

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Stable,High temperature,Glass passivated junction
- -V suffix for Automative and other applications requiring unique site and conctrol change requirments
- PPAP capable
- AEC-Q101 qualified
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



AEC-Q101 Qualified

MECHANICAL DATA

- Case: Flat lead SOD-123FL 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



CASE: SOD-123FL

MARKING:

JF-Logo

A7-V: Device code

TYPICAL APPLICATIONS

For use in high voltage rectifier,polarity protection,clamp applications

MAXIMUM RATINGS

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

Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1000	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}	30	A
Operating junction temperature range	T_J	-55 to+150	°C
Storage temperature range	T_{stg}	-55 to+150	°C

RATINGS AND CHARACTERISTIC OF A7-V

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

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	I _R =10μA	T _J =25°C	V _{BR} V _R	1150	-	-	V
		T _J =-55°C		1000	-	-	
Instaneous forward voltage	I _F =1.0A	T _J =-40°C	V _F ¹⁾	-	-	1.20	V
		T _J =25°C		-	0.95	1.00	
		T _J =125°C		-	0.85	-	
Reverse current	V _R =1000V	T _J =25°C	I _R ²⁾	-	-	2	μA
		T _J =100°C		-	-	50	
		T _J =125°C		-	-	250	
Junction capacitance	4V, 1MHz		C _J	-	6.0	-	pF

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

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SOD-123FL	Unit
Typical thermal resistance ³⁾	R _{θJA}	206.0	°C/W
	R _{θJL}	118.0	

3.PCB Mounted with The Suggested PAD Size

AVAILABALE 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)
A7-V SOD-123FL	T/R	Φ180	3000	183×183×62	5	406×406×200	12

RATINGS AND CHARACTERISTIC OF A7-V

FIG.1-FORWARD CURRENT DERATING CURVE

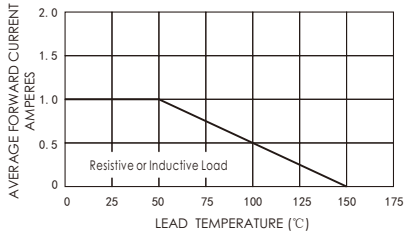


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

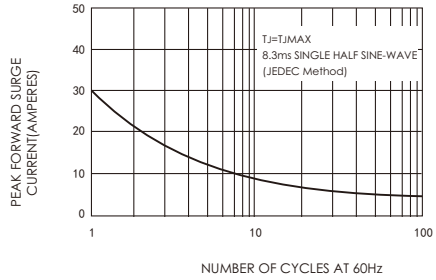


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

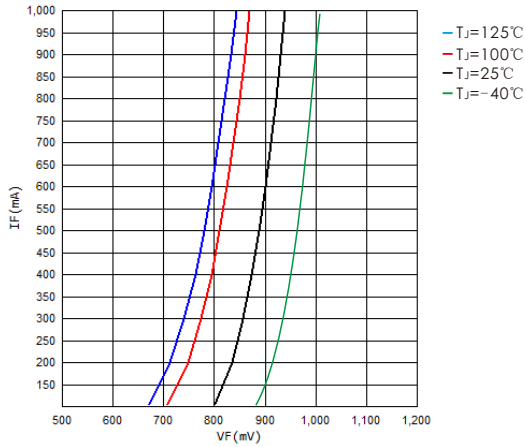


FIG.4-TYPICAL REVERSE CHARACTERISTICS

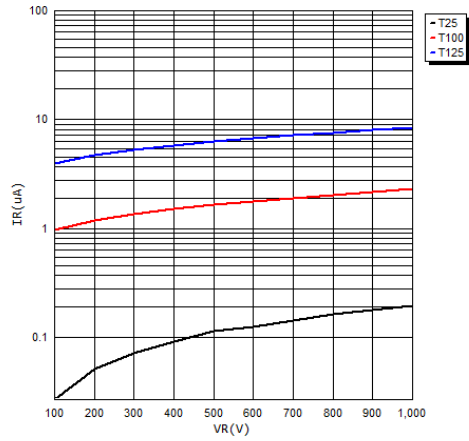
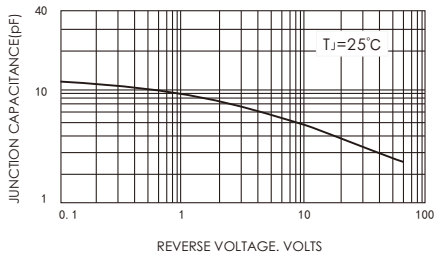
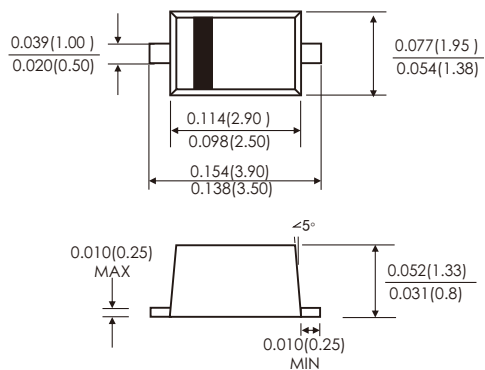


FIG.5-TYPICAL JUNCTION CAPACITANCE

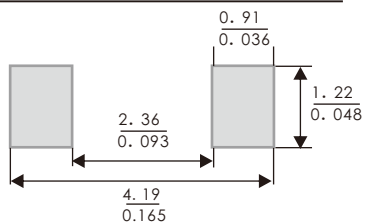


PACKAGE OUTLINE DIMENSIONS

SOD-123FL



Suggested PAD Layout



Dimensions in inches and (millimeters)