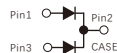


FEATURES

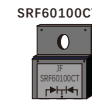
- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Meets MSL Level 1, per J-STD-020,LF MAX peak of 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



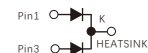
TO-220AB



ITO-220AB



TO-263
SR60100D1



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)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (see fig.1)	Per leg	30.0	A
	Total device	60.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) Per Leg	I_{FSM}	300	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

PRIMARY CHARACTERISTICS	
$I_r(AV)$	2×30A
V_{RRM}	100V
I_{FSM}	300A
V_f at $I_f=30.0A$,Per leg	0.84V
I_r	0.8μA
$T_j(MAX)$	150°C
Package	TO-220AB, ITO-220AB, TO-263
Diode variations	Common cathode

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =30.0A	T _A =25 ^o C	V _F ¹⁾	0.84	0.88	V
		T _A =100 ^o C		0.74	-	
		T _A =125 ^o C		0.70	-	
	I _F =5.0A	T _A =25 ^o C		0.62	-	
		T _A =100 ^o C		0.53	-	
		T _A =125 ^o C		0.50	-	
Reverse current	V _R =100V	T _A =25 ^o C	I _R ²⁾	-	5.0	μA
		T _A =100 ^o C		-	2.0	mA
		T _A =125 ^o C		-	5.5	
Typical junction capacitance	4V,1MHz		C _J	620		pF

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

2.Pulse test: pulse width ≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SR60100CT	SRF60100CT	SR60100D1	Unit
Typical thermal resistance ³⁾	R _{θc}	0.8	2.8	0.8	°C/W

3.Thermal resistance from junction to case,Total device

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)
SR60100CT-TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SRF60100CT-ITO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SR60100D1-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)
SR60100D1-TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4

FIG.1-FORWARD CURRENT DERATING CURVE

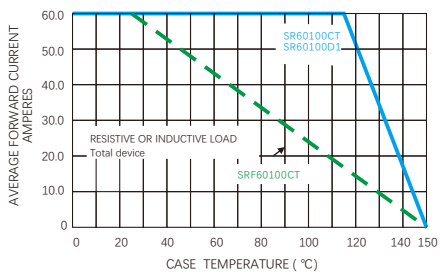


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

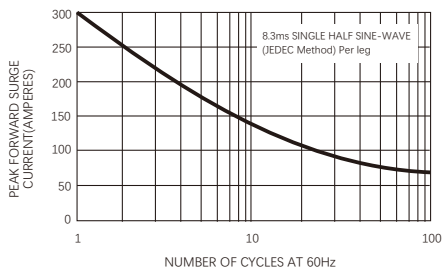


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS (Per Leg)

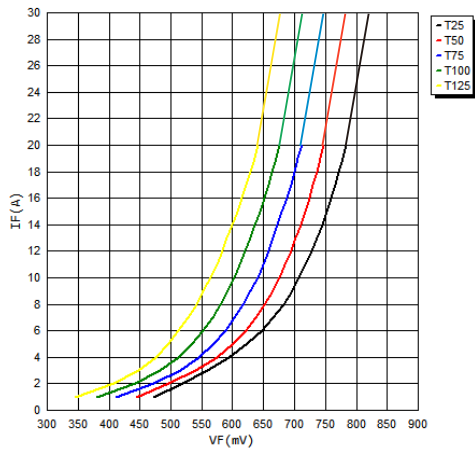


FIG.4-TYPICAL REVERSE CHARACTERISTICS (Per Leg)

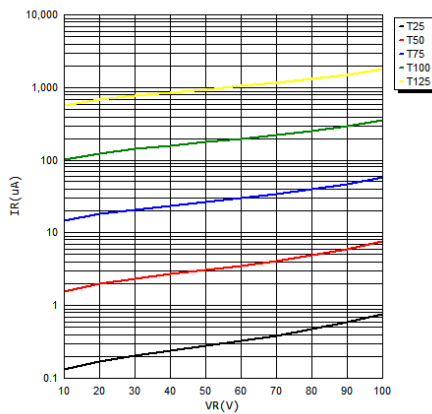
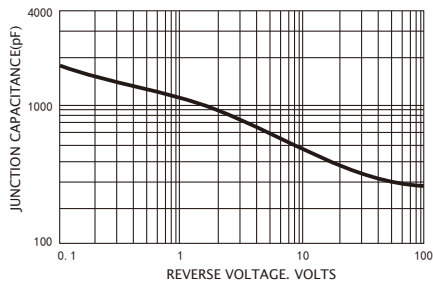
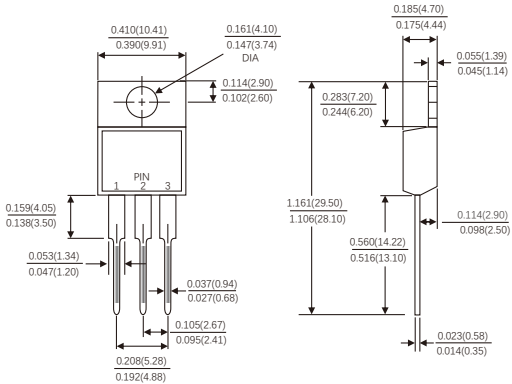


FIG.5-TYPICAL JUNCTION CAPACITANCE (Per Leg)

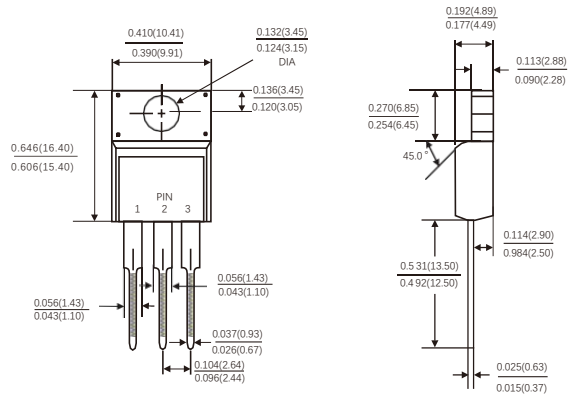


Dimensions in inches and (millimeters)

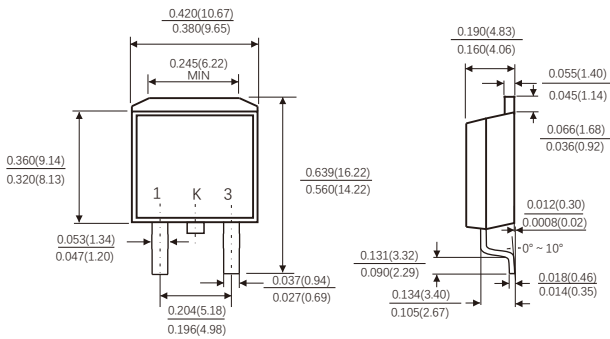
TO-220AB



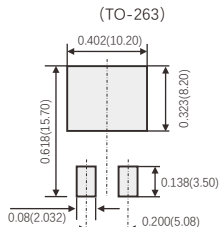
ITO-220AB



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)

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