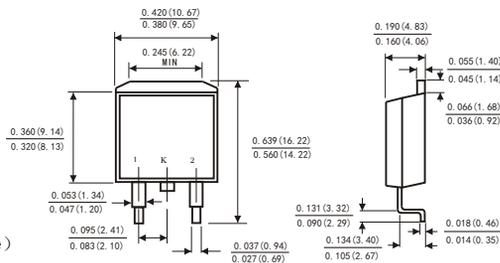


FEATURES

- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Ultra low forward voltage drop
- High forward surge capability
- High frequency operation
- Meets MSL Level 1, per J-STD-020, LF MAX peak of 245°C (for TO-263 package)
- Component in accordance to RoHS 2011/65/EU



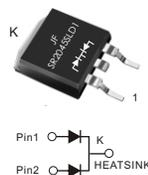
TO-263



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: TO-263 ,Plastic
- 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)

PRIMARY CHARACTERISTICS	
I _{F(AV)}	2×10A
V _{RRM}	45V
I _{FSM}	280A
V _F at I _F =10A (125°C)	0.36V
T _{JMAX}	150°C

Parameter	Symbol	SR2045SLD1	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	45	V
Maximum average forward rectified current(see fig.1)	Per leg	10	A
	Total device	20	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per leg(JEDEC method at rated TL)	I _{FSM}	280	A
Operating junction temperature range	T _j	-55 to+150	°C
Storage temperature range	T _{stg}	-55 to+150	°C

RATINGS AND CHARACTERISTIC OF SR2045SLD1

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	Per leg	IF=1A IF=5A T _J =25°C IF=10A	V _F ¹⁾	0.28 0.36 0.41	0.43	V
		IF=1A IF=5A T _J =125°C IF=10A		0.18 0.28 0.36		
Reverse current	V _R =45V	T _J =25°C	I _R ²⁾	80	200	μA
		T _J =100°C		8	15	mA
		T _J =125°C		20	50	
Typical junction capacitance	4V, 1MHz		C _J	860		pF

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

2.Pulse test: pulse width≤40ms

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

Parameter	Symbol	SR2045SLD1	Unit
Typical thermal resistance ³⁾	R _{θJC}	2.5	°C/W

3.Thermal resistance from junction to case

AVAILABLE PACK INFORMATION

Product code	Package	Box Size L×W×H(mm)	Quantity (pcs/box)	Carton SizeL×W×H(mm)	Quantity (box/carton)
SR2045SLD1-TO-263	P/T	558×148×38	1000	565×225×170	5

RATINGS AND CHARACTERISTIC CURVES OF SR2045SLD1

FIG.1-FORWARD CURRENT DERATING CURVE

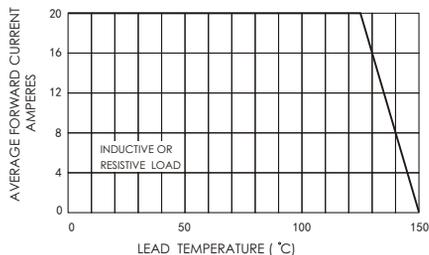


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

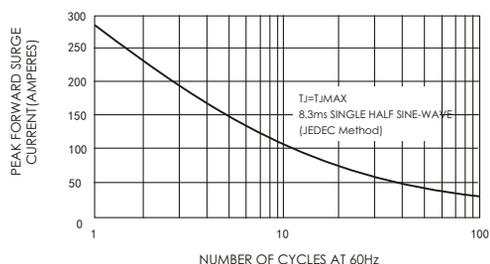


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

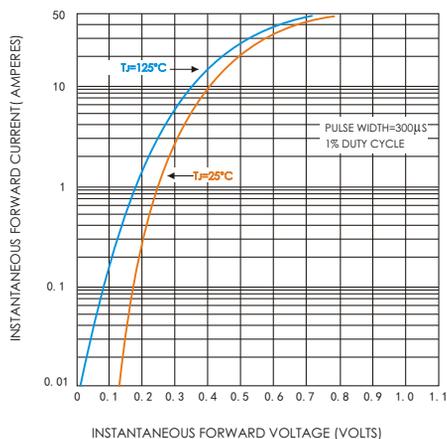


FIG.4-TYPICAL REVERSE CHARACTERISTICS

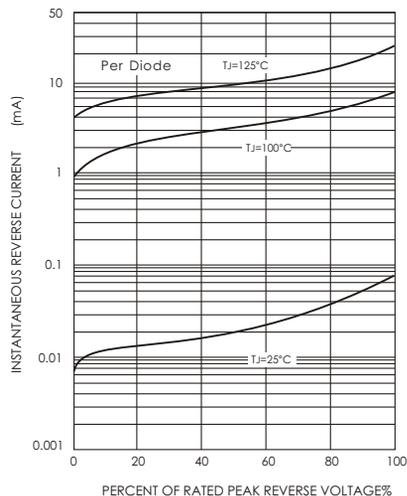


FIG.5-TYPICAL JUNCTION CAPACITANCE

