

Features

- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Per J-STD-020,LF MAX peak of 260°C (for TO-263 package)
- Solder bath temperature 275°C maximum, 10s, per JESD22-B106 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2015/863/EU



Mechanical Data

- Case: JEDEC TO-220AB、ITO-220AB、TO-263
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked
- Mounting Torque: 10 in-lbs maximum

PRIMARY CHARACTERISTICS	
$I_{(AV)}$	2×15A
V_{RRM}	100V
I_{FSM}	250A
VF at IF=15.0A,125°C,Per leg	0.66V
$T_J(MAX)$	175°C
Package	TO-220AB,ITO-220AB, TO-263
Diode variations	Common cathode

Typical Applications

For use in low voltage ,high frequency inverters ,DC/DC converters,free wheeling ,and polarity protection applications

Maximum Ratings

(Per Leg,Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (see fig.1)	Per leg	15.0	A
	Total device	30.0	
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I_{FSM}	250	A
Operating junction and Storage temperature range	T_J,T_{stg}	-55 to+175	°C

Electrical Characteristics (Per Leg, $T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	$T_J=25^{\circ}\text{C}$	$I_F=5.0\text{A}$	$V_F^{1)}$	0.67	-	V
		$I_F=15.0\text{A}$		0.80	0.85	
	$T_J=125^{\circ}\text{C}$	$I_F=5.0\text{A}$		0.53	-	
		$I_F=15.0\text{A}$		0.66	0.71	
Reverse current	$T_J=25^{\circ}\text{C}$	$V_R=100\text{V}$	$I_R^{2)}$	-	10	μA
	$T_J=125^{\circ}\text{C}$			-	5	mA
Typical junction capacitance	4V,1MHz		C_j	367		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width $\leq 40\text{ms}$

Thermal Characteristics

Parameter	Symbol	TO-220AB	ITO-220AB	TO-263	Unit
Typical thermal resistance ³⁾	$R_{\theta\text{JC}}$	1.0	3.2	1.0	$^{\circ}\text{C}/\text{W}$

3.Thermal resistance from junction to case

Available Pack Information

Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Tube Length (mm)	Inner Box Number	Tube Number Per A Inner Box	Part Number Per A Tube	Quantity(carton) (K)
SR30100CT TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SRF30100CT ITO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SR30100D1 TO-263	Tube	565×225×170	548×151×37	538	5	20	50	5
Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Reel Diameter (mm)	Inner Box Number	Reel Number Per A Inner Box	Part Number Per A Reel	Quantity(carton) (K)
SR30100D1 TO-263	Reel	364×364×235	330×330×38	$\phi 330$	5	1	800	4

Fig.1-Forward Current Derating Curve(Per Leg)

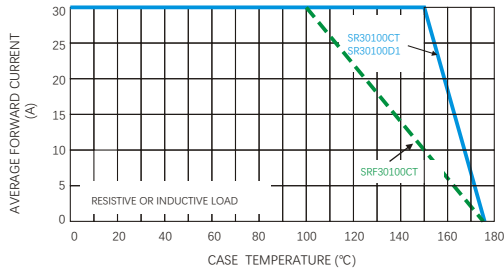


Fig.2-Maximum Non-repetitive Peak Forward Surge Current (Per Leg)

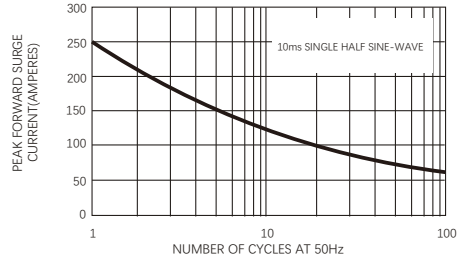


Fig.3-Typical Instantaneous Forward Characteristics(Per Leg)

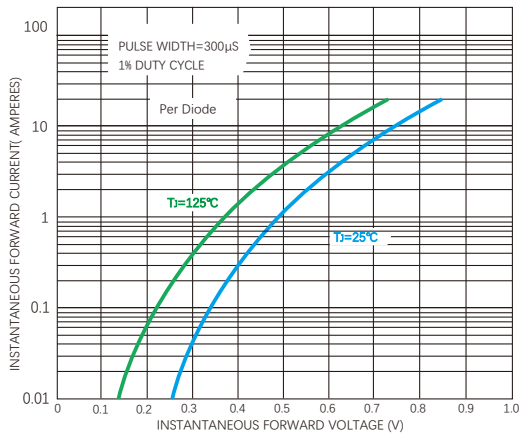


Fig.4-Typical Reverse Characteristics(Per Leg)

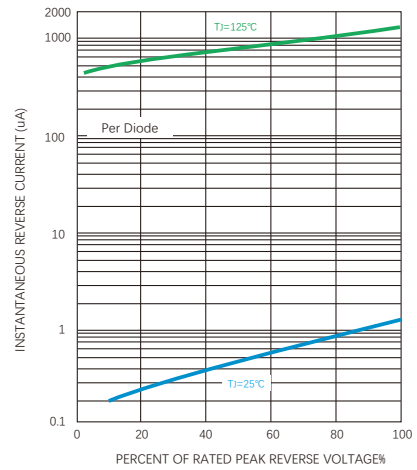
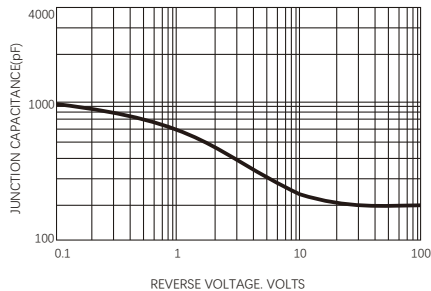
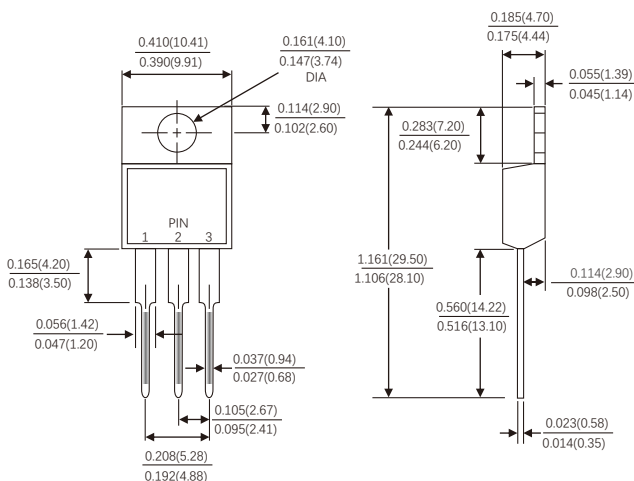
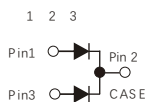


Fig.5-Typical Junction Capacitance(Per Leg)



TO-220AB

SR30100CT

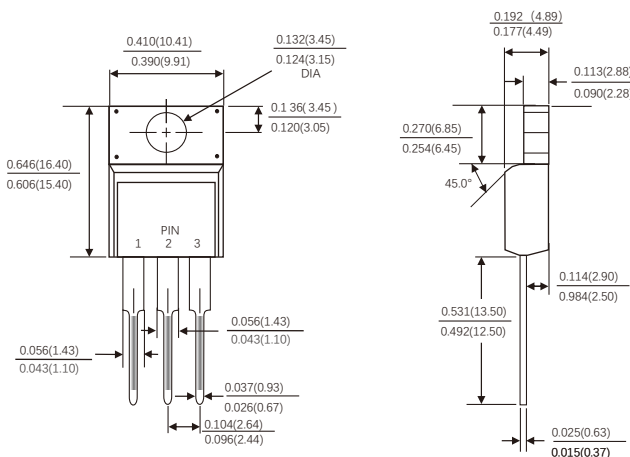
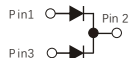
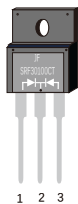


Dimensions in inches and (millimeters)

ITO-220AB

ITO-220AB

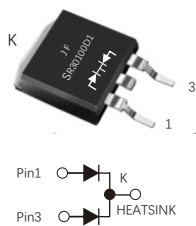
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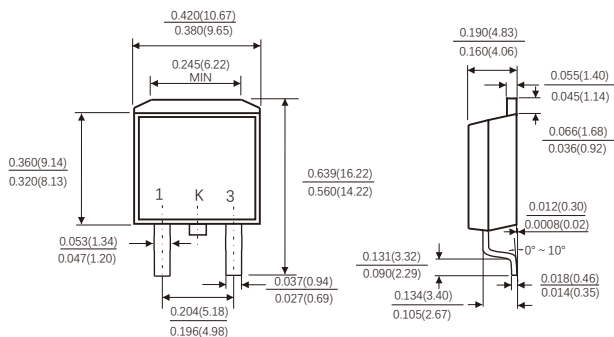
Dimensions in inches and (millimeters)

TO-263

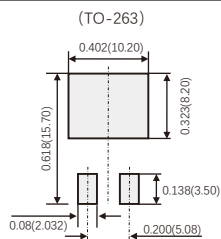
SR30100D1



TO-263



Suggested Pad Layout



(设计者可参考推荐值根据焊接工艺要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

Dimensions in inches and (millimeters)

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