

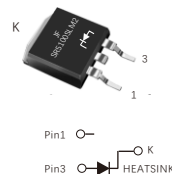
FEATURES

- 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

SR5100SLM2



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)	$I_F(AV)$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	150	A
Operating junction and Storage temperature range	T_J, T_{stg}	-55 to +150	°C

PRIMARY CHARACTERISTICS

$I_F(AV)$	5.0A
V_{RRM}	100V
I_{FSM}	150A
V_f at $I_F=5.0A(25^{\circ}C)$	0.55V
$I_R(typ)$	5 μ A
$T_J(MAX)$	150°C
Package	TO-252
Diode variations	Single

RATINGS AND CHARACTERISTIC OF SR5100SLM2

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =5.0A	T _J =25°C	V _F ¹⁾	0.55	0.58	V
		T _J =100°C		0.52	-	
		T _J =125°C		0.50	-	
Reverse current	V _R =100V	T _J =25°C	I _R ²⁾	-	20	μA
		T _J =100°C		-	5.0	mA
		T _J =125°C		-	20	
Typical junction capacitance	4V,1MHz		C _J	616		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

AVAILABLE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton SizeL×W×H(mm)	Quantity(box/carton)
SR5100SLM2-TO-252	P/T	558×148×38	4000	565×225×170	5

RATINGS AND CHARACTERISTIC OF SR5100SLM2

FIG.1-FORWARD CURRENT DERATING CURVE

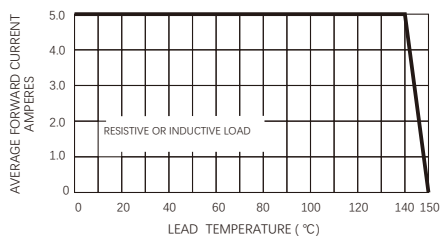


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

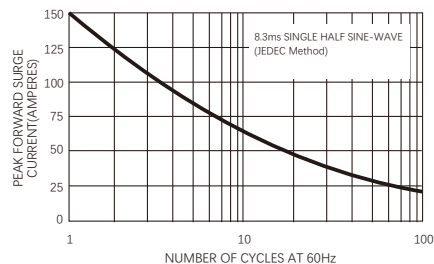


FIG.3-TYPICAL REVERSE CHARACTERISTICS

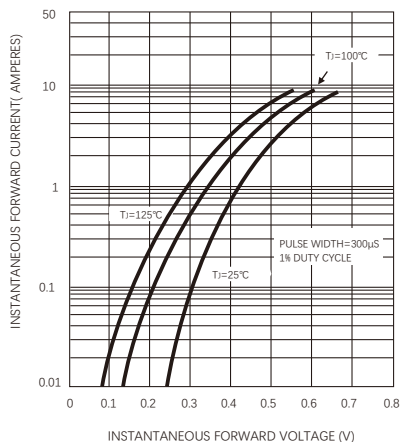


FIG.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

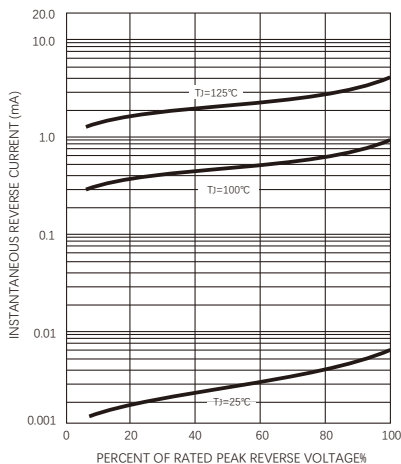
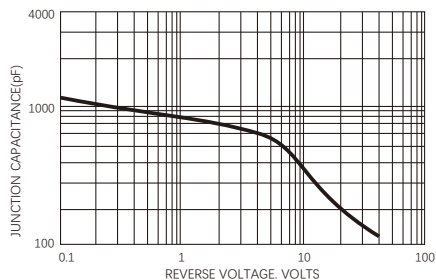
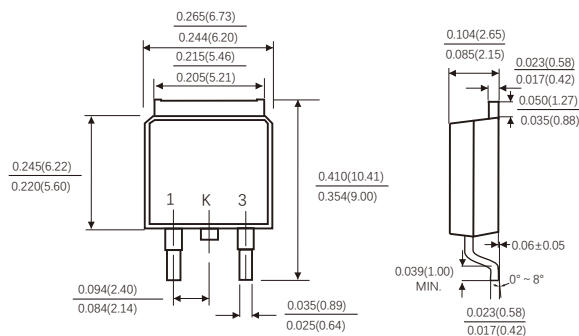


FIG.5-TYPICAL JUNCTION CAPACITANCE



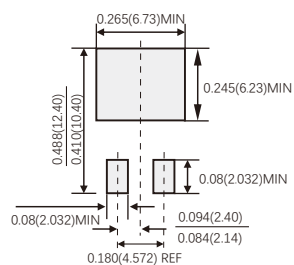
Dimensions in inches and (millimeters)

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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