SEMICONDUCTOR

SR20100D3

SCHOTTKY BARRIER RECTIFIER

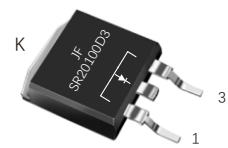
Reverse Voltage - 100 Volts
Forward Current - 20.0Amperes

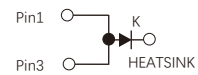
FEATURES

- 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℃
- Component in accordance to RoHS 2015/863/EU

RoHS COMPLIANT

TO-263
SR20100D3





MECHANICAL DATA

- Case: JEDEC TO-263
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked

PRIMARY CHARACTERISTICS	
I_F(AV)	20A
V_{RRM}	100V
I_{FSM}	350A
V_F at I_F=20A, 125℃	0.65V
$I_{R,Typ.25℃}$	2μA
T_J(MAX)	150℃
Package	TO-263
Diode variations	Single chip

TYPICAL APPLICATIONS

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

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter		Symbol	Value	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	100	V
Maximum forward rectified current (see fig.1)	Average(D=0.5,square wave)	$I_{F(AV)}$	20.0	A
	RMS		30.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)		I_{FSM}	350	A
Operating junction and Storage temperature range		T_J ,T_{stg}	-55 to+150	℃

ELECTRICAL CHARACTERISTCS (TA=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	T_J=25℃	I_F=5.0A	V_F 1)	0.61	-	V
		I_F=10.0A		0.70	-	
		I_F=20.0A		0.79	0.85	
	T_J=125℃	I_F=5.0A		0.49	-	
		I_F=10.0A		0.56	-	
		I_F=20.0A		0.65	0.69	
Reverse current	T_J=25℃	V_R=100V	I_R 2)	2.0	5.0	μA
	T_J=125℃			-	5.0	mA
Typical junction capacitance	4V,1MHz		C_J	475		pF

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

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-263	Unit
Typical thermal resistance 3)	$R_{\theta JC}$	1.2	℃/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)
SR20100D3-TO-263	P/T	558×148×38	1000	565×225×170	5

FIG.1-FORWARD CURRENT DERATING CURVE

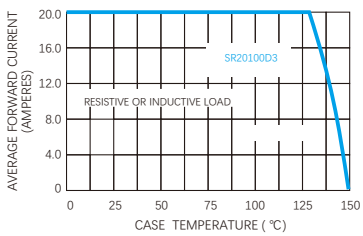


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

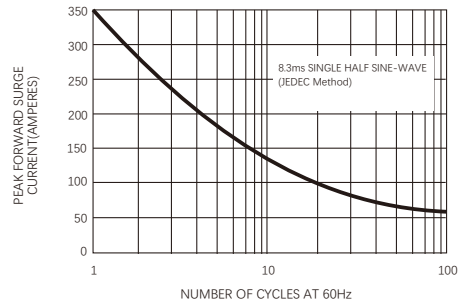


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

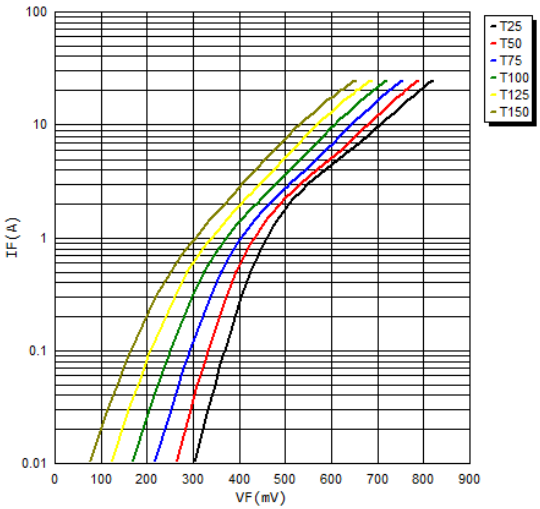


FIG.4-TYPICAL REVERSE CHARACTERISTICS

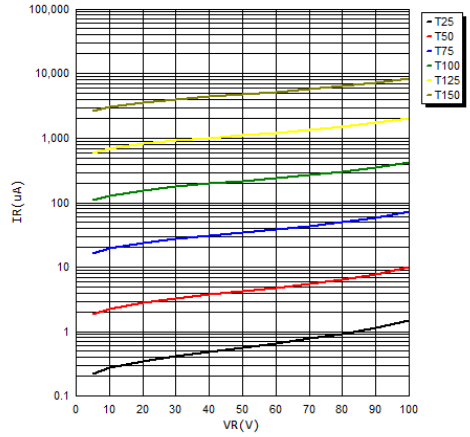
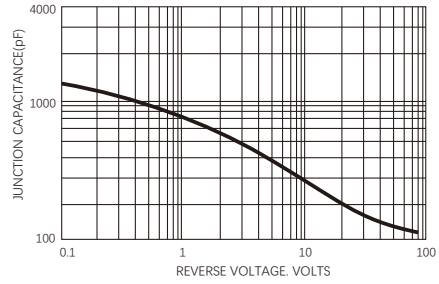


FIG.5-TYPICAL JUNCTION CAPACITANCE



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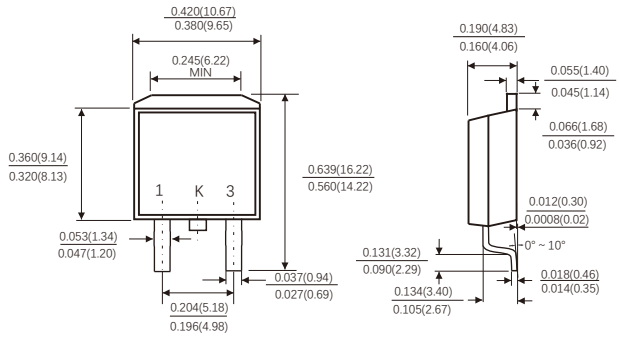
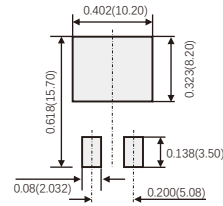


Suggested Pad Layout

(TO-263)



(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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