

## 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-263AB package)
- Solder bath temperature 275°C maximum, 10s, per JESD22-B106 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2015/263/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

## TYPICAL APPLICATIONS

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

PRIMARY CHARACTERISTICS	
$I_F(AV)$	2×15A
$V_{RRM}$	200V
$I_{FSM}$	250A
$V_F$ at $I_F=15.0A$ ,Per leg	0.83V
$I_R$	2μA
$T_J(MAX)$	150°C
Package	TO-220AB, ITO-220AB, TO-263AB
Diode variations	Common cathode

## MAXIMUM RATINGS

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

Parameter		Symbol	Value	Unit
Maximum repetitive peak reverse voltage		$V_{RRM}$	200	V
Maximum average forward rectified current (see fig.1)	Per leg	$I_F(AV)$	15.0	A
	Total device		30.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated $T_L$ )		$I_{FSM}$	250	A
Operating junction and Storage temperature range		$T_J, T_{stg}$	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	Per leg IF=15.0A	T <sub>J</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.83	0.95	V
		T <sub>J</sub> =100°C		0.74	-	
		T <sub>J</sub> =125°C		0.70	-	
	Per leg IF=10.0A	T <sub>J</sub> =25°C		0.77	0.85	
		T <sub>J</sub> =100°C		0.68	-	
		T <sub>J</sub> =125°C		0.65	-	
Reverse current	VR= 200V	T <sub>J</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	2	5	μA
		T <sub>J</sub> =100°C		-	2	mA
		T <sub>J</sub> =125°C		-	5	
Typical junction capacitance	4V,1MHz		C <sub>J</sub>	272		pF

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

2.Pulse test: pulse width≤40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	SR30200CT	SRF30200CT	SR30200D1	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJC</sub>	1.0	3.2	1.0	°C/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)
SR30200CT TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SRF30200CT ITO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SR30200D1 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)
SR30200D1 TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4

FIG.1-FORWARD CURRENT DERATING CURVE

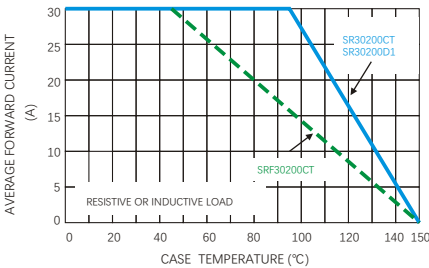


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

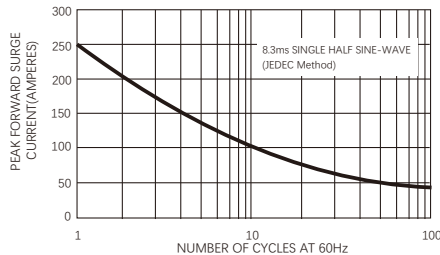


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

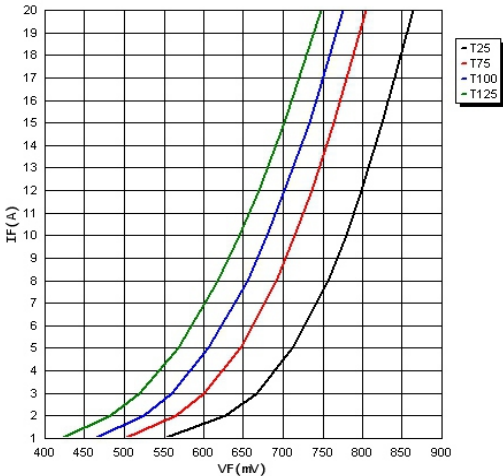


FIG.4-TYPICAL REVERSE CHARACTERISTICS

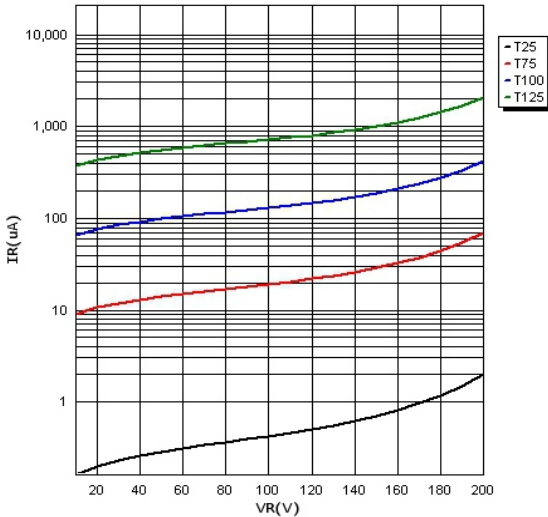
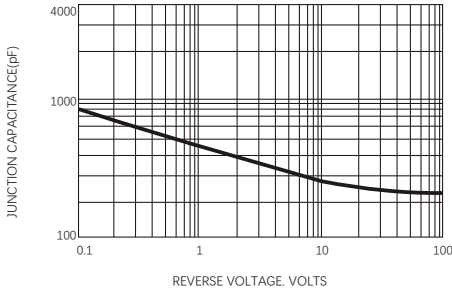
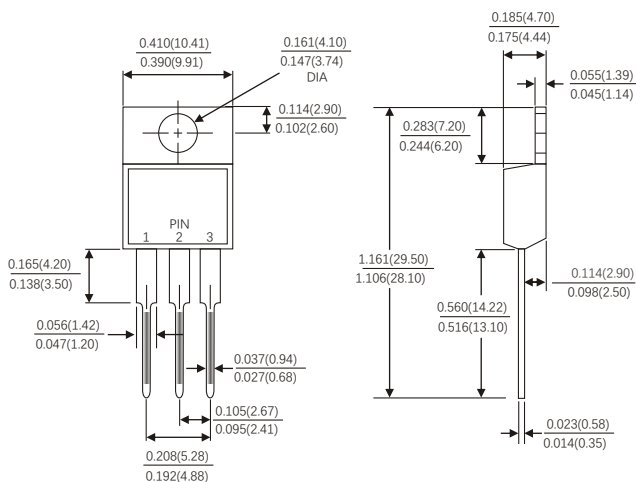


FIG.5-TYPICAL JUNCTION CAPACITANCE



## TO-220AB

SR30200CT

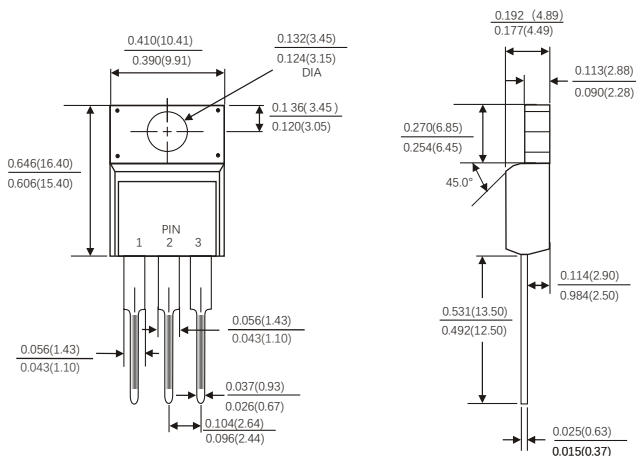
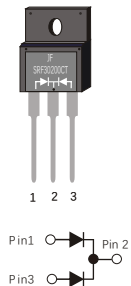


Dimensions in inches and (millimeters)

## ITO-220AB

### ITO-220AB

SRF30200CT



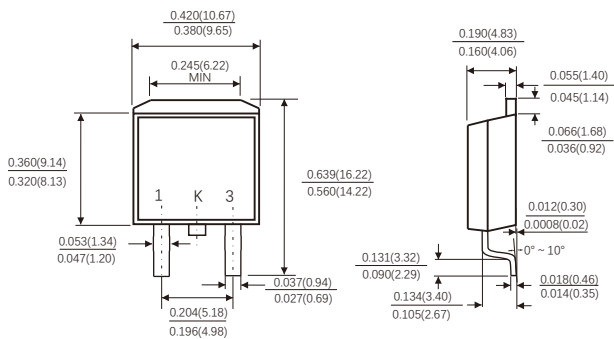
Dimensions in inches and (millimeters)

## TO-263

SR30200D1

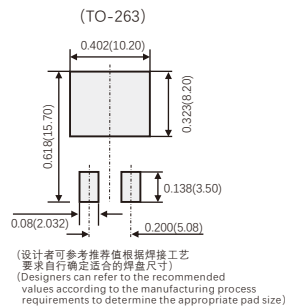


## TO-263



Dimensions in inches and (millimeters)

## Suggested Pad Layout



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