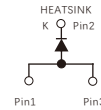


## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



## TO-252 (DPAK)



## MECHANICAL DATA

- Case: JEDEC TO-252 molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

## 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)	$I_{F(AV)}$	30	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	250	A
Operating junction temperature range	$T_j$	-55 to+150	°C
Storage temperature range	$T_{stg}$	-55 to+150	°C

PRIMARY CHARACTERISTICS	
$I_{RAV}$	30.0A
$V_{RRM}$	100V
$I_{FSM}$	200A
$V_F$ at $I_F=30.0A(25^\circ C)$	0.77V
$T_{JMAX}$	150°C

ELECTRICAL CHARACTERISTICS (Pin1 and 3 is shorted,  $T_A=25^{\circ}\text{C}$  Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	If=30.0A	$T_A=25^{\circ}\text{C}$	$V_F$ <sup>1)</sup>	0.77	0.80	V
		$T_A=100^{\circ}\text{C}$		0.71	-	
		$T_A=125^{\circ}\text{C}$		0.67	-	
	If=5.0A	$T_A=25^{\circ}\text{C}$		0.45	-	
		$T_A=100^{\circ}\text{C}$		0.39	-	
		$T_A=125^{\circ}\text{C}$		0.37	-	
Reverse current	$V_R=100\text{V}$	$T_A=25^{\circ}\text{C}$	$I_R$ <sup>2)</sup>	-	30	$\mu\text{A}$
		$T_A=100^{\circ}\text{C}$		-	5	mA
		$T_A=125^{\circ}\text{C}$		-	20	
Typical junction capacitance	4V,1MHz		$C_J$	1500		pF

 Notes: 1.Pulse test: 300  $\mu\text{s}$  pulse width,1% duty cycle

 2.Pulse test: pulse width  $\leq 40\text{ms}$ 

## THERMAL CHARACTERISTICS

Parameter	Symbol	SR30100LM3	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta\text{JC}}$	2.5	$^{\circ}\text{C/W}$

3.Thermal resistance from junction to case,Total device.

## AVAILABALE PACK INFORMATION

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)
SR30100LM3- TO-252	Tube	565×225×170	548×151×37	520	5	60	75	22.5
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)
SR30100LM3- TO-252	Reel	364×364×235	346×346×23	$\phi 330$	8	1	2500	20

FIG.1-FORWARD CURRENT DERATING CURVE

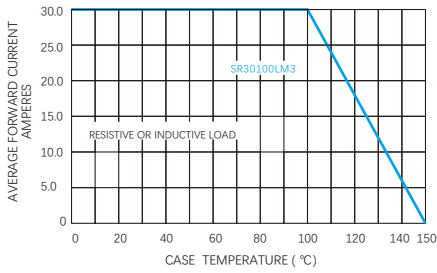


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

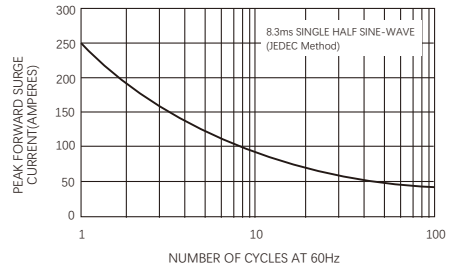


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

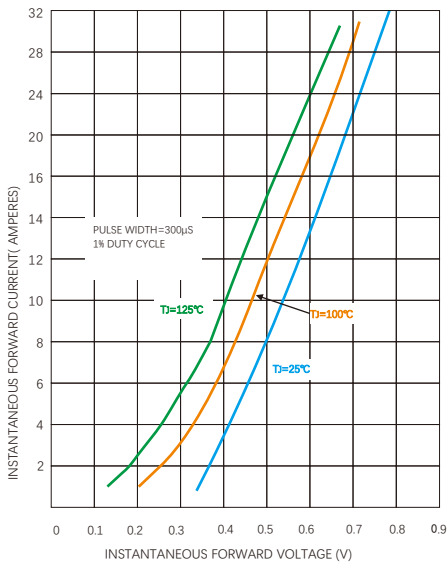


FIG.4-TYPICAL REVERSE CHARACTERISTICS

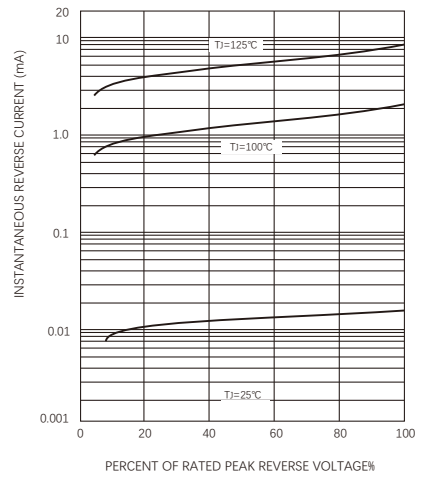
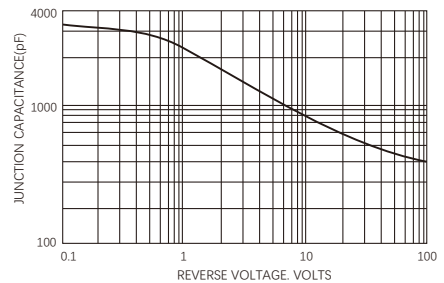
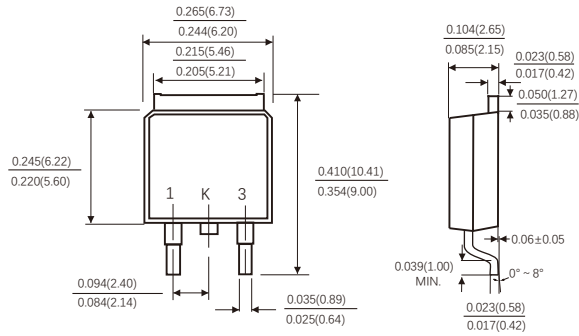


FIG.5-TYPICAL JUNCTION CAPACITANCE



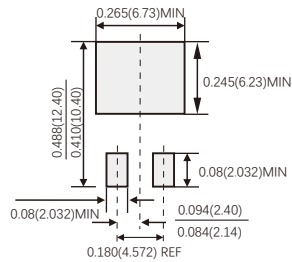
Dimensions in inches and (millimeters)

## 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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