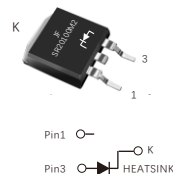


FEATURES

- 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-252 package
- Component in accordance to RoHS 2015/863/EU



TO-252
SR20100M2



MECHANICAL DATA

- Case: JEDEC TO-252
- 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

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)	I _{F(AV)}	20.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I _{FSM}	200	A
Operating junction and Storage temperature range	T _J ,T _{stg}	-55 to+150	°C

PRIMARY CHARACTERISTICS	
I _{F(AV)}	20A
V _{RRM}	100V
I _{FSM}	200A
V _F at I _F =20.0A(125°C)	0.64V
I _R	5μA
T _J (MAX)	150°C
Package	TO-252
Diode variations	Single

RATINGS AND CHARACTERISTIC OF SR20100M2

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	I _f =20.0A	T _j =25°C	V _F ¹⁾	0.80	0.85	V
		T _j =100°C		0.67	-	
		T _j =125°C		0.64	-	
	I _f =5.0A	T _j =25°C		0.63	0.68	
		T _j =100°C		0.54	-	
		T _j =125°C		0.50	-	
Reverse current	V _r =100V	T _j =25°C	I _r ²⁾	-	20	μA
		T _j =100°C		-	1	mA
		T _j =125°C		-	5	
Typical junction capacitance	4V,1MHz		C _j	60		pF

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

2.Pulse test: pulse width ≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-252	Unit
Typical thermal resistance ³⁾	R _{θJC}	2.5	°C/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)
SR20100M2-TO-252	P/T	558×148×38	4000	565×225×170	5

FIG.1-FORWARD CURRENT DERATING CURVE

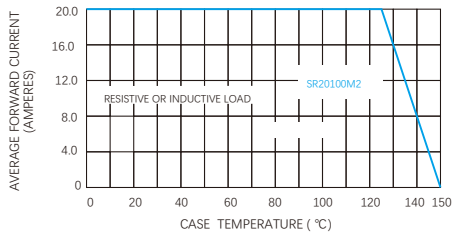


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

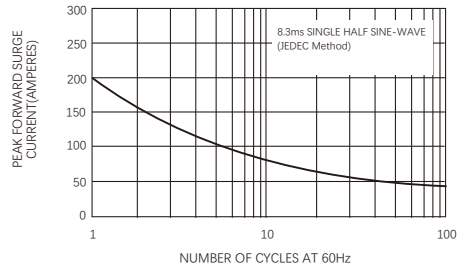


FIG.3-TYPICAL REVERSE CHARACTERISTICS

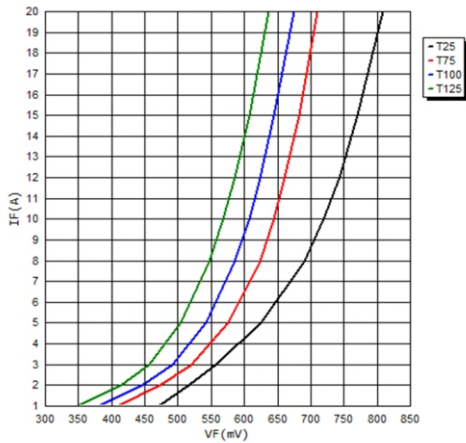


FIG.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

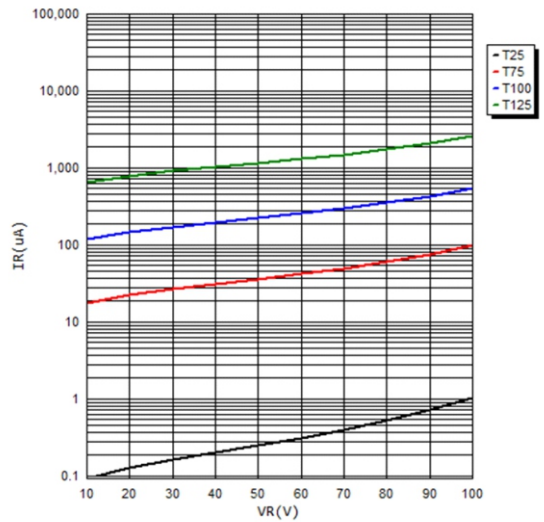
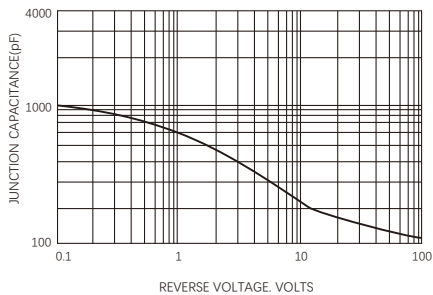
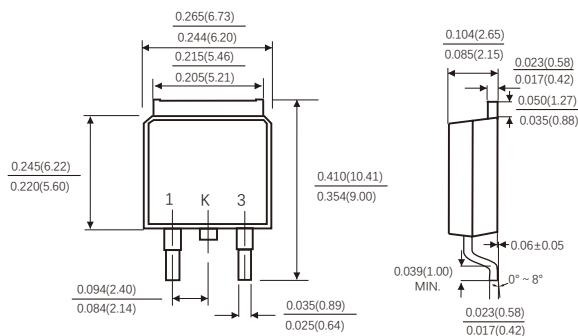


FIG.5-TYPICAL JUNCTION CAPACITANCE



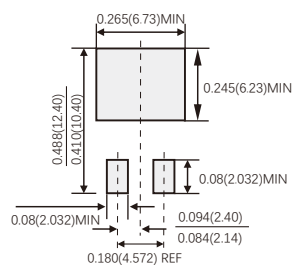
Dimensions in inches and (millimeters)

TO-252



Suggested Pad Layout

(TO-252)



(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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