

SR20300LCT – SRD20300LCT



20A 300V 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

Typical Applications

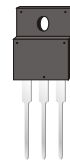
Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications

SR20300LCT



TO-220AB

SRF20300LCT



ITO-220AB

SRB20300LCT

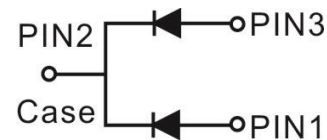


TO-262

SRD20300LCT



TO-263



Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	10 × 2	A
V_{RRM}	300	V
$V_F@ 10A, T_j=125^\circ C$	0.71	V
T_j Operating Junction Temperature	-65 to +175	°C

SR20300LCT – SRD20300LCT

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	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			0.84	0.88	
	IF = 5.0A	$T_J = 125^{\circ}\text{C}$		0.60	-----	
	IF = 10A			-----	0.71	
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
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Notes:

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

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2. Characteristics Curves

Ratings and Characteristics Curves

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

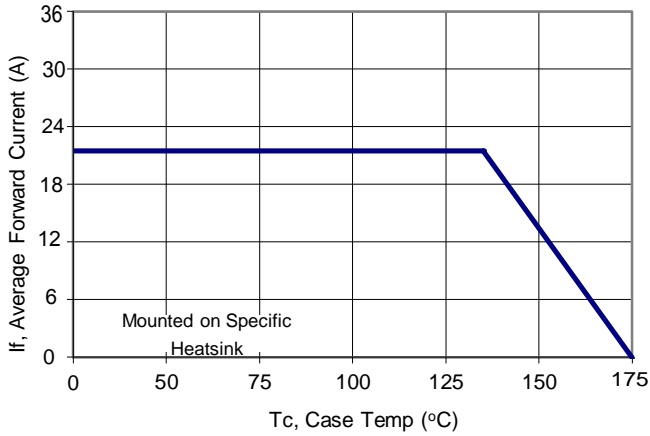


Figure 1: Current Derating, Case

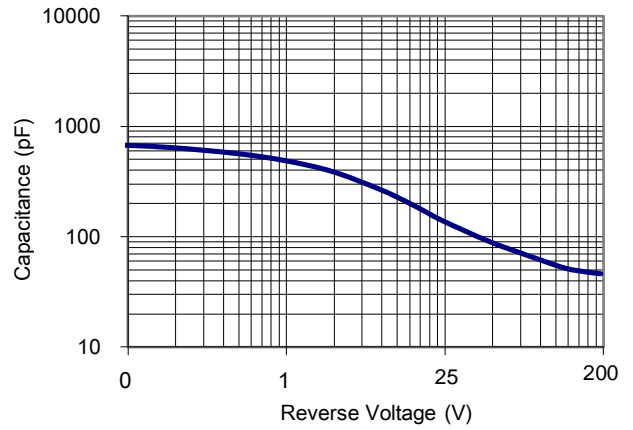


Figure 2: Typical Junction Capacitance

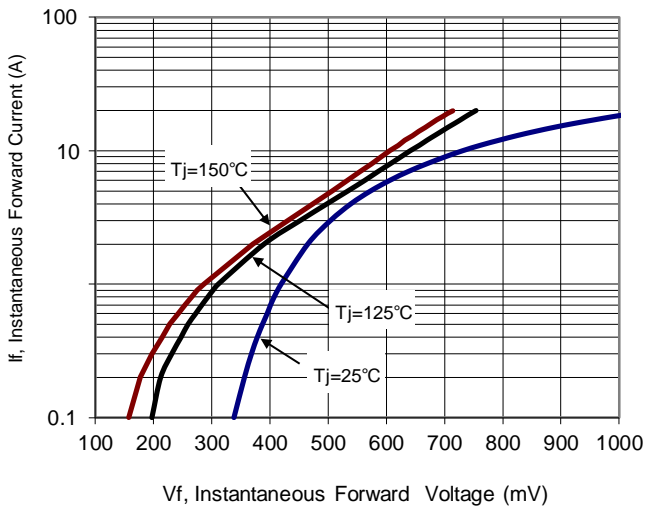


Figure 3: Typical Forward Voltage

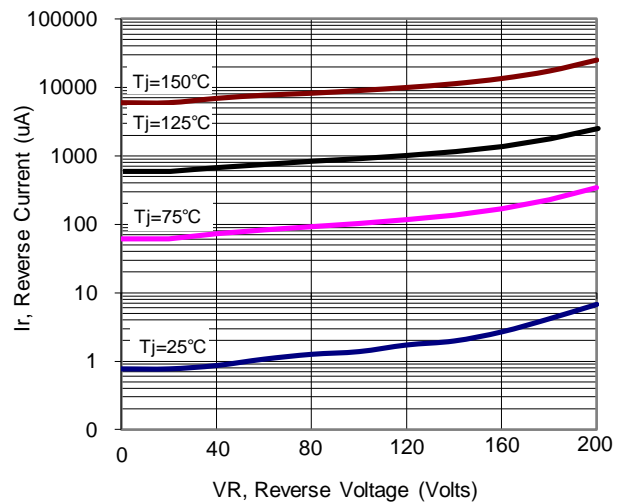


Figure 4: Typical Reverse Current

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3. Marking information

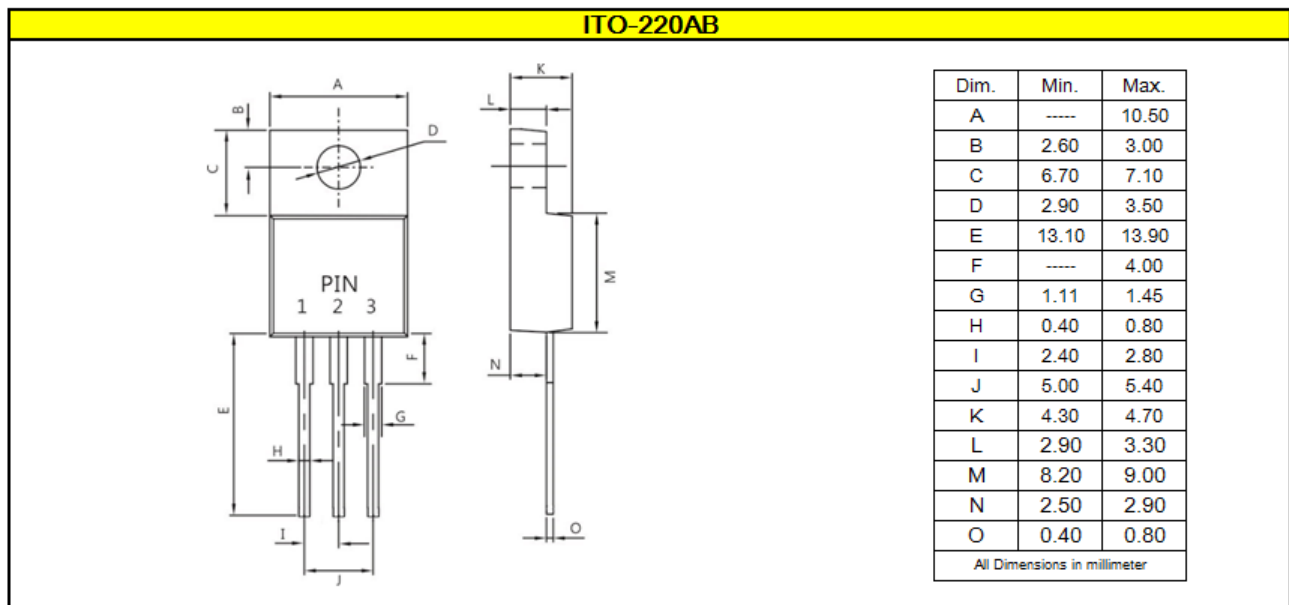
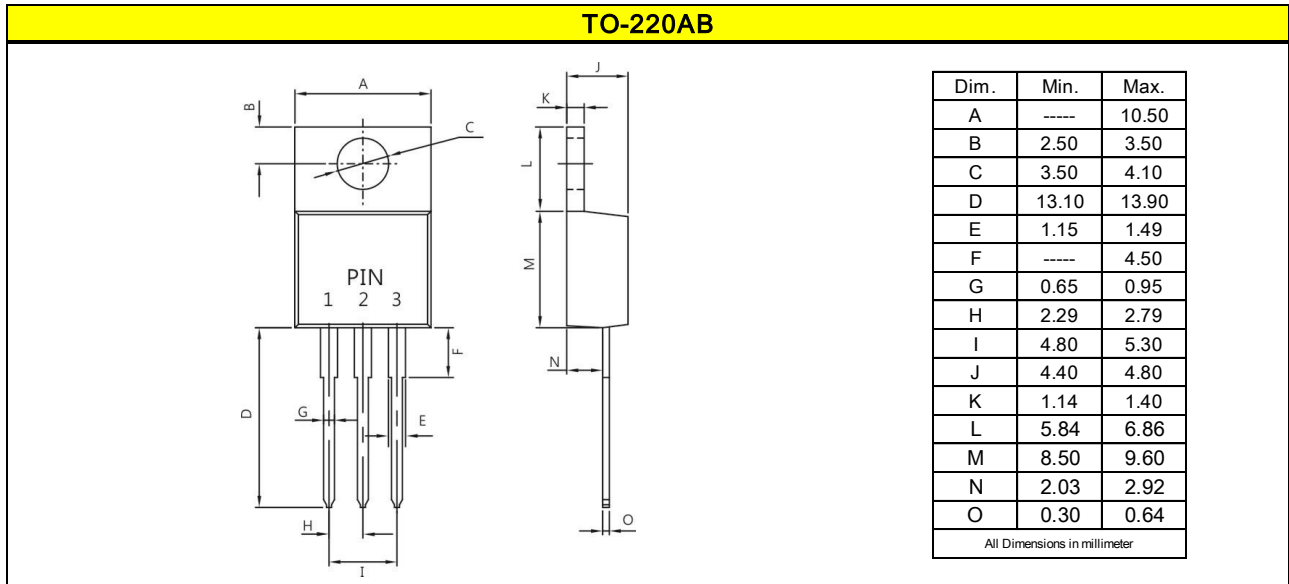
Top Marking Rule



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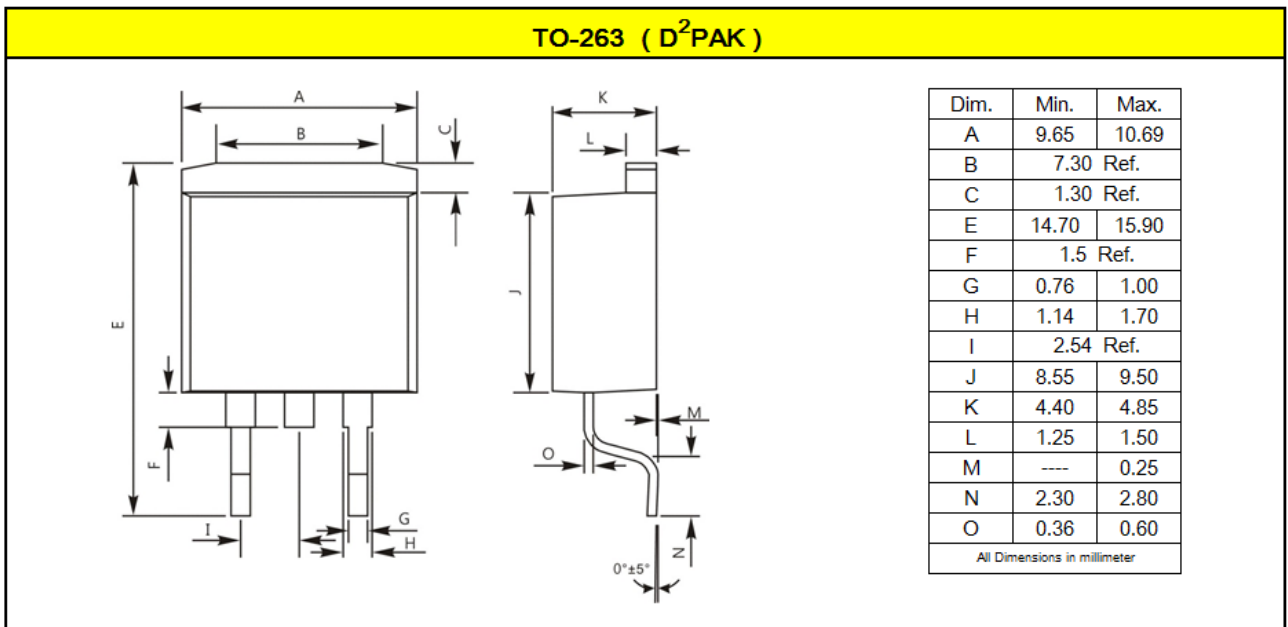
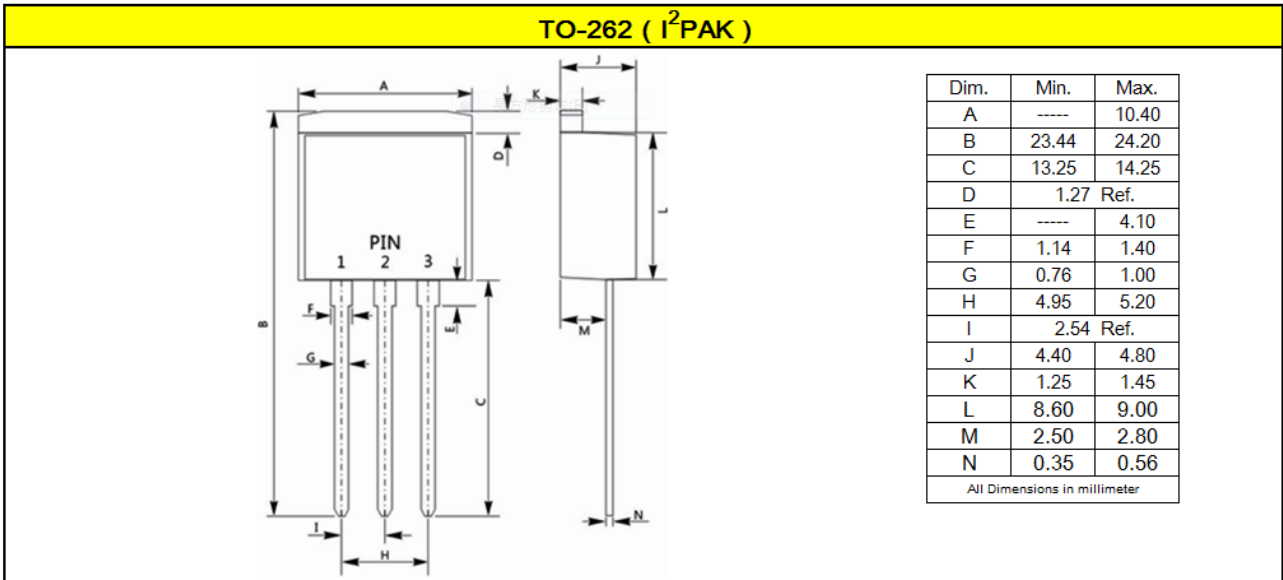
4. Package information

Package Outline Dimensions millimeters



SR20300LCT – SRD20300LCT

Package Outline Dimensions millimeters



SR20300LCT – SRD20300LCT

5. Ordering information

Part Number	Package	Delivery mode
SR20300LCT	TO-220AB	50 pieces / tube
SRF20300LCT	ITO-220AB	50 pieces / tube
SRB20300LCT	TO-262	50 pieces / tube
SRD20300LCT	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.