SEMICONDUCTOR

SR1045LM1

LOW VF SCHOTTKY BARRIER RECTIFIER

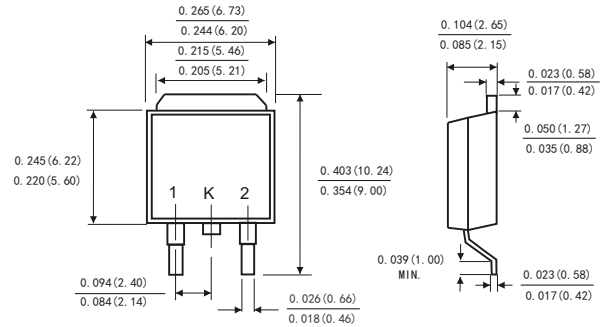
Reverse Voltage - 45 Volts
Forward Current - 10.0Amperes

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℃/10 seconds at terminals Component in accordance to RoHS 2011/65/EU and
- WEEE 2012/19/EU

RoHS COMPLIANT

TO-252
(DPAK)



Dimensions in inches and (milimeters)

MECHANICAL DATA

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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	10.0A
V_{RRM}	45V
I_{FSM}	150A
V_F at I_F=5.0A(125℃)	0.33V
T_{JMAX}	150℃

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter		Symbol	SR1045LM1	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	45	V
Maximum average forward rectified current(see fig.1)	Per leg	$I_{F(AV)}$	5.0	A
	Total device		10.0	
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 temperature range		T_j	-55 to+150	℃
Storage temperature range		T_{stg}	-55 to+150	℃

RATINGS AND CHARACTERISTIC OF SR1045LM1

ELECTRICAL CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	Per leg IF=5. 0A	T_A=25℃	V_F 1)	0. 43	0. 45	V
		T_A=100℃		0. 35	0. 37	
		T_A=125℃		0. 33	0. 35	
Reverse current	VR=45V	T_A=25℃	I_R 2)	110	200	μA
		T_A=100℃		10	20	mA
		T_A=125℃		70	140	
Typical junction capacitance	4V, 1MHz		CJ	370		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Symbol	SR1045LM1	Unit
Typical thermal resistance 3)	RθJC	2. 5	℃/W

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMATION

Product code	Package	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton SizeL×W×H(mm)	Quantity(box/carton)
SR1045LM1-TO-252	P/T	558×148×38	4000	565×225×170	5

RATINGS AND CHARACTERISTIC CURVES SR1045LM1

FIG.1-FORWARD CURRENT DERATING CURVE

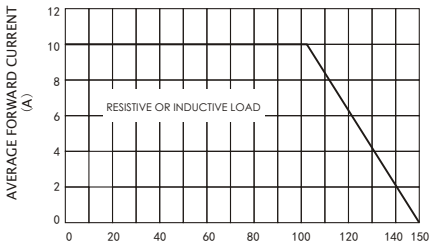


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

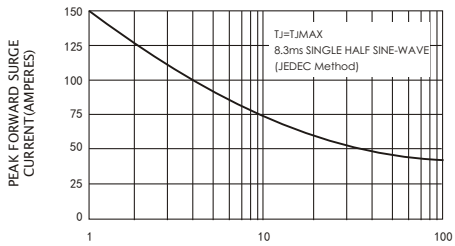


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

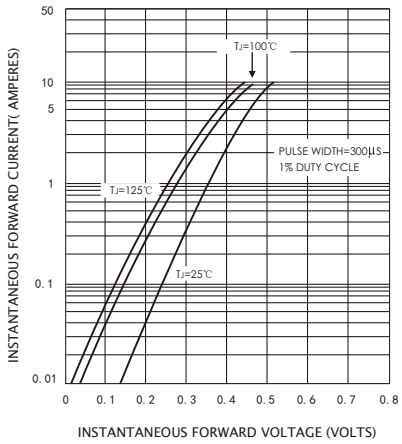


FIG.4-TYPICAL REVERSE CHARACTERISTICS

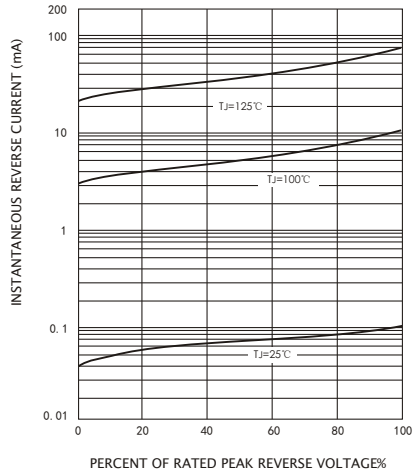


FIG.5-TYPICAL JUNCTION CAPACITANCE