

30A 100V 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

KSR30100CT



TO-220AB
KSRB30100CT

KSRF30100CT



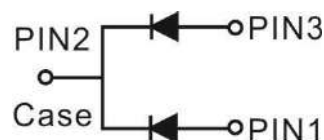
ITO-220AB
KSRD30100CT



TO-262



TO-263



Major ratings and characteristics

| Characteristics | Values | Units |
|------------------------------------------|-------------|------------------|
| $I_{F(AV)}$ Rectangular Waveform | 15 × 2 | A |
| V_{RRM} | 100 | V |
| $V_F@ 5A, T_J=125\text{ }^\circ\text{C}$ | 0.60 | V, |
| T_J Operating Junction Temperature | -65 to +150 | $^\circ\text{C}$ |

1. Characteristics

Maximum Ratings Characteristics

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

| Parameter | Symbol | Values | Units |
|---------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|-----------------------------|
| DC Blocking Voltage | V_{RM} | 100 | Volts |
| Working Peak Reverse Voltage | V_{RWM} | | |
| Peak Repetitive Reverse Voltage | V_{RRM} | | |
| Average Rectified Forward Current Per device (Rated VR-20Khz Square Wave) - 50% duty cycle | I_o | 30 | Amps |
| Peak Forward Surge Current - 1/2 60hz | I_{FSM} | 200 | Amps |
| Peak Repetitive Reverse Surge Current (2uS-1Khz) | I_{RRM} | 4 | Amps |
| Typical Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB Package = TO-262 Package = TO-263 | $R\theta_{Jc}$ | 2 4 2.5 3 | $^\circ\text{C} / \text{W}$ |
| 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 +150 | $^\circ\text{C}$ |
| Storage Junction Temperature | T_{STG} | - 40 to +150 | |

Electrical Characteristics - (per leg)

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

| Parameter | Test Conditions | | Symbol | Typ. | Max. | Units |
|----------------------------------|-----------------|---------------------------|---------|-------|-------|---------------|
| Instantaneous Forward Voltage | IF = 10A | $T_J = 25^\circ\text{C}$ | V_F^* | 0.60 | ----- | Volts |
| | IF = 15 A | | | ----- | 0.82 | |
| | IF = 10A | $T_J = 125^\circ\text{C}$ | | 0.52 | ----- | |
| | IF = 15 A | | | ----- | 0.70 | |
| Instantaneous Reverse Current | At V_{RM} | $T_J = 25^\circ\text{C}$ | I_R^* | 8.0 | 100 | μA |
| | | $T_J = 125^\circ\text{C}$ | | ----- | 5 | mA |

* Pulse width < 300 uS, Duty cycle < 2%

2. Characteristics Curves

Ratings and Characteristics Curves

(TA = 25°C unless otherwise specified)

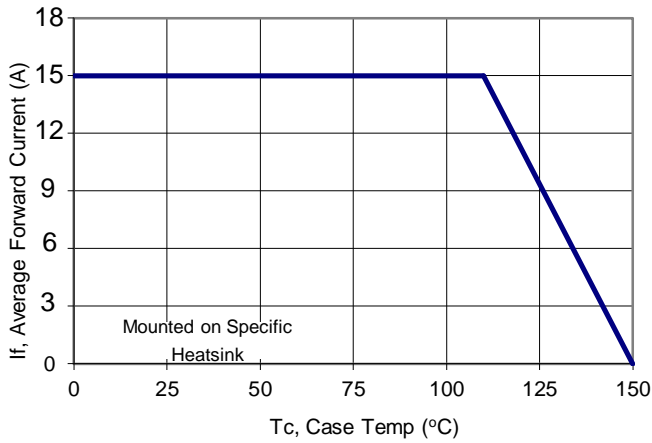


Figure 1: Current Derating, Case

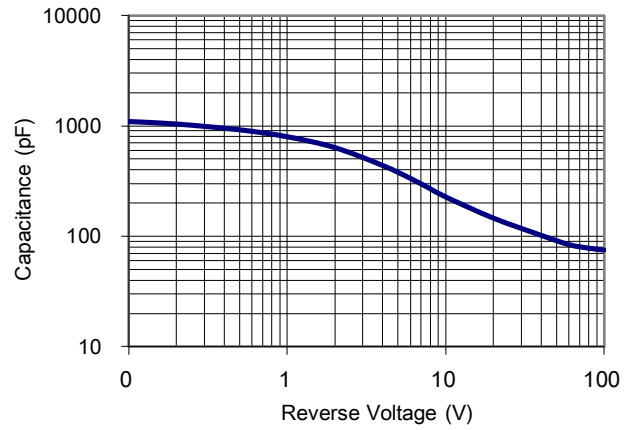


Figure 2: Typical Junction Capacitance

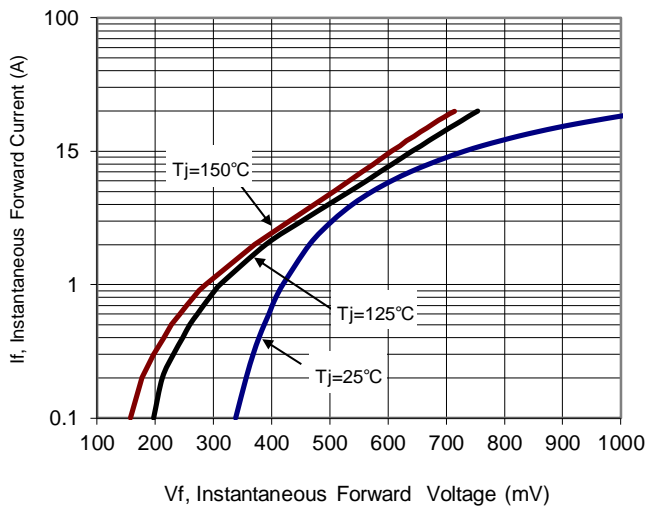


Figure 3: Typical Forward Voltage

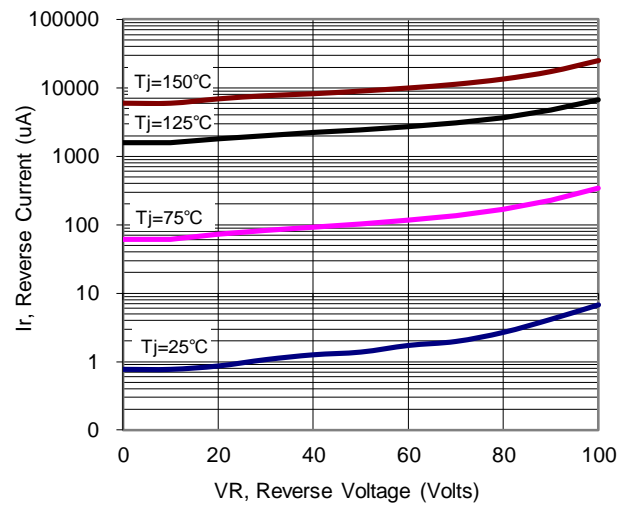


Figure 4: Typical Reverse Current

3. Marking information

Top Marking Rule

SR30100CT
YYWW

SR30100CT = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code

SRF30100CT
YYWW

SRF30100CT = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code

SRB30100CT
YYWW

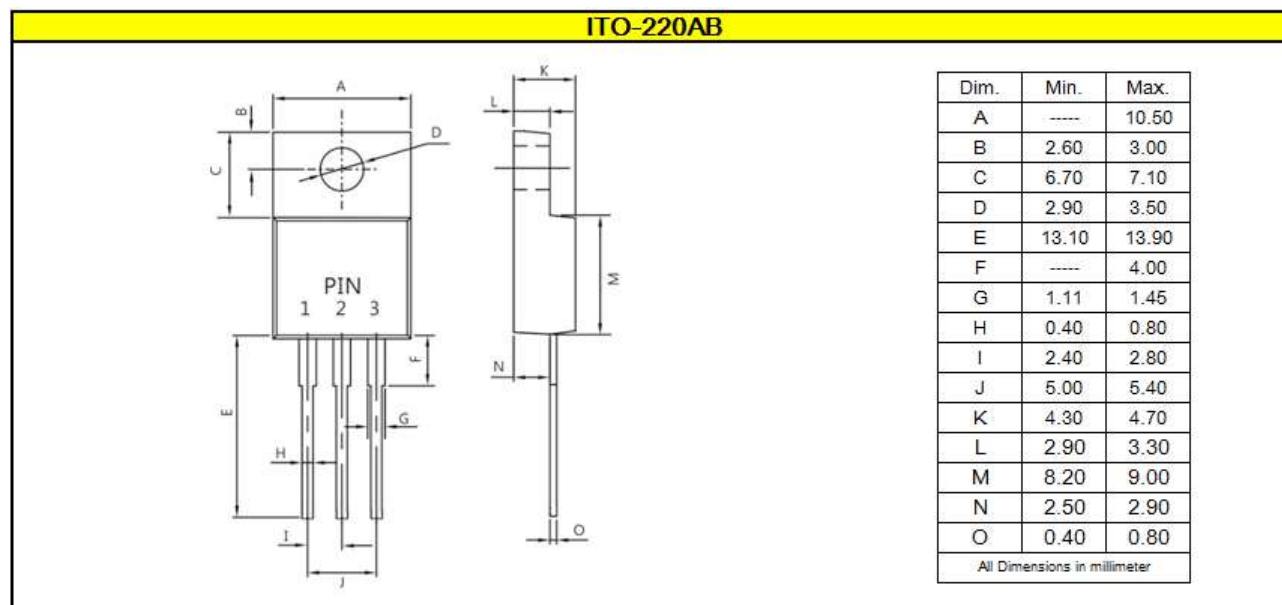
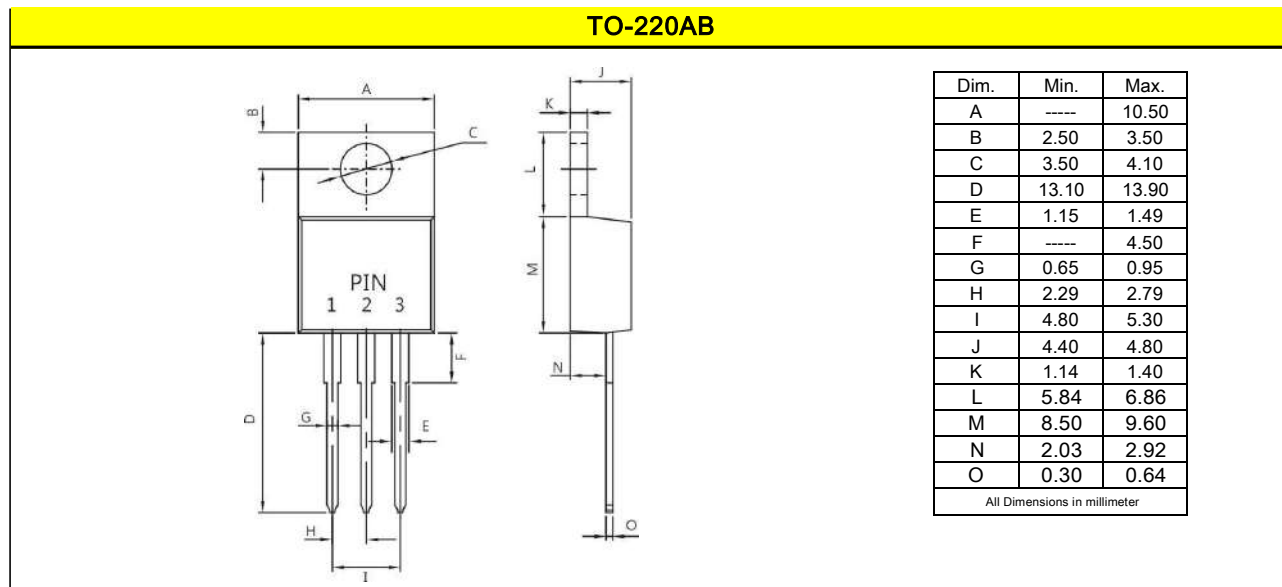
SRB30100CT = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code

SRD30100CT
YYWW

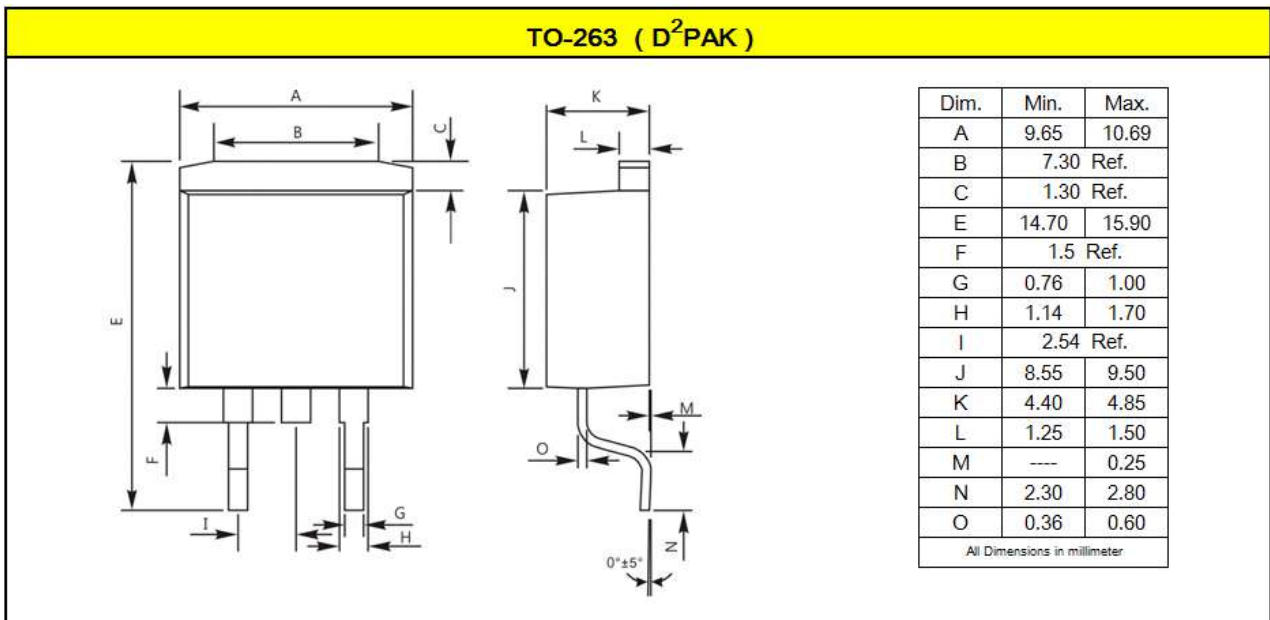
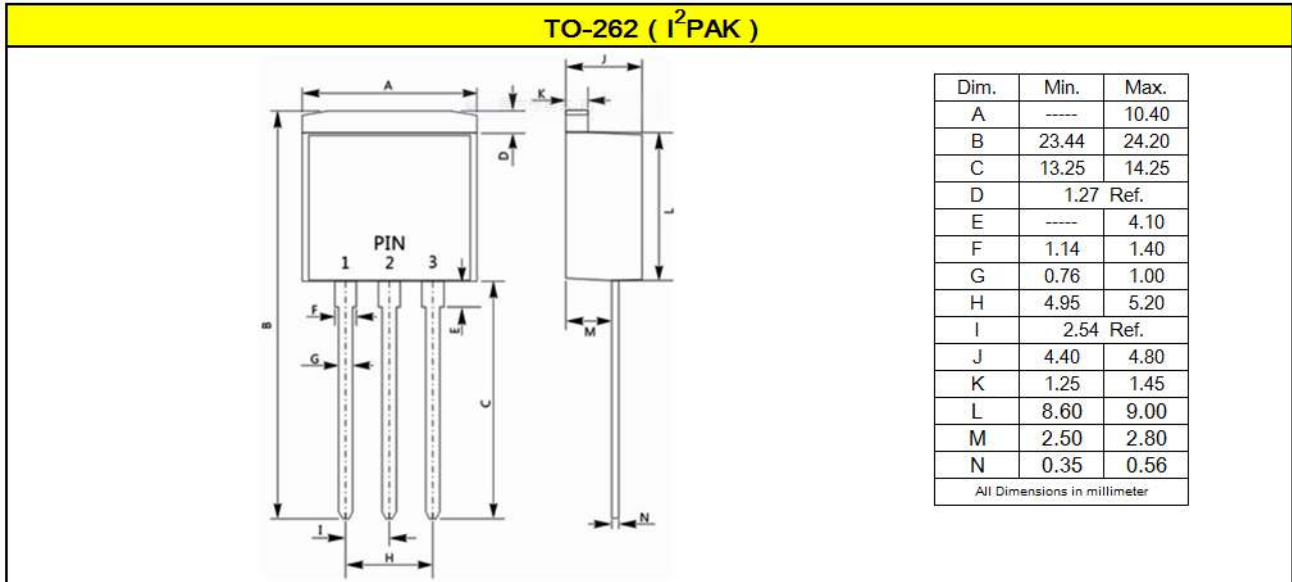
SRD30100CT = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code

4. Package information

Package Outline Dimensions millimeters



Package Outline Dimensions millimeters



5. Ordering information

| Part Number | Package | Delivery mode |
|-------------|-----------|--------------------------------|
| KSR30100CT | TO-220AB | 50 pieces / tube |
| KSRF30100CT | ITO-220AB | 50 pieces / tube |
| KSRB30100CT | TO-262 | 50 pieces / tube |
| KSRD30100CT | 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.