

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



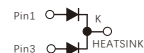
TO-220AB



ITO-220AB



TO-263
SR30200LD1



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	0.88V
I_R	5μA
$T_J(MAX)$	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 T_L)		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

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	Per leg I _F =15.0A	T _J =25°C	V _F 1)	-	0.88	V
		T _J =100°C		-	0.78	
		T _J =125°C		0.72	0.75	
	Per leg I _F =10.0A	T _J =25°C		-	0.83	
		T _J =100°C		-	0.73	
		T _J =125°C		0.65	0.68	
Reverse current	V _R =200V	T _J =25°C	I _R 2)	5.0	20	μA
		T _J =100°C		0.3	1	mA
		T _J =125°C		2.1	5	
Typical junction capacitance	4V,1MHz		C _J	272		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SR30200LCT	SRF30200LCT	SR30200LD1	Unit
Typical thermal resistance 3)	R _{θjc}	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)
SR30200LCT-TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SRF30200LCT-ITO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SR30200LD1-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)
SR30200LD1-TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4

FIG.1-FORWARD CURRENT DERATING CURVE

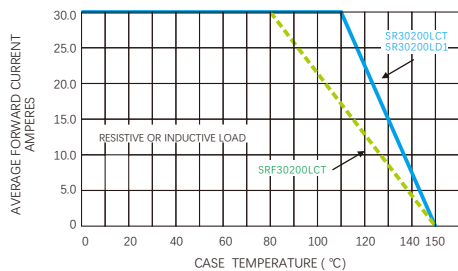


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

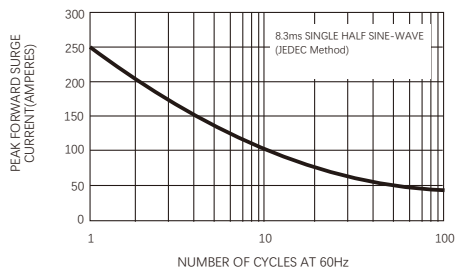


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

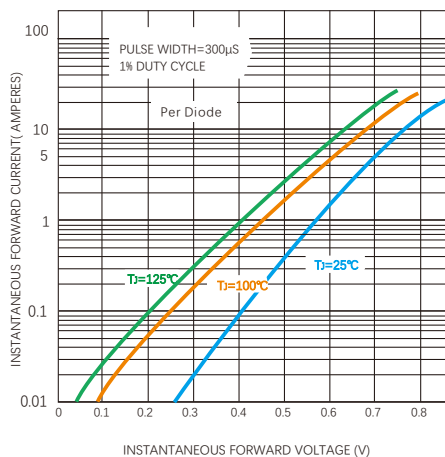


FIG.4-TYPICAL REVERSE CHARACTERISTICS

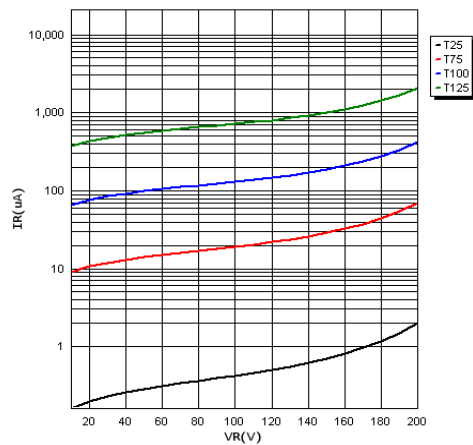
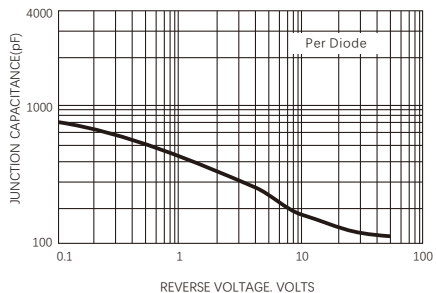


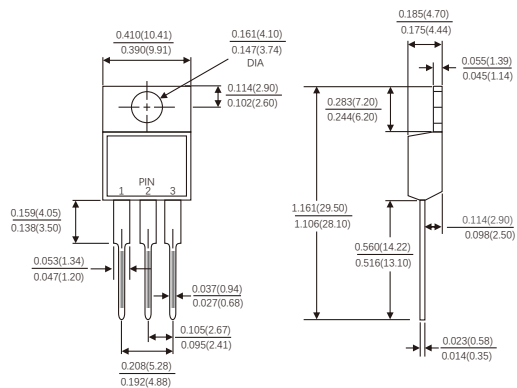
FIG.5-TYPICAL JUNCTION CAPACITANCE



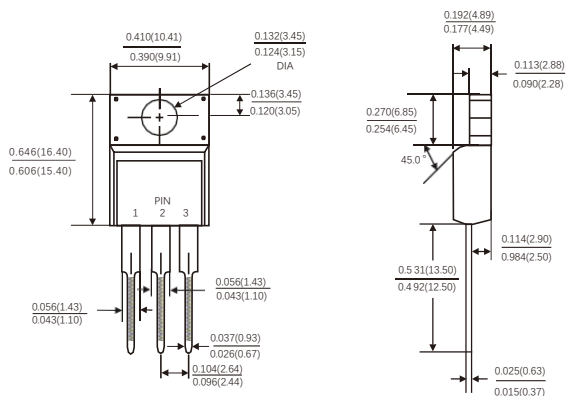
PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

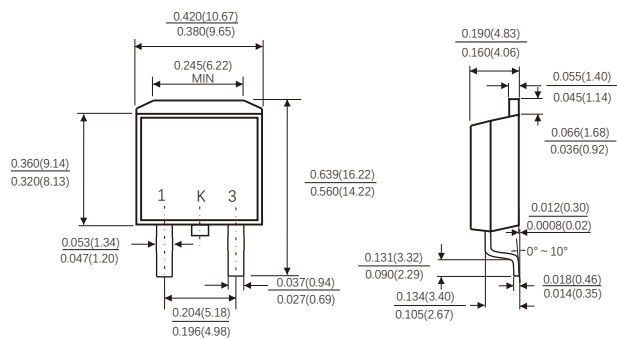
TO-220AB



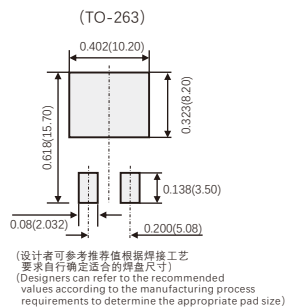
ITO-220AB



TO-263



Suggested Pad Layout



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