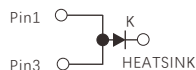


FEATURES

- 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(DPAK)
SR20150LM3



MECHANICAL DATA

- Case: JEDEC TO-252(DPAK)
- 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}	150V
I_{FSM}	200A
V_f at $I_F=20A, 125^\circ C$	0.67V
$I_s Typ, 25^\circ C$	3.0 μA
$T_J(MAX)$	150 $^\circ C$
Package	TO-252
Diode variations	Single chip

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	150	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	$^\circ C$

RATINGS AND CHARACTERISTIC OF SR20150LM3

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =20.0A	T _A =25°C	V _F ¹⁾	0.79	0.85	V
		T _A =100°C		0.70	-	
		T _A =125°C		0.67	-	
	I _F =10.0A	T _A =25°C		0.70	-	
		T _A =100°C		0.61	-	
		T _A =125°C		0.58	-	
Reverse current	V _R =150V	T _A =25°C	I _R ²⁾	-	20	μA
		T _A =100°C		-	2.5	mA
		T _A =125°C		-	10	
Typical junction capacitance	4V,1MHz		C _J	660		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}	1.8	°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)
SR20150LM3-TO-252	Tube	558×148×38	4000	565×225×170	5
SR20150LM3-TO-252	Tape & reel(13")	346×346×23	2500	364×364×250	10

RATINGS AND CHARACTERISTIC OF SR20150LM3

FIG.1-FORWARD CURRENT DERATING CURVE

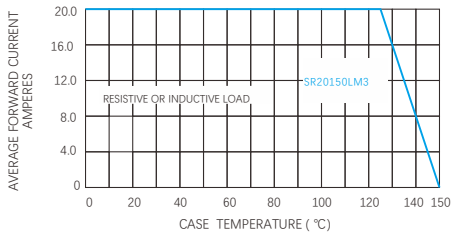


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

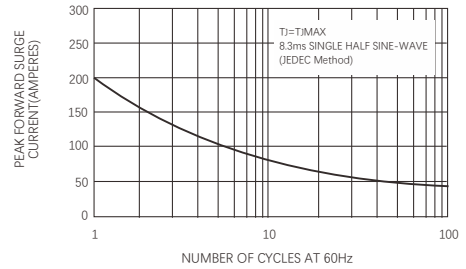


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

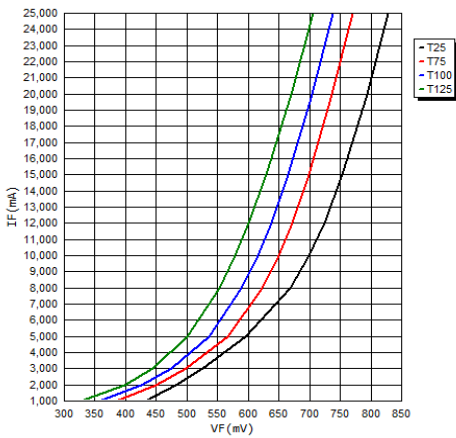


FIG.4-TYPICAL REVERSE CHARACTERISTICS

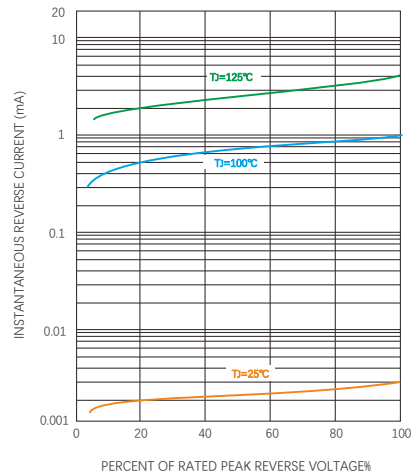
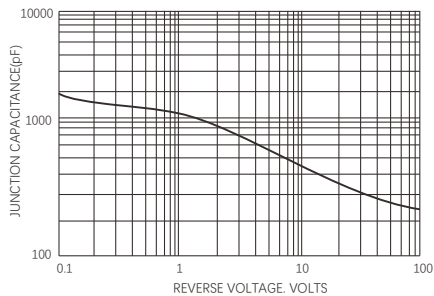
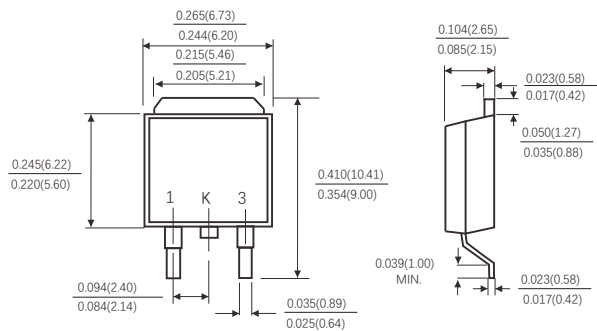


FIG.5-TYPICAL JUNCTION CAPACITANCE

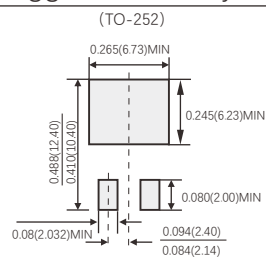


PACKAGE OUTLINE DIMENSIONS

TO-252



Suggested Pad Layout



Dimensions in inches and (millimeters)

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