

## 20A 300V 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

KSR20300CT



TO-220AB

KSRF20300CT



ITO-220AB

KSRB20300CT

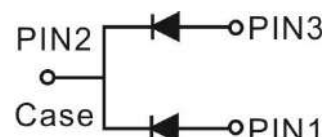


TO-262

KSRD20300CT



TO-263



### Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	10× 2	A
$V_{RRM}$	300	V
$V_F@ 10A$ , $T_j=125^\circ C$	0.75	V
$T_j$ Operating Junction Temperature	-65 to +150	$^\circ C$

## 1. Characteristics

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

Parameter	Symbol	Values	Units
DC Blocking Voltage	$V_{RM}$	300	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	$I_o$	20	Amps
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	$I_F = 5.0 \text{ A}$	$V_F^*$	0.74	-----	Volts
	$I_F = 10 \text{ A}$		0.90	0.95	
	$I_F = 5.0 \text{ A}$	$T_J = 125^\circ\text{C}$	0.70	-----	
	$I_F = 10 \text{ A}$		-----	0.75	
Instantaneous Reverse Current	At $V_{RM}$	$I_R^*$	-----	10	$\mu\text{A}$
			-----	3	$\text{mA}$

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

Typical Junction Capacitance <sup>1</sup>	$C_J$	300	pF
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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 )

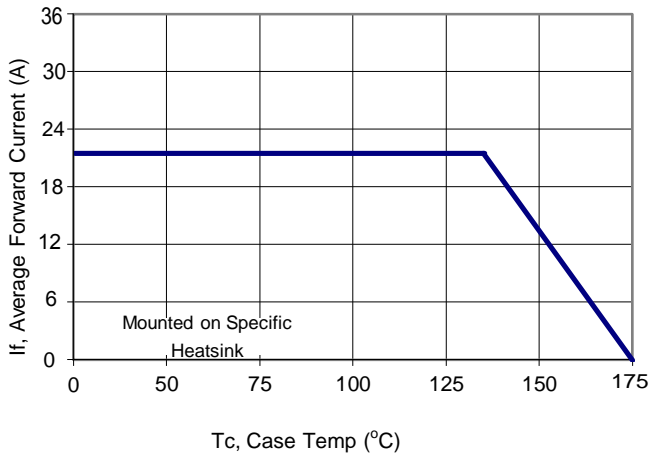


Figure 1: Current Derating, Case

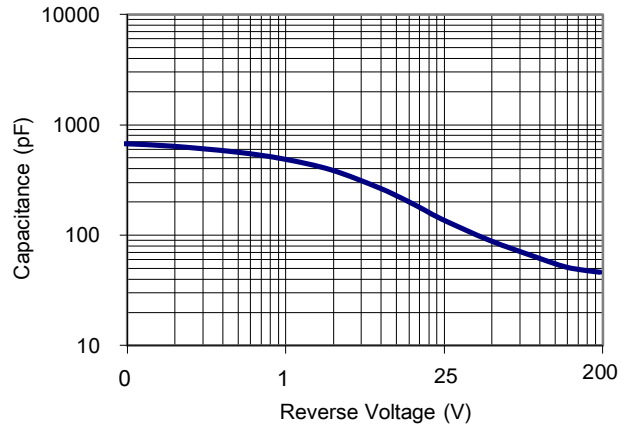


Figure 2: Typical Junction Capacitance

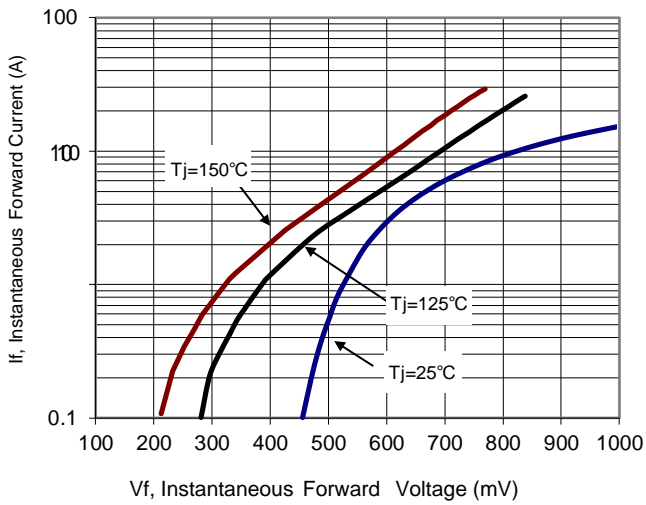


Figure 3: Typical Forward Voltage

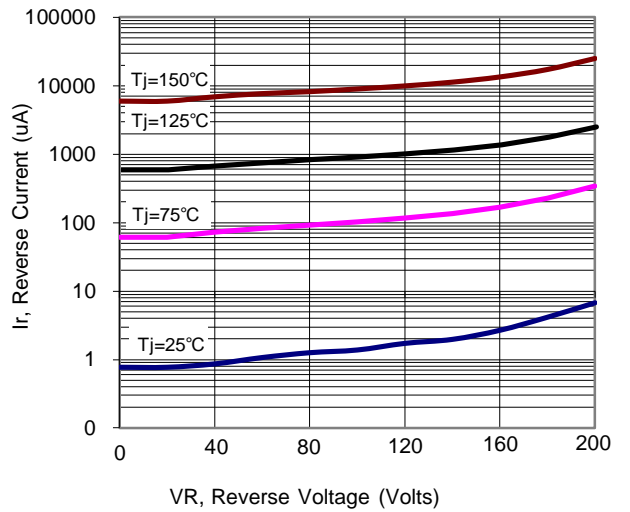


Figure 4: Typical Reverse Current

### 3. Marking information

#### Top Marking Rule

SR20300CT

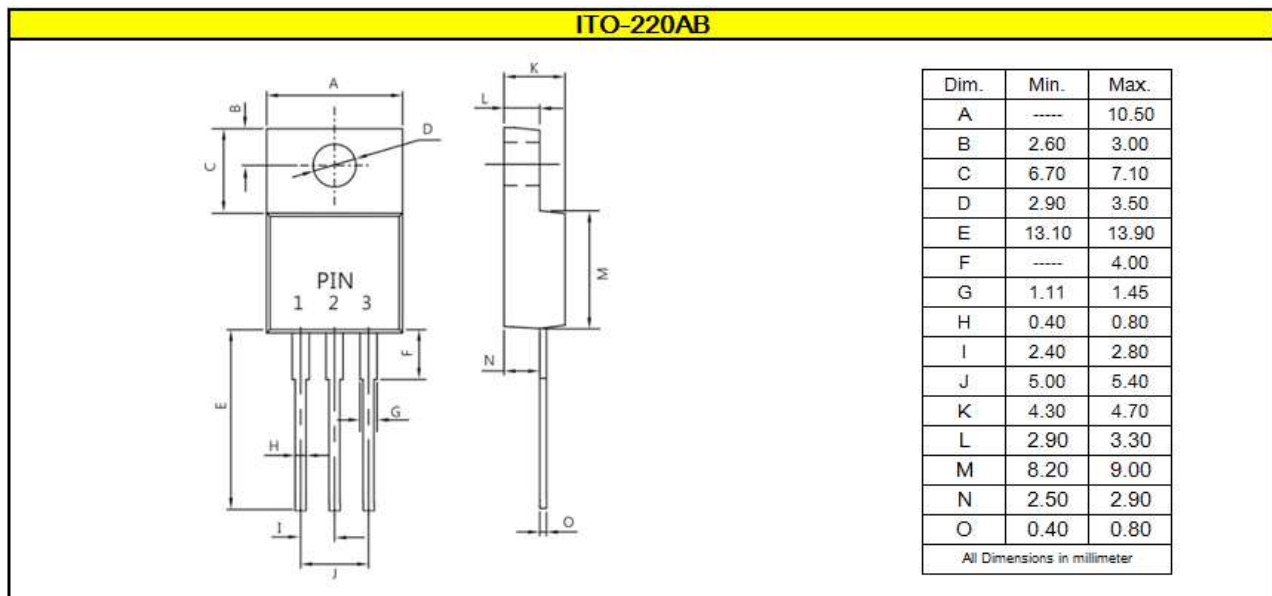
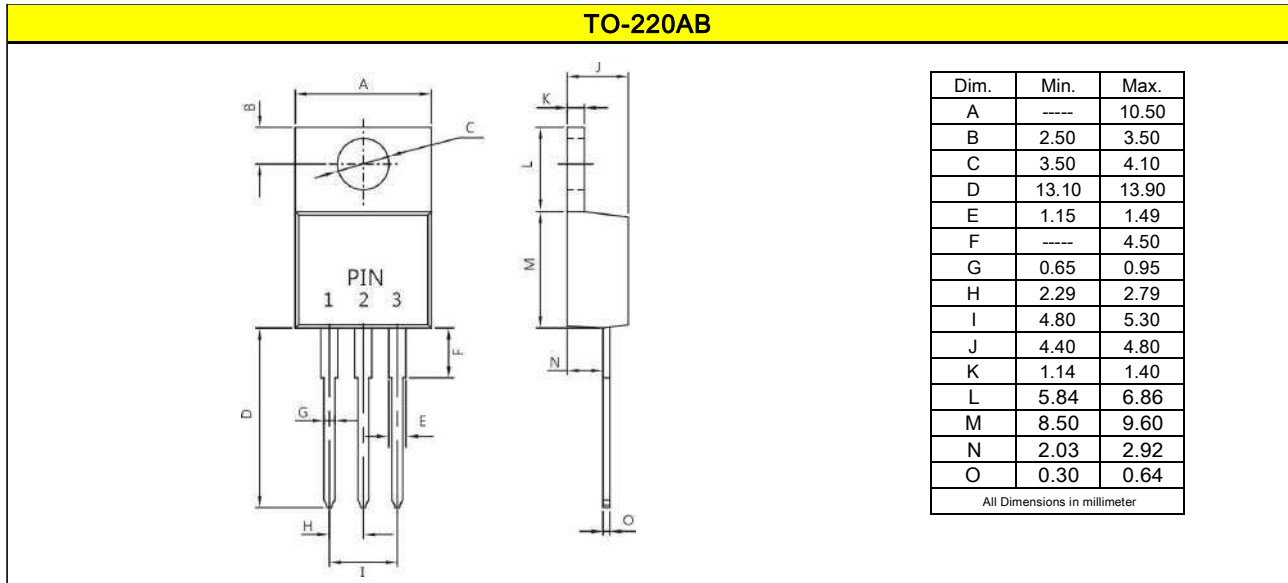
SRF20300CT

SRB20300CT

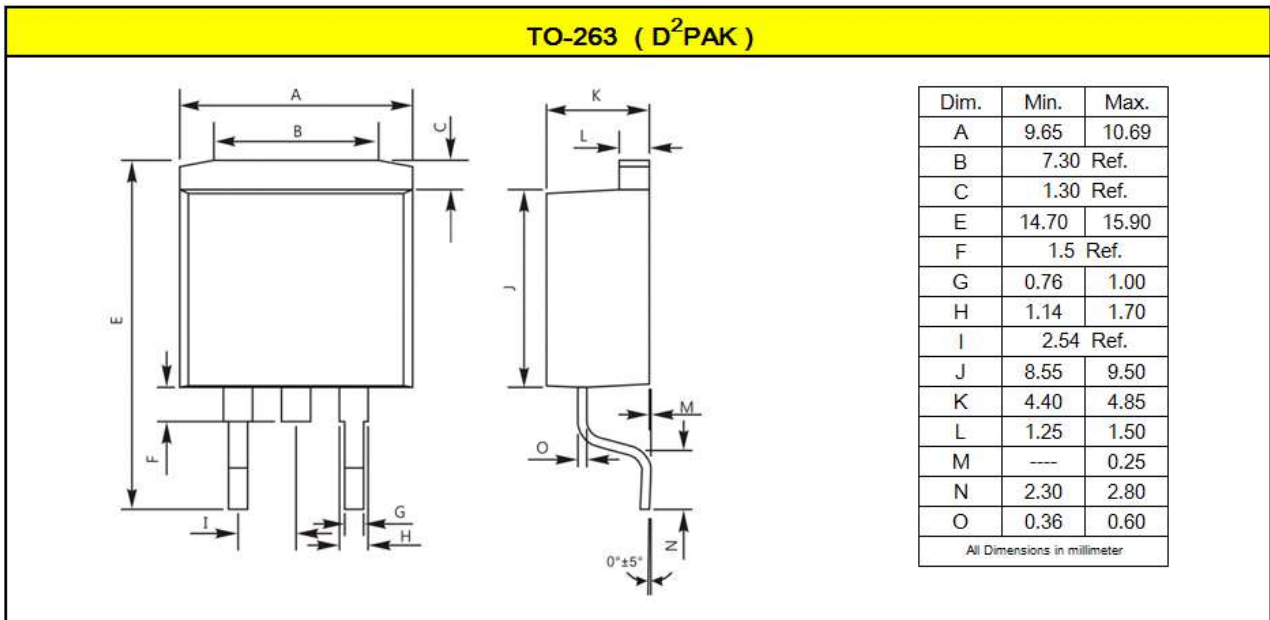
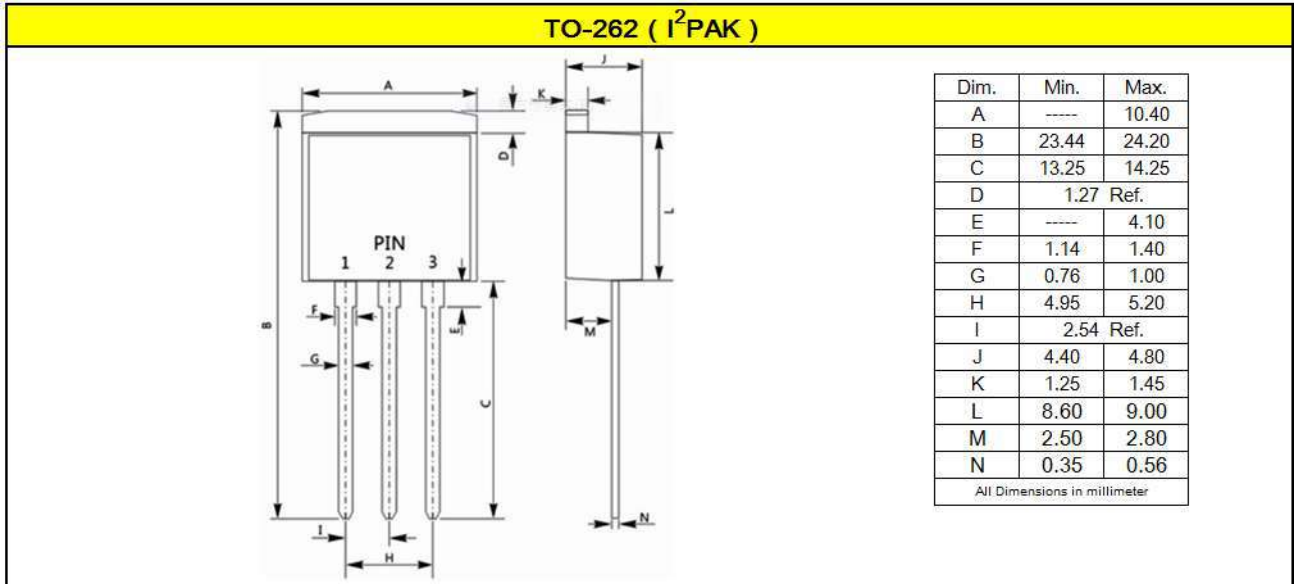
SRD20300CT

## 4. Package information

Package Outline Dimensions millimeters



Package Outline Dimensions millimeters



## 5. Ordering information

Part Number	Package	Delivery mode
KSR20300CT	TO-220AB	50 pieces / tube
KSRF20300CT	ITO-220AB	50 pieces / tube
KSRB20300CT	TO-262	50 pieces / tube
KSRD20300CT	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.