

10A 150V 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

KSR10150CT



TO-220AB

KSRF10150CT



ITO-220AB

KSRB10150CT

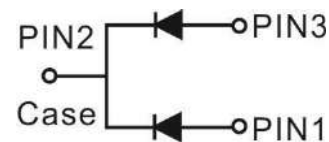


TO-262

KSRD10150CT



TO-263



Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5× 2	A
V_{RRM}	150	V
$V_F@ 5A$, $T_j=125^\circ C$	0.76	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}	150	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	10	Amps
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	150	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	1.5	Amps
Typical Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB Package = TO-262 Package = TO-263	$R\theta_{Jc}$	2.0 4.0 2.5 3.0	$^\circ\text{C} / \text{W}$
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	$I_F = 2.5\text{A}$	$T_J = 25^\circ\text{C}$	V_F^*	0.75	-----	Volts
	$I_F = 5\text{A}$			0.85	0.90	
	$I_F = 2.5\text{A}$	$T_J = 125^\circ\text{C}$		0.60	-----	
	$I_F = 5\text{A}$			-----	0.76	
Instantaneous Reverse Current	At V_{RM}	$T_J = 25^\circ\text{C}$	I_R^*	-----	10	μA
		$T_J = 125^\circ\text{C}$		-----	2	mA
* Pulse width < 300 uS, Duty cycle < 2%						

Typical Junction Capacitance ¹	C_J	230	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

(TA = 25°C unless otherwise specified)

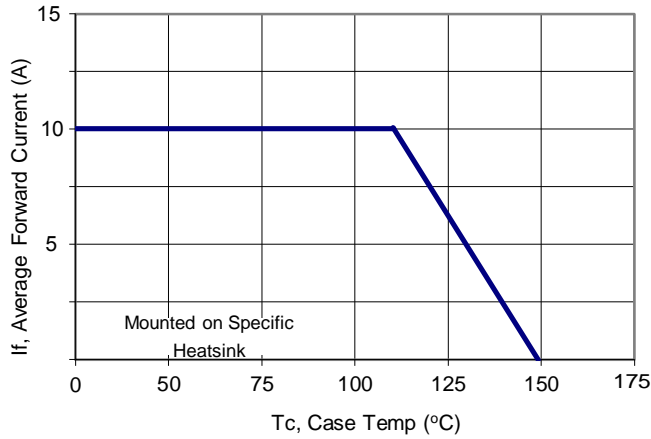


Figure 1: Current Derating, Case

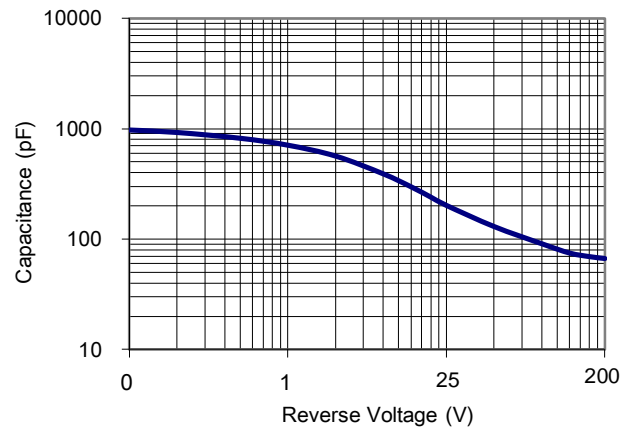


Figure 2: Typical Junction Capacitance

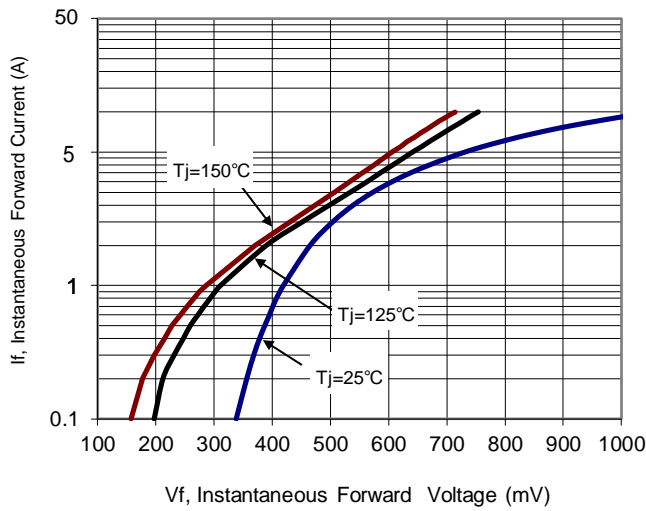


Figure 3: Typical Forward Voltage

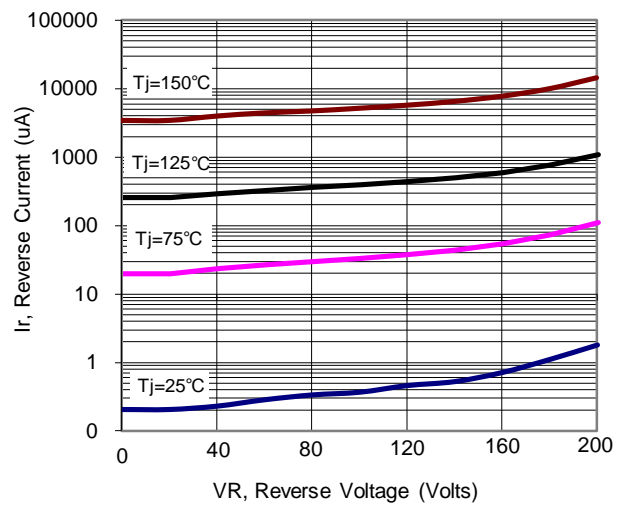


Figure 4: Typical Reverse Current

3. Marking information

Top Marking Rule

SR10150CT

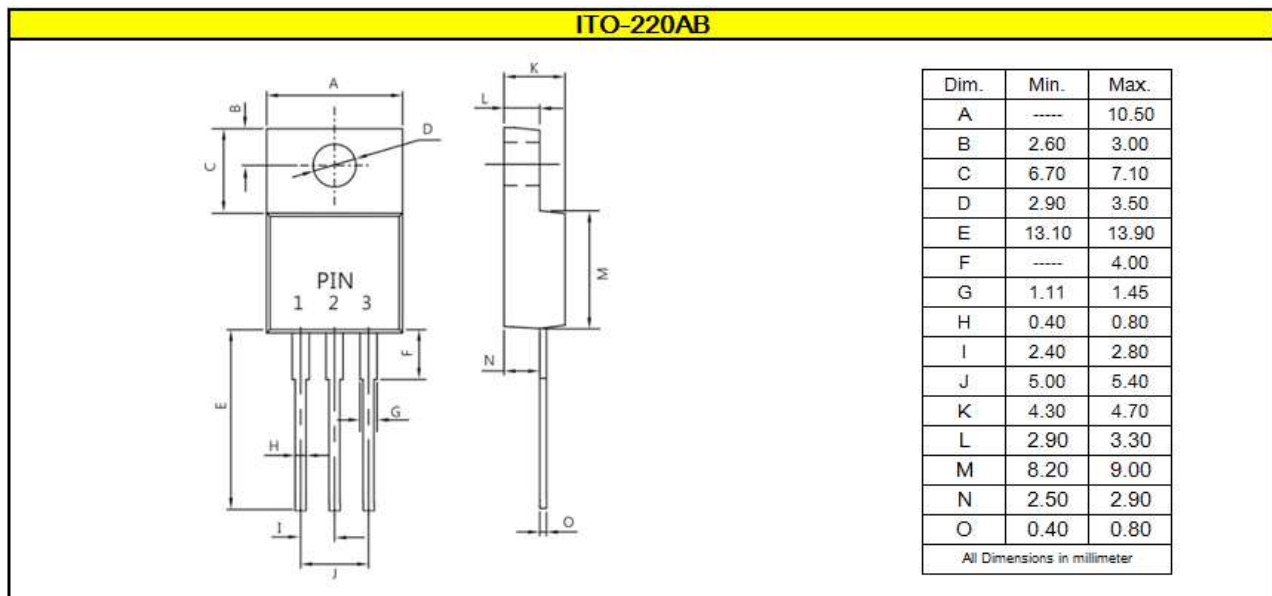
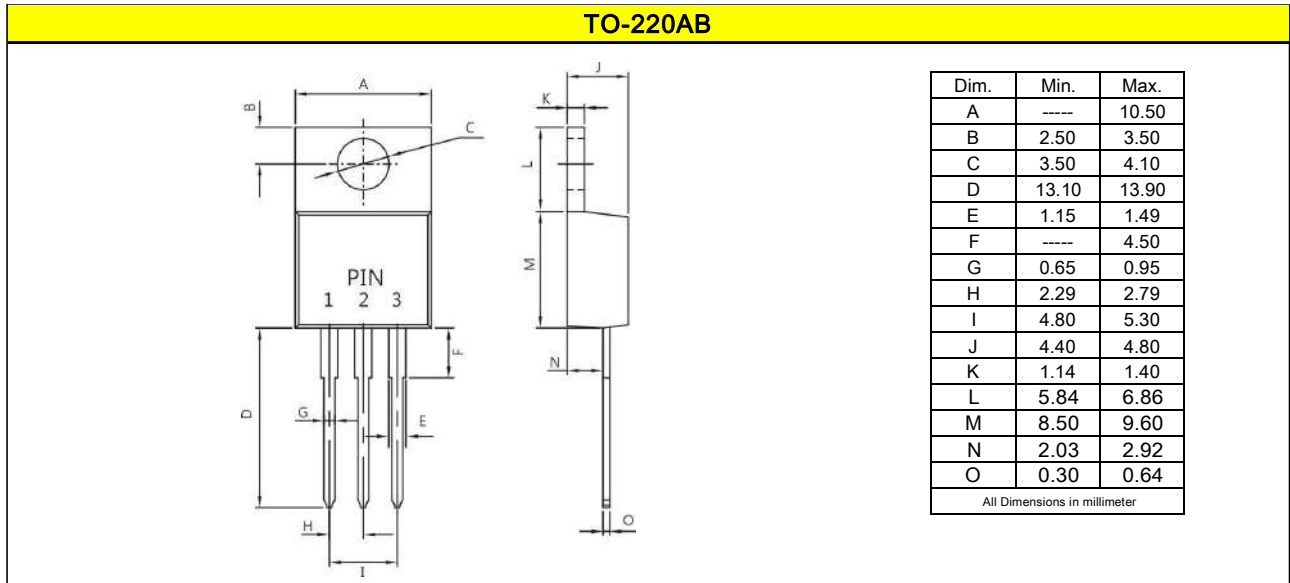
SRF10150CT

SRB10150CT

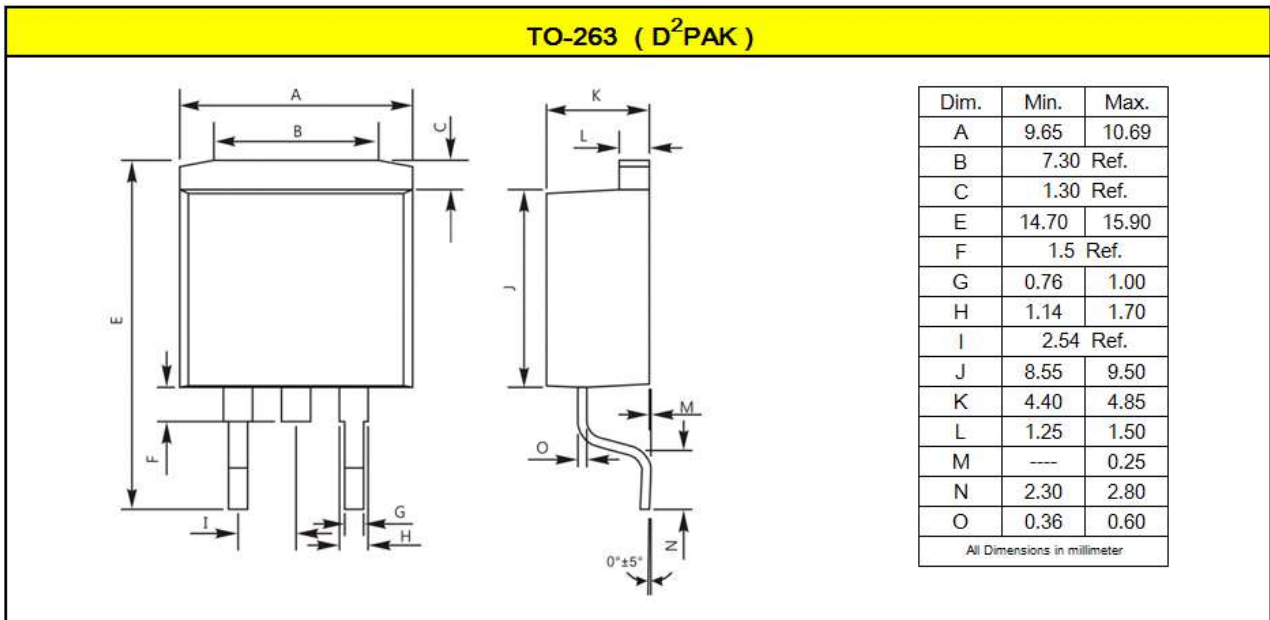
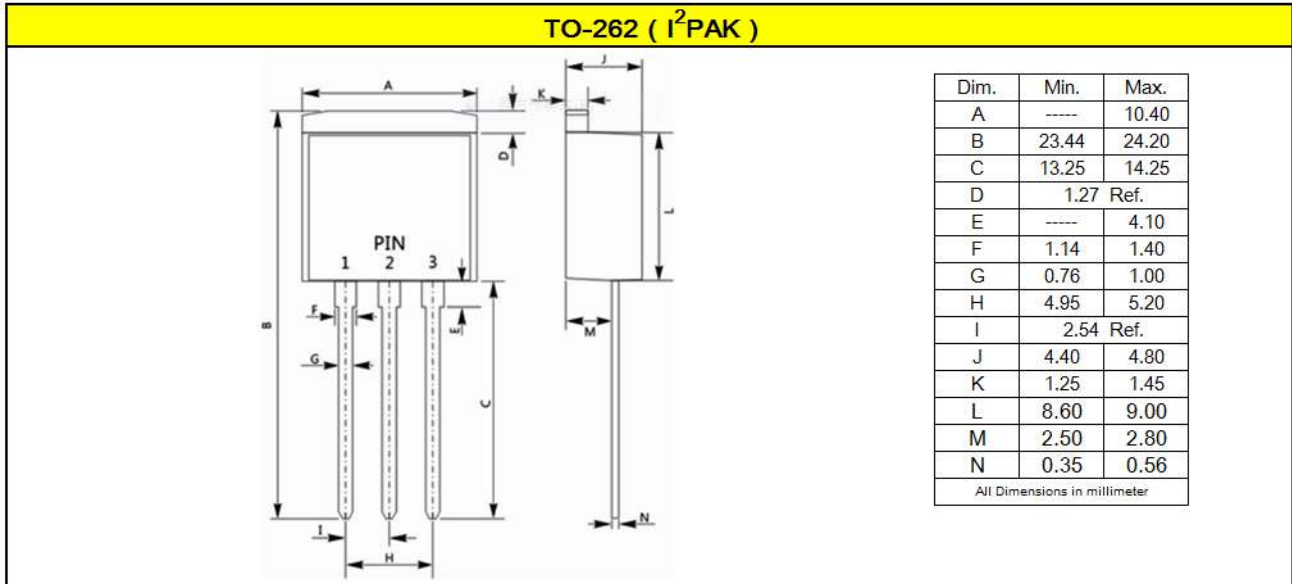
SRD10150CT

4. Package information

Package Outline Dimensions millimeters



Package Outline Dimensions millimeters



5. Ordering information

Part Number	Package	Delivery mode
KSR10150CT	TO-220AB	50 pieces / tube
KSRF10150CT	ITO-220AB	50 pieces / tube
KSRB10150CT	TO-262	50 pieces / tube
KSRD10150CT	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.