SEMICONDUCTOR

SR20300D2

SCHOT TKY BARRIER RECTIFIER

Reverse Voltage - 300 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
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

RoHS COMPLIANT

TO-263
SR20300D2

MECHANICAL D ATA

- 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	
$I_{F(AV)}$	20A
V_{RRM}	300V
I_{FSM}	200A
V_F at I_F=20A, 125℃	0.77V
I_RTyp,25℃	0.5μA
T_J(MAX)	150℃
Package	TO-263
Diode variations	Single chip

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	300	V
Maximum forward average rectified current (see fig.1)	$I_{F(AV)}$	20.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200	A
Operating junction and Storage temperature range	T_J ,T_{stg}	-55 to+150	℃

ELECTRICAL CHARACTERISTCS (T_A=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	I_F=20A	T_A=25℃	V_F 1)	0.90	0.95	V
		T_A=100℃		0.80	-	
		T_A=125℃		0.77	-	
	I_F=5A	T_A=25℃		0.76	-	
		T_A=100℃		0.66	-	
		T_A=125℃		0.62	-	
Reverse current	V_R=300V	T_A=25℃	I_R 2)	-	5.0	μA
		T_A=100℃		-	0.5	mA
		T_A=125℃		-	1.5	
Typical junction capacitance	4V,1MHz		C_J	214		pF

Notes: 1.P ulse 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)	$R_{\theta JC}$	1.0	℃/W

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMA TION

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)
Sr20300D2-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)
SR20300D2-TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4

SEMICONDUCTOR

RATINGS AND CHARACTERISTIC OF SR20300D2

FIG.1-FORWARD CURRENT DERA TING CURVE

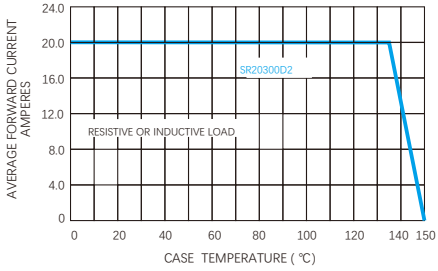


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

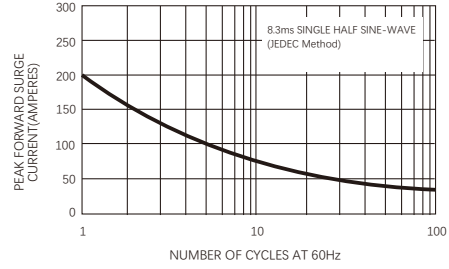


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

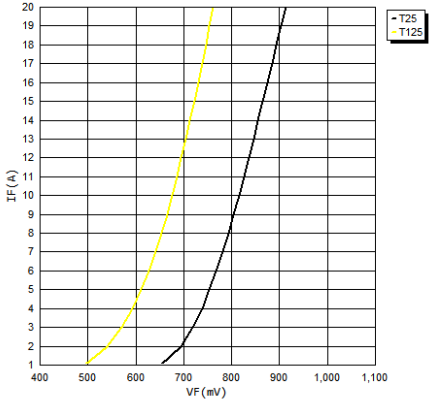


FIG.4-TYPICAL REVERSE CHARACTERISTICS

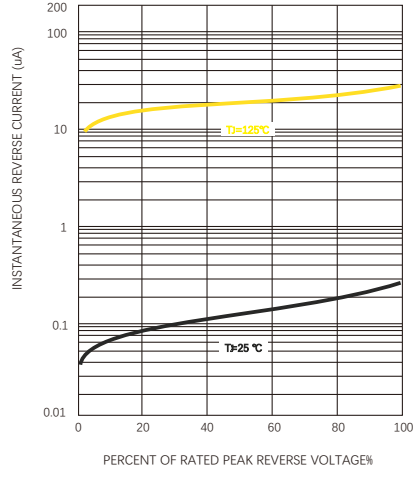
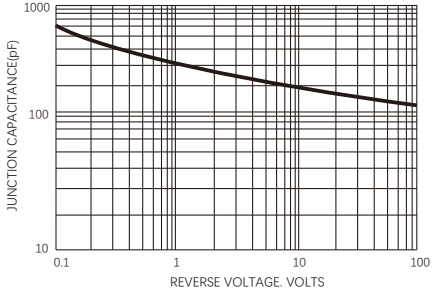


FIG.5-TYPICAL JUNCTION CAPACITANCE



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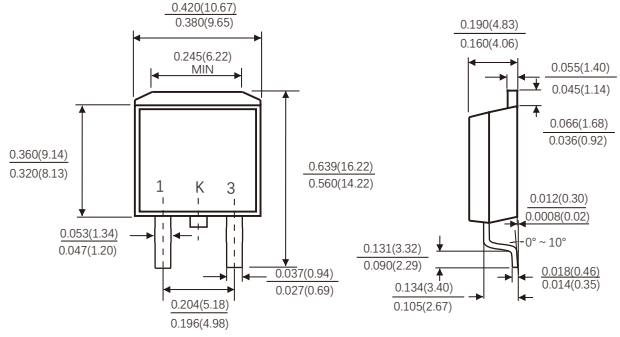
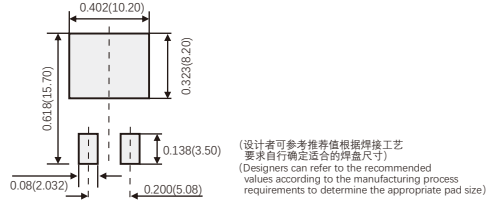


Suggested Pad Layout

(TO-263)



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