

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

KSR10150CT



TO-220AB

KSRF10150CT



ITO-220AB

KSRB10150CT



TO-262

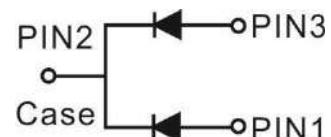
KSRD10150CT



TO-263

Applications:

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



Major ratings and characteristics

Characteristics	Values	Units
I _{F(AV)} Rectangular Waveform	5x 2	A
V _{RRM}	150	V
V _F @ 5A , T _j =125 °C	0.76	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}	150	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current Per device	I_o	10	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
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	$R\theta_{JC}$	2.0	
Package = ITO-220AB		4.0	$^\circ\text{C} / \text{W}$
Package = TO-262		2.5	
Package = TO-263		3.0	
Isolation voltage (ITO-220 only)	V_{AC}	1500	V
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10000	$\text{V}/\mu\text{s}$
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 = 2.5A	$T_J = 25^\circ\text{C}$	V_F^*	0.75	-----	Volts
	IF = 5A			0.85	0.90	
	IF = 2.5A			0.60	-----	
	IF = 5A			-----	0.76	
Instantaneous Reverse Current	At V_{RM}	$T_J = 25^\circ\text{C}$	IR^*	-----	10	uA
		$T_J = 125^\circ\text{C}$		-----	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)

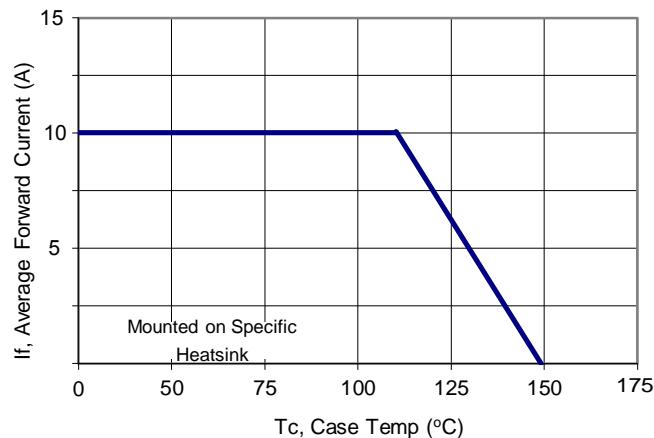


Figure 1: Current Derating, Case

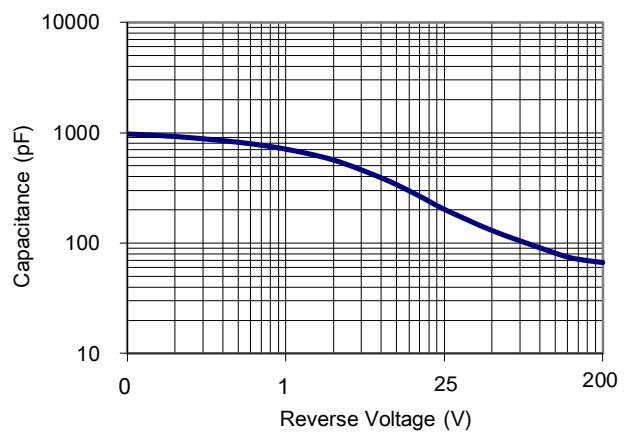


Figure 2: Typical Junction Capacitance

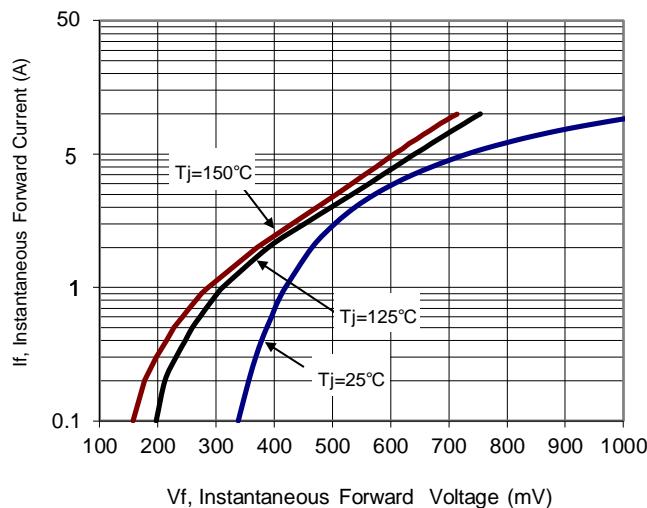


Figure 3: Typical Forward Voltage

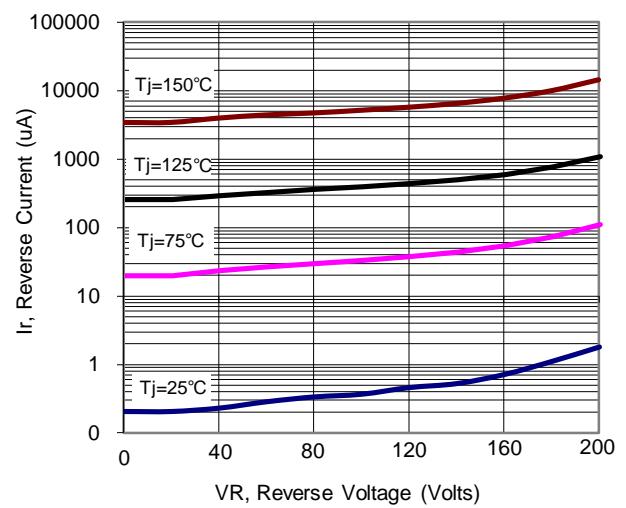


Figure 4: Typical Reverse Current



3. Marking information

Top Marking Rule

SR10150CT

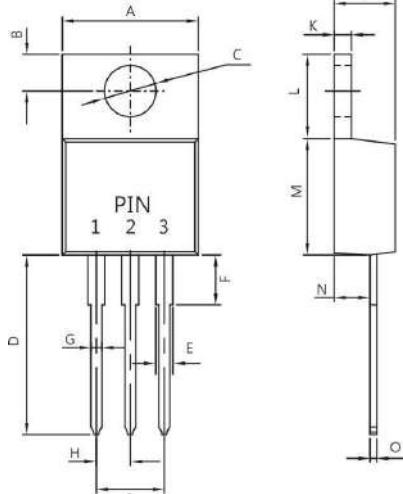
SRF10150CT

SRB10150CT

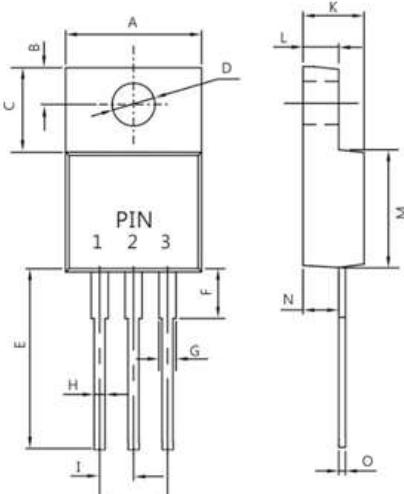
SRD10150CT

4. Package information

Package Outline Dimensions millimeters

TO-220AB		
		
		Dimensions:
Dim.	Min.	Max.
A	-----	10.50
B	2.50	3.50
C	3.50	4.10
D	13.10	13.90
E	1.15	1.49
F	-----	4.50
G	0.65	0.95
H	2.29	2.79
I	4.80	5.30
J	4.40	4.80
K	1.14	1.40
L	5.84	6.86
M	8.50	9.60
N	2.03	2.92
O	0.30	0.64

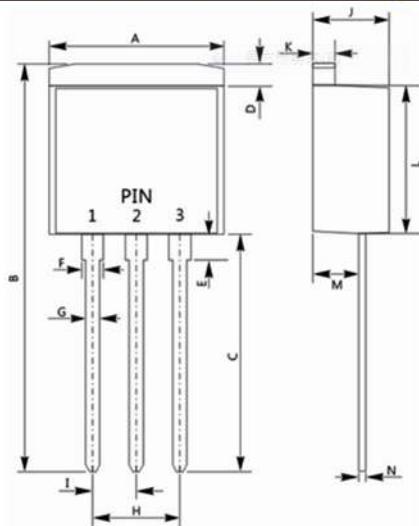
All Dimensions in millimeter

ITO-220AB		
		
		Dimensions:
Dim.	Min.	Max.
A	-----	10.50
B	2.60	3.00
C	6.70	7.10
D	2.90	3.50
E	13.10	13.90
F	-----	4.00
G	1.11	1.45
H	0.40	0.80
I	2.40	2.80
J	5.00	5.40
K	4.30	4.70
L	2.90	3.30
M	8.20	9.00
N	2.50	2.90
O	0.40	0.80

All Dimensions in millimeter

Package Outline Dimensions millimeters

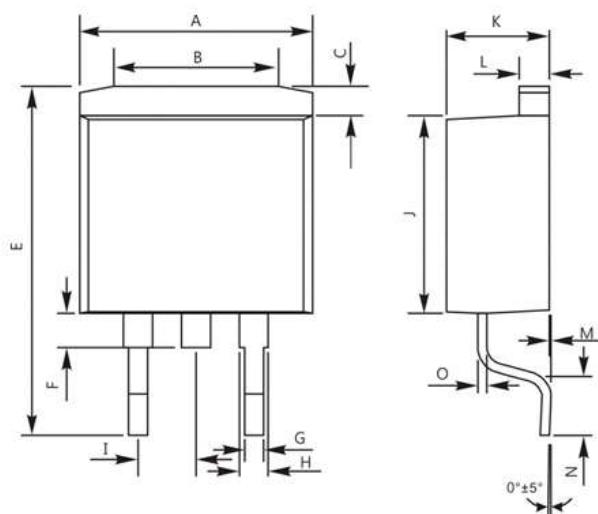
TO-262 (I²PAK)



Dim.	Min.	Max.
A	-----	10.40
B	23.44	24.20
C	13.25	14.25
D	1.27 Ref.	
E	-----	4.10
F	1.14	1.40
G	0.76	1.00
H	4.95	5.20
I	2.54 Ref.	
J	4.40	4.80
K	1.25	1.45
L	8.60	9.00
M	2.50	2.80
N	0.35	0.56

All Dimensions in millimeter

TO-263 (D²PAK)



Dim.	Min.	Max.
A	9.65	10.69
B	7.30 Ref.	
C	1.30 Ref.	
E	14.70	15.90
F	1.5 Ref.	
G	0.76	1.00
H	1.14	1.70
I	2.54 Ref.	
J	8.55	9.50
K	4.40	4.85
L	1.25	1.50
M	-----	0.25
N	2.30	2.80
O	0.36	0.60

All Dimensions in millimeter



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.