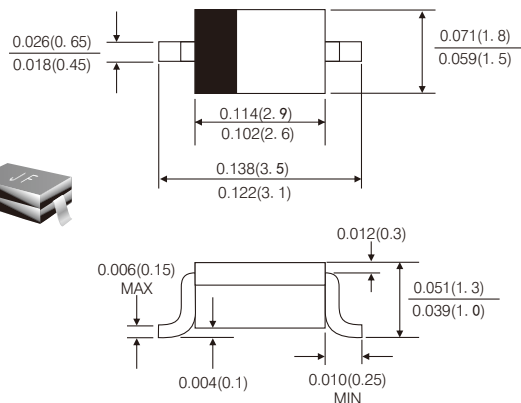


SOD-123

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High current capability
- Smoothly soft reverse recovery time (trr)
- Low profile surface mounted package
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



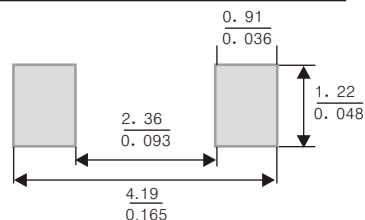
MECHANICAL DATA

- Case: Flat lead SOD-123 small outline plastic package
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: solderable per J-STD-002 and JESD22-B102
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight:Approx. 8.85 mg

TYPICAL APPLICATIONS

For suitable use in snubber damping circuit (RCD) in the primary of SMPS

Suggested PAD Layout



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	650	V
Maximum average forward rectified current	I _{F(AV)}	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I _{FSM}	9	A
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{stg}	-55 to +150	°C

RATINGS AND CHARACTERISTIC OF SD1J

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Voltage	V _R ¹⁾	I _R =200μA	650	-	-	V
Forward Voltage	V _{F1} ²⁾	I _F =100mA	-	-	0.95	V
	V _{F2} ²⁾	I _F =1000mA	-	-	1.7	
Reverse current	I _R ¹⁾	V _R =560V	-	-	0.5	μA
	I _R ¹⁾	V _R =560V, T _J =125°C	-	-	10	μA
Typical Reverse Recovery Time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	-	900	3000	ns
Typical Junction Capacitance	C _j	V _R =1V, f=1MHz	-	11.6	-	pF

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

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SOD123	Unit
Typical thermal resistance ³⁾	R _{θJA}	206.0	°C/W
	R _{θJL}	118.0	

3.PCB Mounted with The Suggested PAD Size

AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
SD1J-SOD-123	T/R	Φ330	7500	330×35×333	2	364×364×360	8

RATINGS AND CHARACTERISTIC OF SD1J

FIG.1-POWER DERATING CURVE

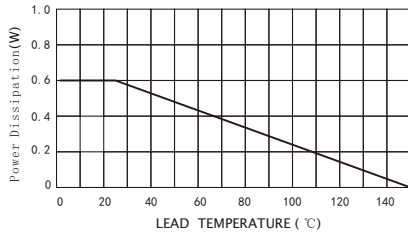


FIG.2-TYPICAL REVERSE CHARACTERISTICS

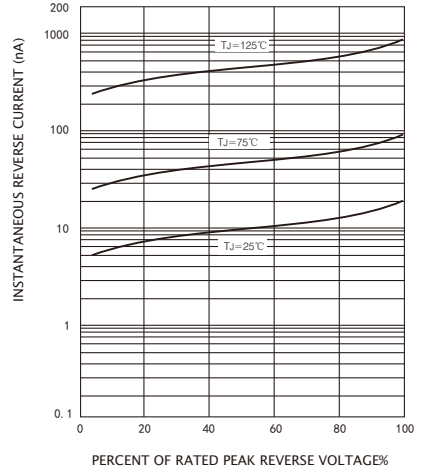


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

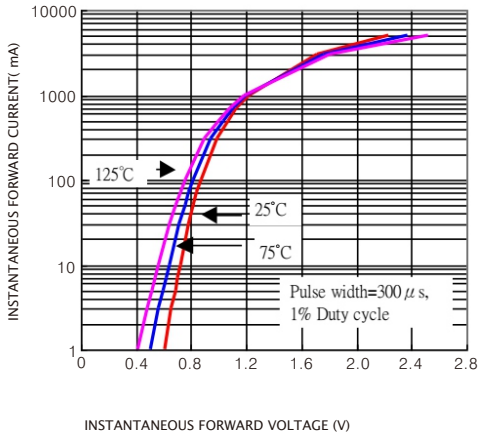


FIG.5-TYPICAL JUNCTION CAPACITANCE

