SEMICONDUCTOR

SR5200D2

SCHOTTKY BARRIER RECTIFIER

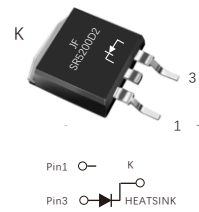
Reverse Voltage - 200 Volts
Forward Current - 5.0Amperes

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
- Meets MSL Level 1, per J-STD-020,LF MAX peak of 260℃ for TO-263 package
- Component in accordance to RoHS 2015/863/EU

RoHS COMPLIANT

TO-263
SR5200D2



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

TYPICAL APPLICATIONS

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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	5A
V_{RRM}	200V
I_{FSM}	120A
V_F at I_F=5.0A(25℃)	0.80V
I_R	0.5μA
T_J(MAX)	150℃
Package	TO-263
Diode variations	Single

MAXIMUM RATINGS

(Ratings at 25℃ 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)	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	120	A
Peak repetitive reverse current per diode at tp=2μs 1KHz	I_{RRM}	0.5	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=0.5A	V_F 1)	0.63		V
		I_F=1.0A		0.67		
		I_F=3.0A		0.75		
		I_F=5.0A		0.80	0.88	
	T_J=125℃	I_F=0.5A		0.47		
		I_F=1.0A		0.52		
		I_F=3.0A		0.61	-	
		I_F=5.0A		0.66	0.73	
Reverse current	T_J=25℃	V_R=200V	I_R 2)	0.50	5.0	μA
	T_J=125℃			0.22	2.5	mA
	T_J=25℃	V_R=160V		0.30	-	μA
	T_J=125℃			0.17	-	mA
Typical junction capacitance	4V,1MHz		C_J	85		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)	$R_{\theta JC}$	2.5	℃/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)
SR5200D2-TO-263	P/T	558×148×38	1000	565×225×170	5

RATINGS AND CHARACTERISTIC OF SR5200D2

FIG.1-FORWARD CURRENT DERATING CURVE

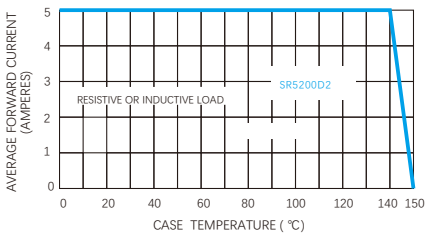


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

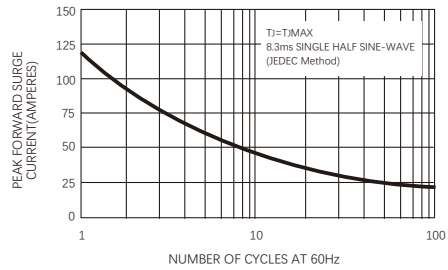


FIG.3-TYPICAL REVERSE CHARACTERISTICS

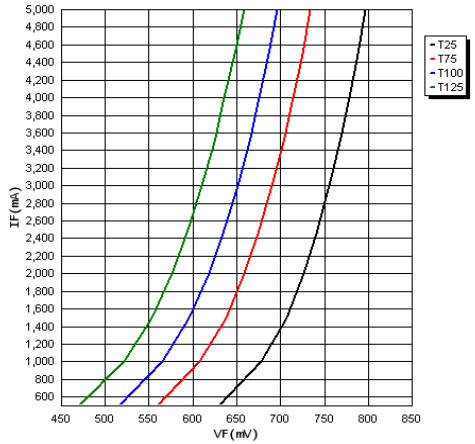


FIG.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

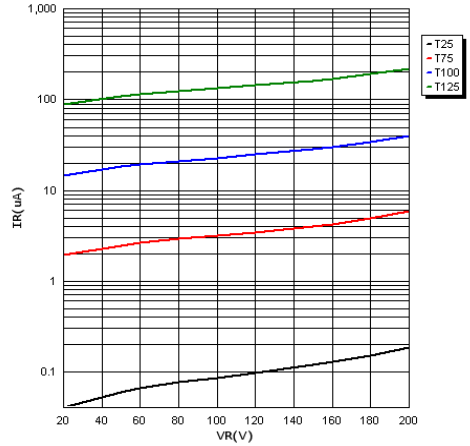
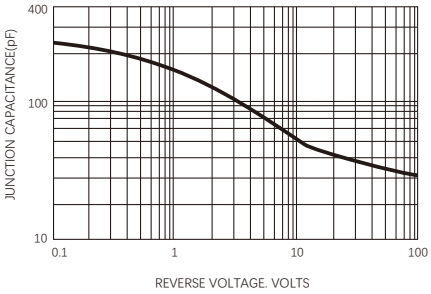
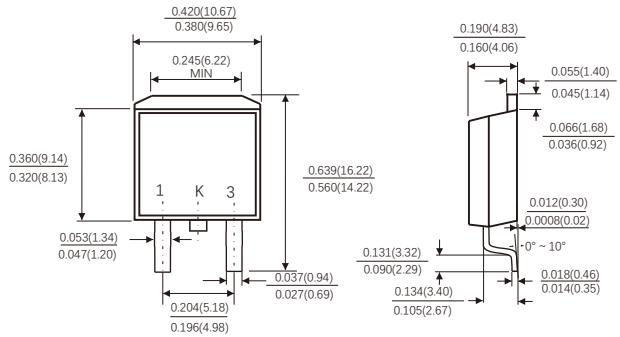


FIG.5-TYPICAL JUNCTION CAPACITANCE

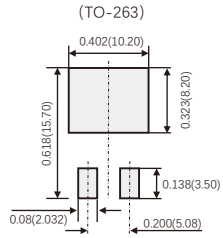


Dimensions in inches and (millimeters)

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)

Friendship Reminder

- JiNan JingHeng（hereinafter referred to as JH） reserves the right to make changes to this document and its products and specifications at anytime without notice.
  济南晶恒（以下简称JH）保留，未经通知变更本文件和与本文件相关的产品及规格的权利。
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
  使用方应在使用、采购本产品之前获取并确认产品信息和规格书的最新版本。
- JH makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.
  JH对其产品用于某特定用途的适用性，既不做任何保证、说明或担保、也不承担任何应用协助或使用方设计的法定责任。
- JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
  JH不保证或承担任何责任，其产品被采购使用于任何非预期或授权的应用。
- No license is granted by implication or otherwise under any intellectual property rights of JH.
  此规格书属于JH的知识产权,没有经过我司授权不得抄袭。
- JH's products are not authorized for use as critical components in life support devices or systems without express written approval of JH.
  没有JH的书面授权，JH的产品不能在生命支撑设备或系统里作为关键零件使用。