

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
- Meets MSL Level 1 , per J-STD-020,LF MAX peak of 245°C (for TO-263AB page)
- Solder bath temperature 275°C maximum , 10s , per JESD22-B106 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2011/65/EU
- AEC-Q101 qualified and PPAP capable



AEC-Q101 Qualified

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

MAXIMUM RATINGS

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

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-263
Diode variations	Common cathode

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 TL)		I_{FSM}	250	A
Peak repetitive reverse current per diode at $t_p=2\mu s$ 1KHz		I_{RRM}	0.5	A
Operating junction and Storage temperature range		T_J, T_{stg}	-55 to +150	°C
Isolation voltage(ITO-220AB only)from terminals to heatsink $t=1$ min		V_{AC}	1500	V

SR30200CT-V,SRF30200CT-V,SR30200D1-V

ELECTRICAL CHARACTERISTCS (TA=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	Per leg IF=15.0A	TA=25°C	VF 1)	0.83	0.95	V
		TA=100°C		0.74	-	
		TA=125°C		0.70	-	
	Per leg IF=10.0A	TA=25°C		0.77	0.85	
		TA=100°C		0.68	-	
		TA=125°C		0.65	-	
Reverse current	VR=200V	TA=25°C	IR 2)	2	5	μA
		TA=100°C		-	2	mA
		TA=125°C		-	5	
Typical junction capacitance	4V,1MHz		CJ	272		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS

Parameter	Symbol	SR30200CT-V	SRF30200CT-V	SR30200D1-V	Unit
Typical thermal resistance 3)	RθJC	2.0	4.5	2.0	°C/W

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton SizeL×W×H(mm)	Quantity(box/carton)
SR30200CT-V-TO-220AB	P/T	558×148×38	1000	565×225×170	5
SRF30200CT-V-ITO-220AB	P/T	558×148×38	1000	565×225×170	5
SR30200D1-V-TO-263	P/T	558×148×38	1000	565×225×170	5

SR30200CT-V,SRF30200CT-V,SR30200D1-V

FIG.1-FORWARD CURRENT DERATING CURVE

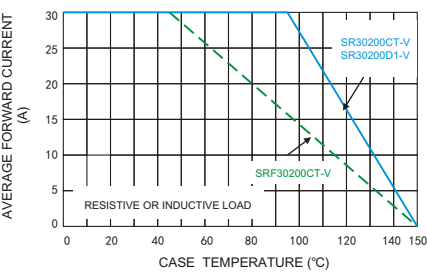


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

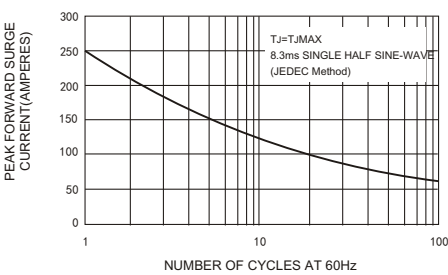


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

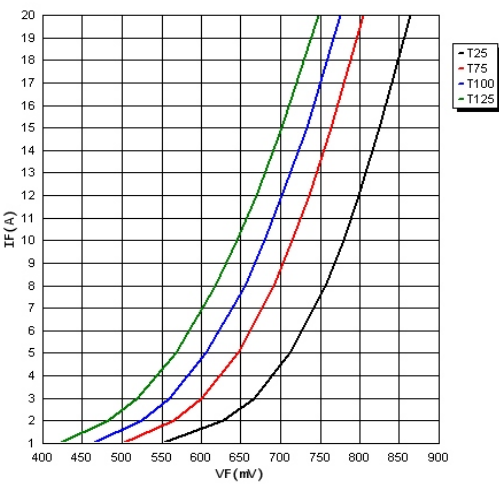


FIG.4-TYPICAL REVERSE CHARACTERISTICS

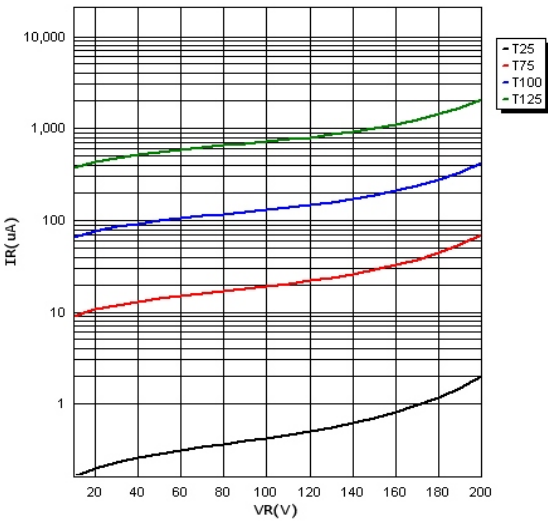
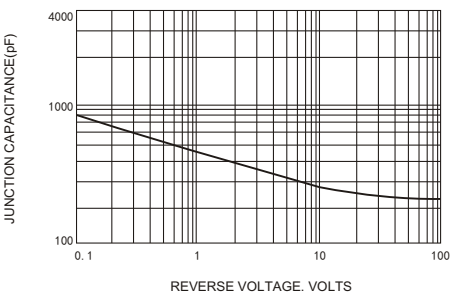


FIG.5-TYPICAL JUNCTION CAPACITANCE

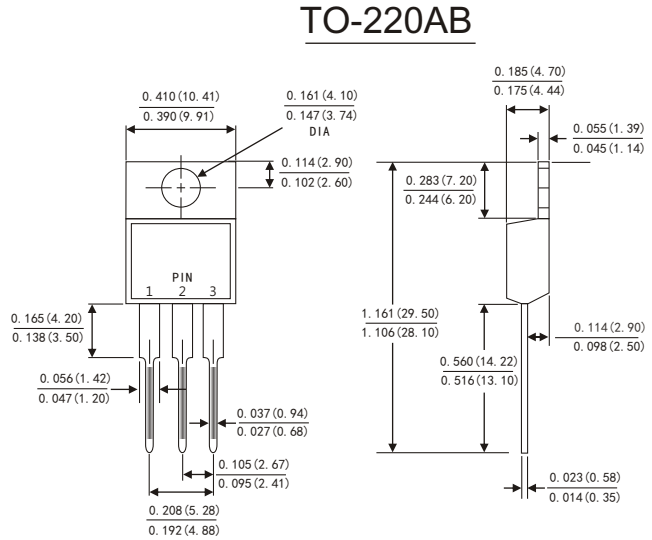
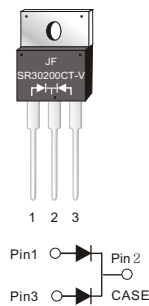


SR30200CT-V,SRF30200CT-V,SR30200D1-V

PACKAGE OUTLINE DIMENSIONS

TO-220AB

SR30200CT-V

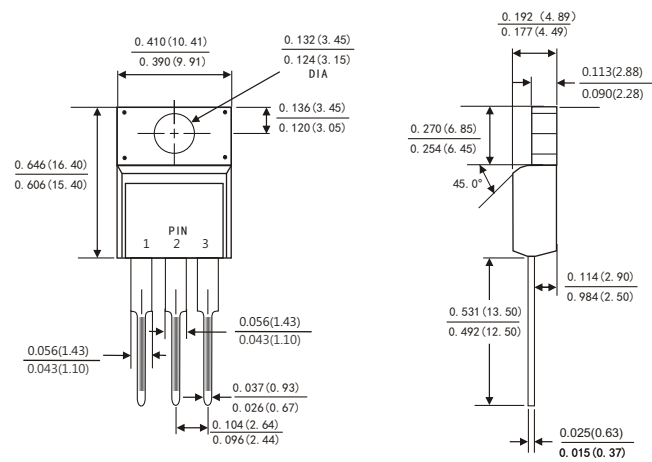
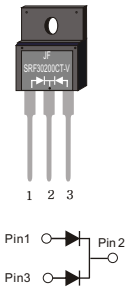


Dimensions in inches and (millimeters)

ITO-220AB

ITO-220AB

SRF30200CT-V



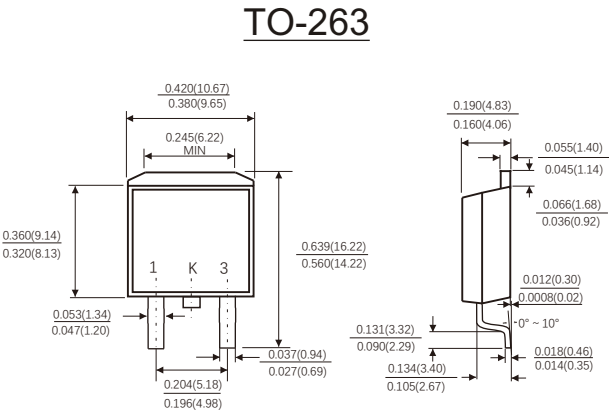
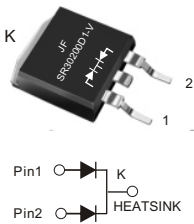
Dimensions in inches and (millimeters)

SR30200CT-V,SRF30200CT-V,SR30200D1-V

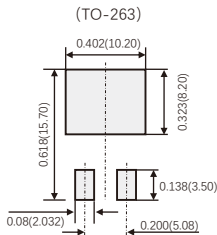
PACKAGE OUTLINE DIMENSIONS

TO-263

SR30200D1-V



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)

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