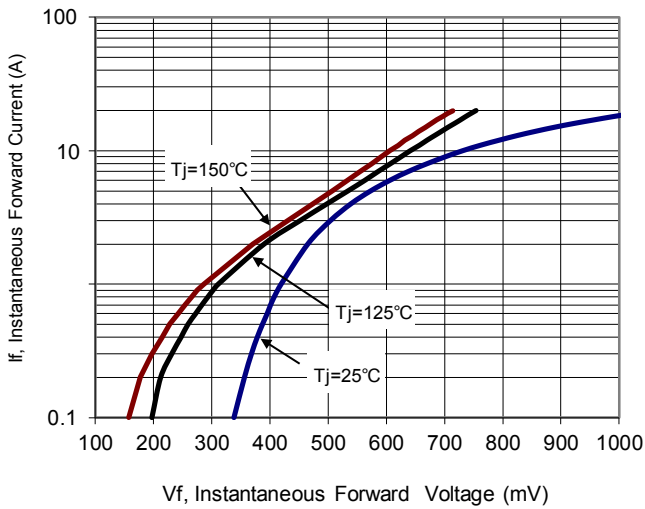


Figure 3: Typical Forward Voltage

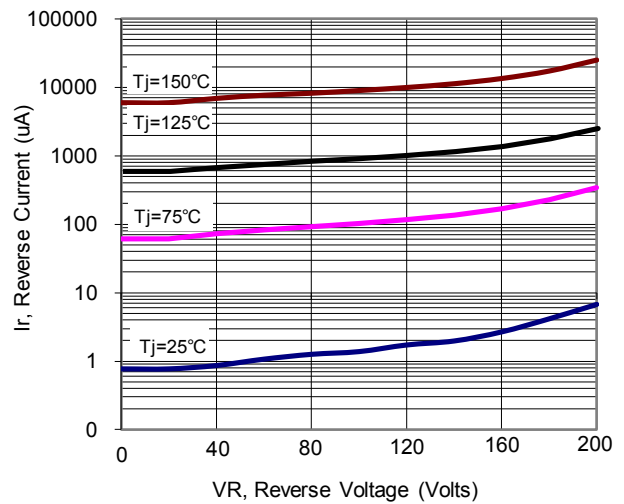


Figure 4: Typical Reverse Current

3. Marking information

Top Marking Rule

SR20200LCT

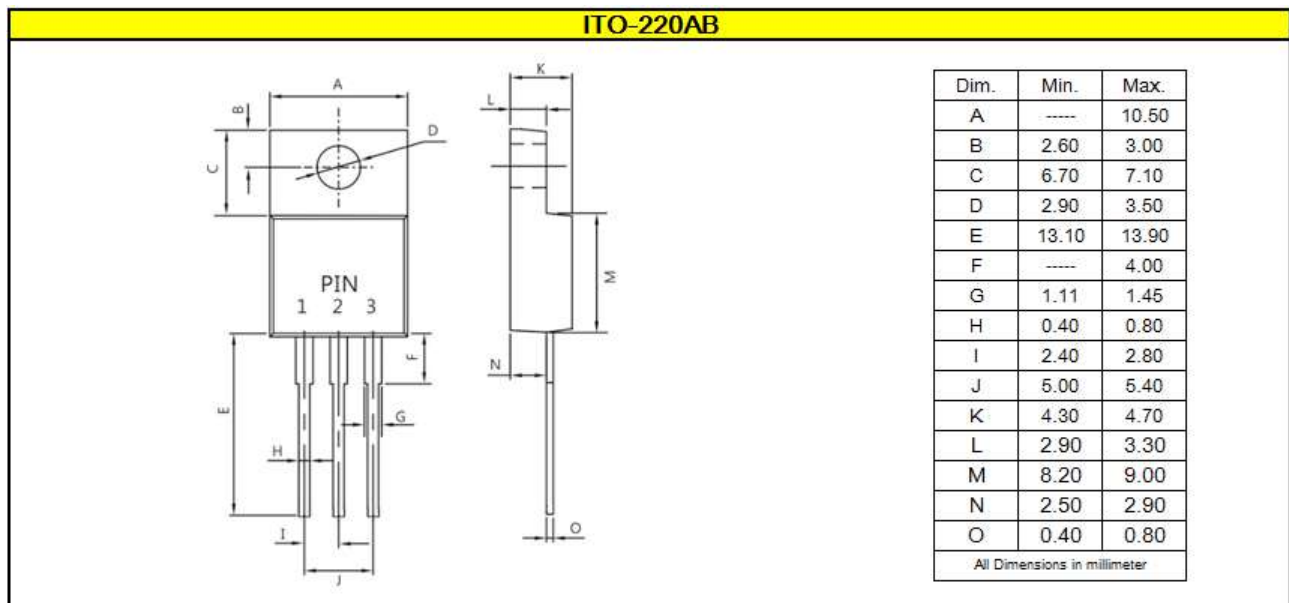
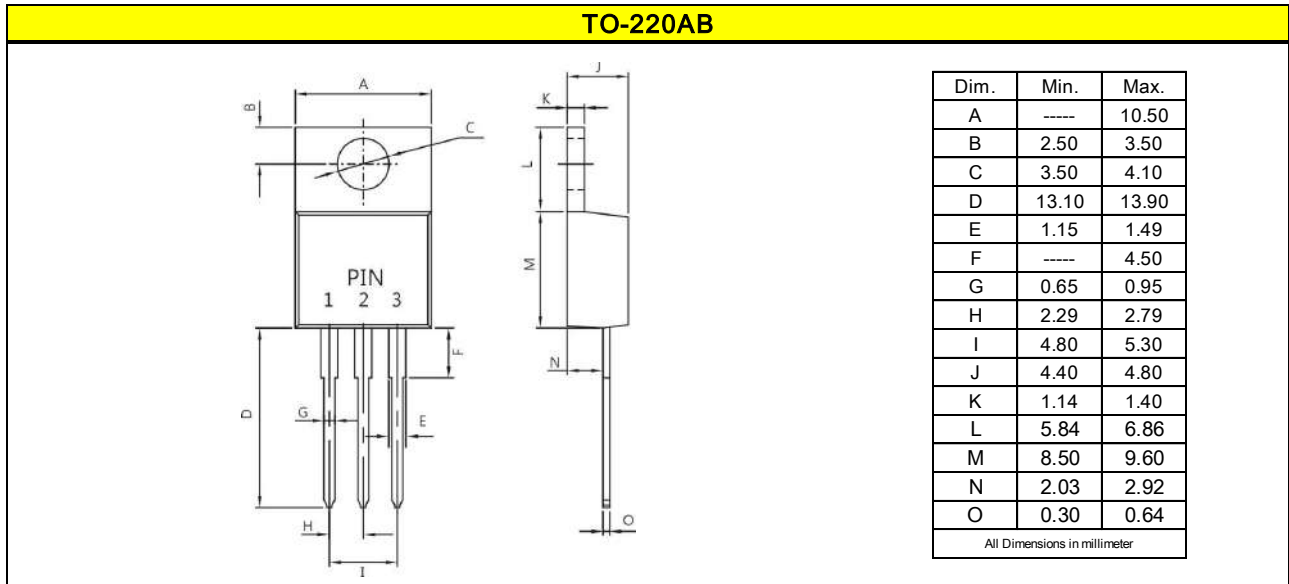
SRF20200LCT

SRB20200LCT

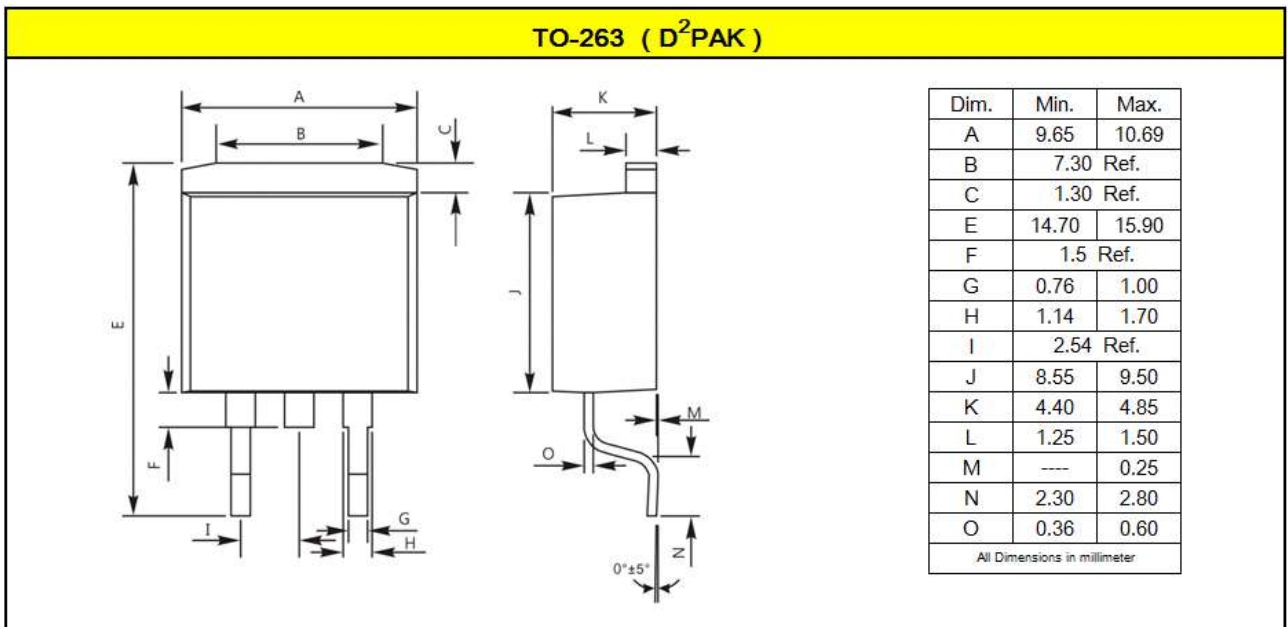
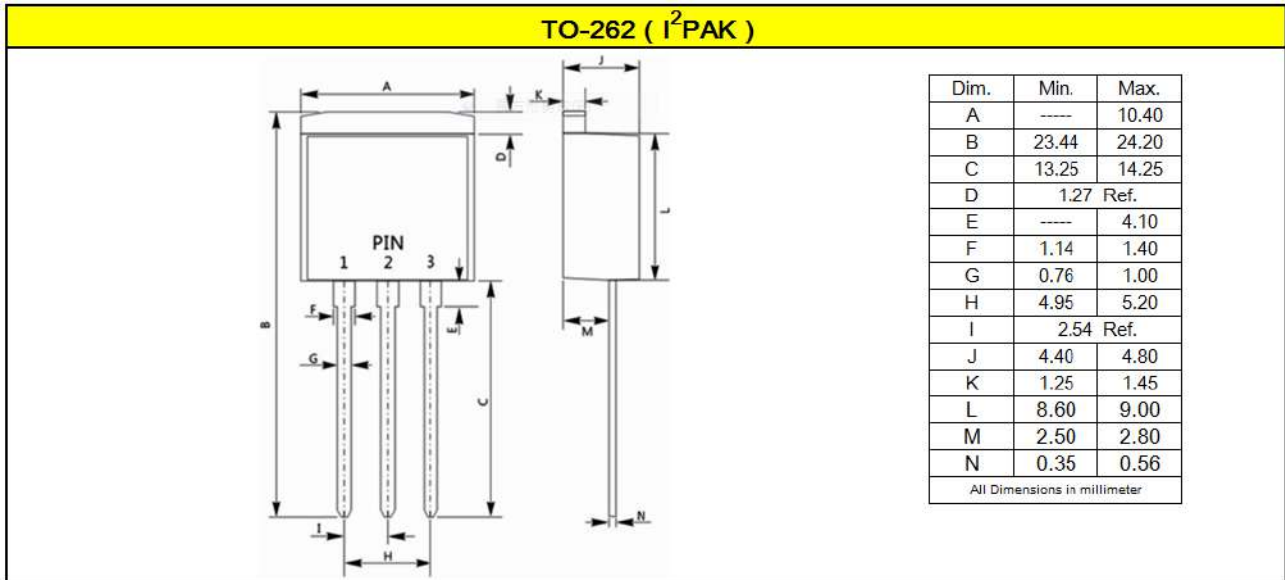
SRD20200LCT

4. Package information

Package Outline Dimensions millimeters



Package Outline Dimensions millimeters



5. Ordering information

| Part Number | Package | Delivery mode |
|--------------|-----------|--------------------------------|
| KSR20200LCT | TO-220AB | 50 pieces / tube |
| KSRF20200LCT | ITO-220AB | 50 pieces / tube |
| KSRB20200LCT | TO-262 | 50 pieces / tube |
| KSRD20200LCT | TO-263 | 800 pieces / 13" diameter reel |

Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.07 ounces (1.96grams) - TO-220AB
 0.06 ounces (1.74grams) - ITO-220AB
 0.05 ounces (1.45 grams) - TO-262
 0.04 ounces (1.16 grams) - TO-263
- Mounting Torque : Recommended 4~5 kg-cm.