

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:

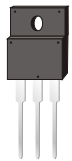
Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications

KSR20300CT



TO-220AB

KSRF20300CT



ITO-220AB

KSRB20300CT

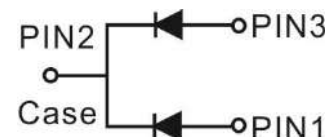


TO-262

KSRD20300CT



TO-263



Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	10× 2	A
V_{RRM}	300	V
$V_F@ 10A$, $T_j=125$ °C	0.75	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}	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	μA
			-----	3	mA

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

Typical Junction Capacitance ¹	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)

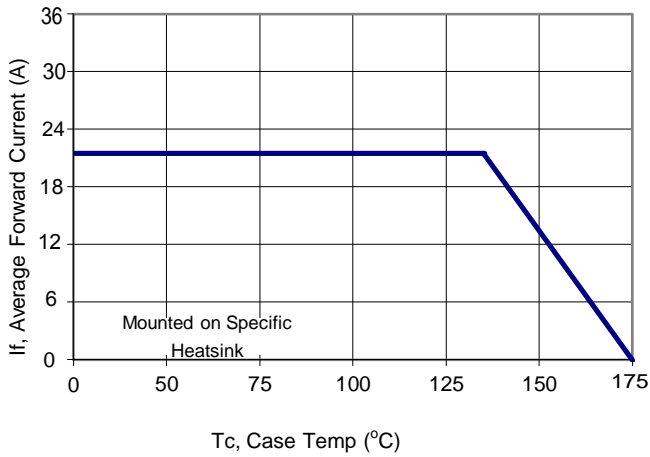


Figure 1: Current Derating, Case

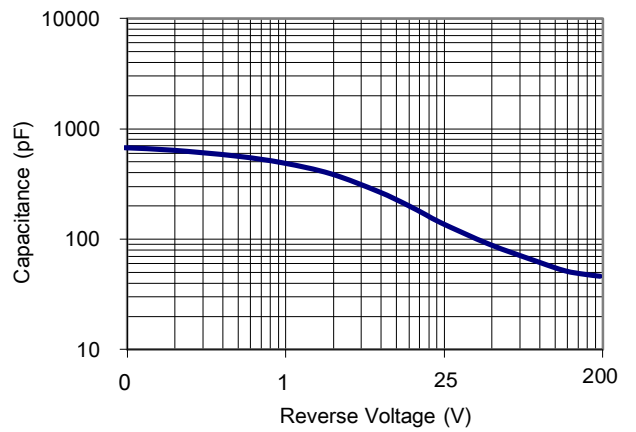


Figure 2: Typical Junction Capacitance

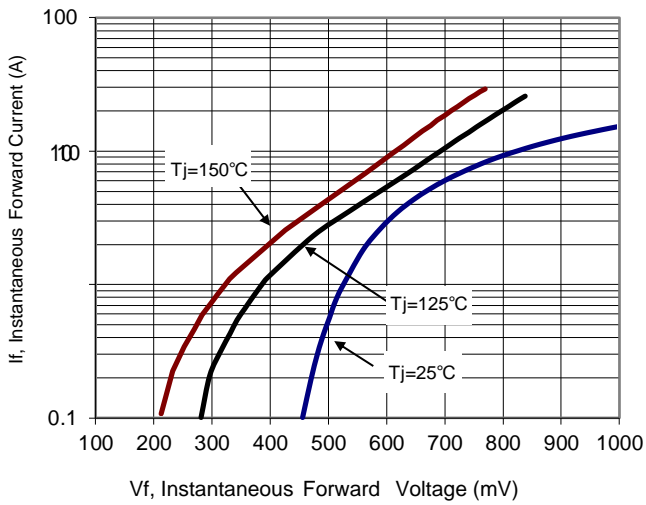


Figure 3: Typical Forward Voltage

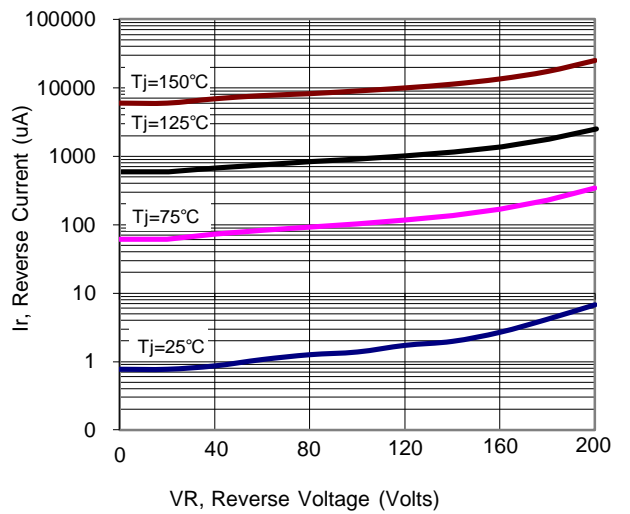


Figure 4: Typical Reverse Current

3. Marking information

Top Marking Rule

SR20300CT

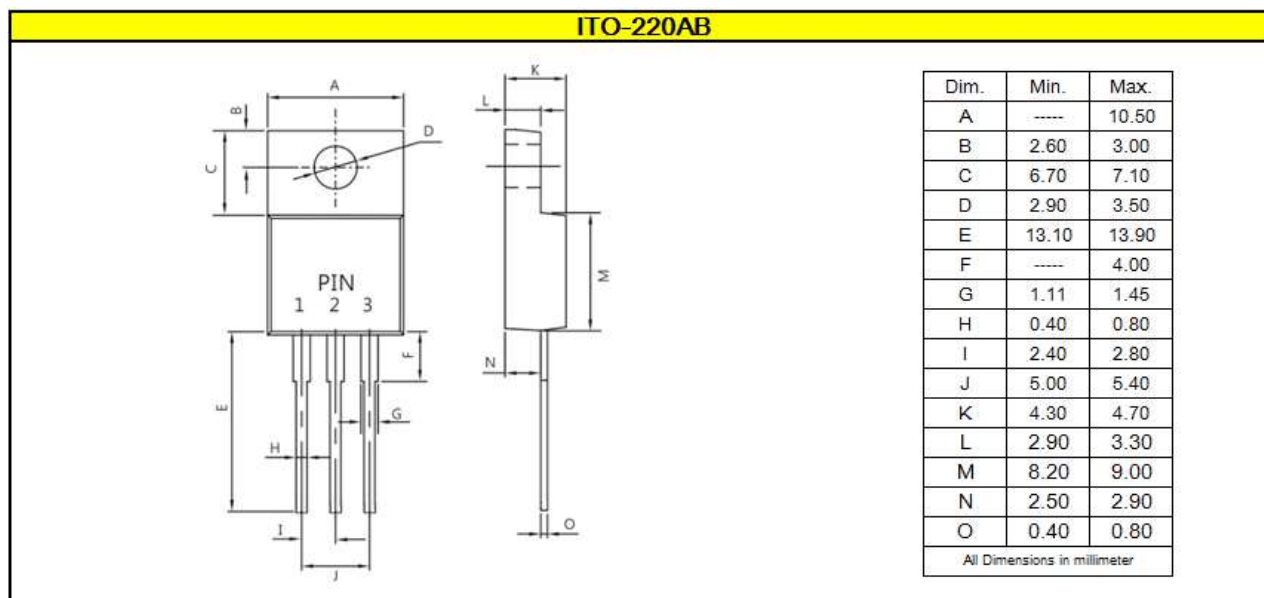
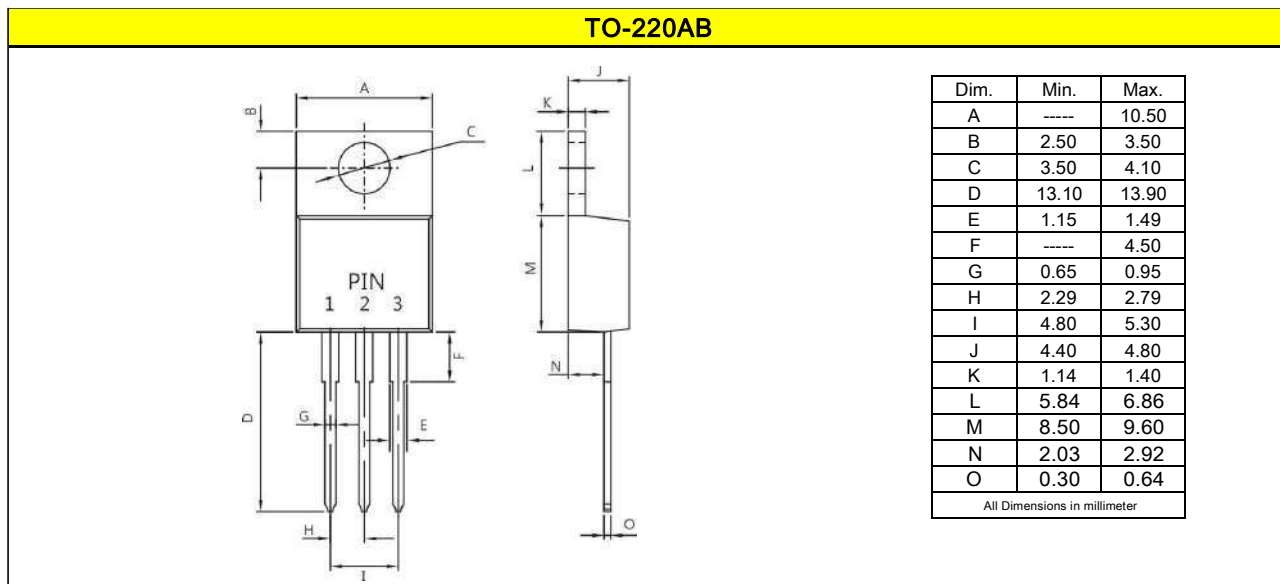
SRF20300CT

SRB20300CT

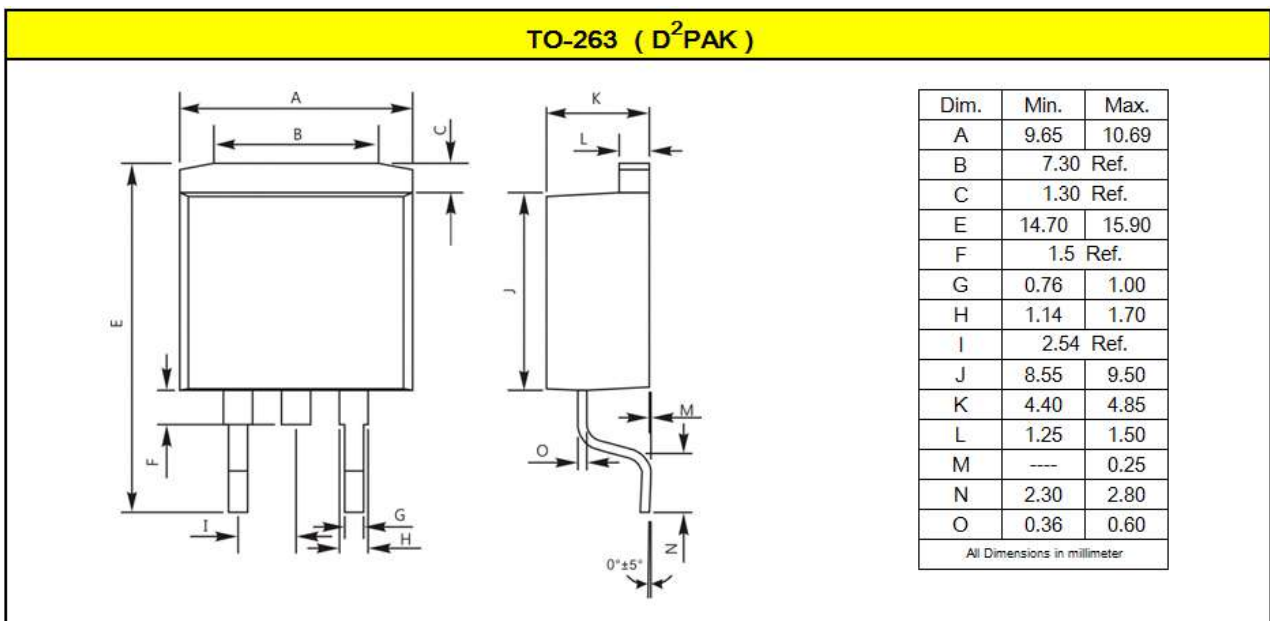
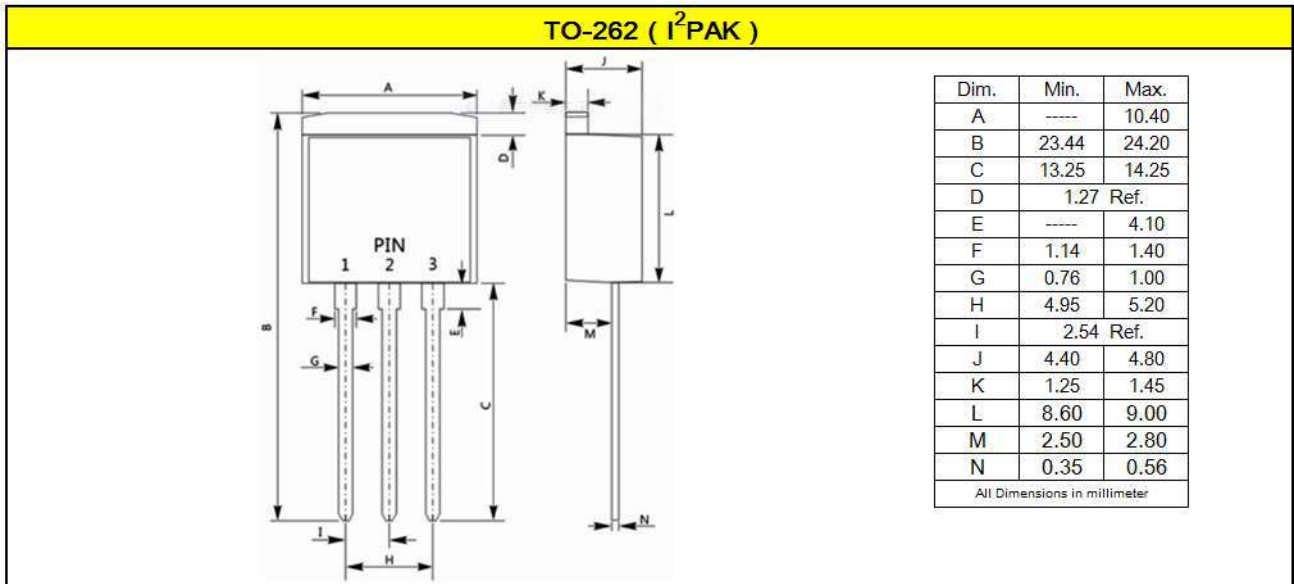
SRD20300CT

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.