



**DESCRIPTION**

The 1N5817W~1N5819W are available in SOD-123FL package.

**ORDERING INFORMATION**

Package Type	Part Number
SOD-123FL	1N5817W
	1N5818W
	1N5819W
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

**FEATURES**

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Available in SOD-123FL package

**PIN DESCRIPTION**



**ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	1N5817W	1N5818W	1N5819W	Unit
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	20	30	40	V
Maximum RMS Voltage		$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage		$V_{DC}$	20	30	40	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Length at $T_L = 90^\circ\text{C}$		$I_{F(AV)}$	1.0			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method) at $T_L = 70^\circ\text{C}$		$I_{FSM}$	25			A
Maximum Instantaneous Forward Voltage	at $I_F=1\text{A}$	$V_F$	0.45	0.55	0.6	V
	at $I_F=3.1\text{A}$		0.75	0.875	0.9	
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage	$T_A=25^\circ\text{C}$	$I_R$	1			mA
	$T_A=100^\circ\text{C}$		10			
Typical Junction Capacitance		$C_J$	110			pF
Typical Thermal Resistance		$R_{\theta JA}$	50			$^\circ\text{C/W}$
		$R_{\theta JL}$	15			
Storage and Operating Junction Temperature Range		$T_J, T_{STG}$	-55 ~+125			$^\circ\text{C}$



## TYPICAL CHARACTERISTICS

Fig.1 Forward Current Derating Curve

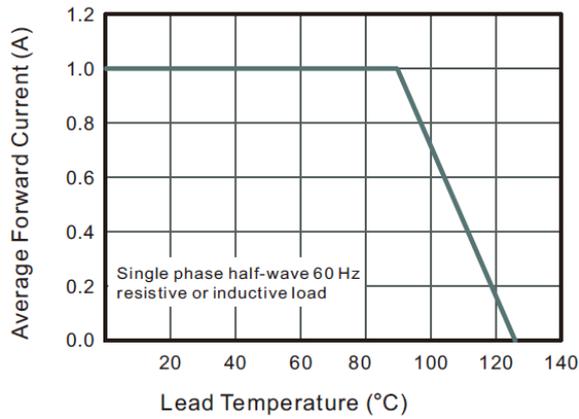


Fig.2 Typical Reverse Characteristics

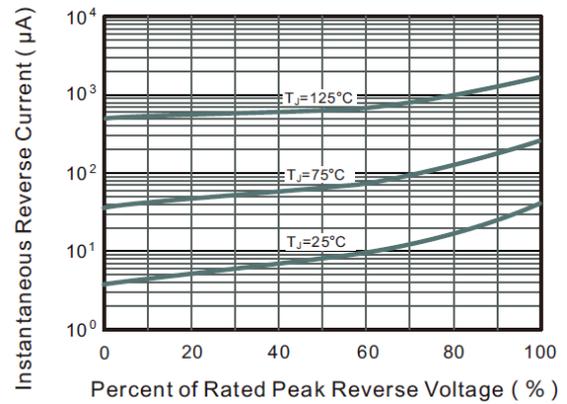


Fig.3 Typical Forward Characteristic

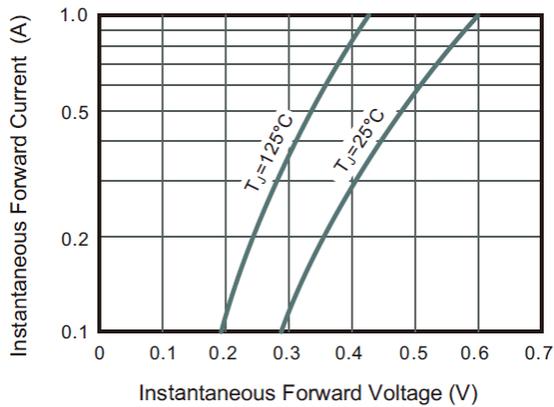


Fig.4 Typical Junction Capacitance

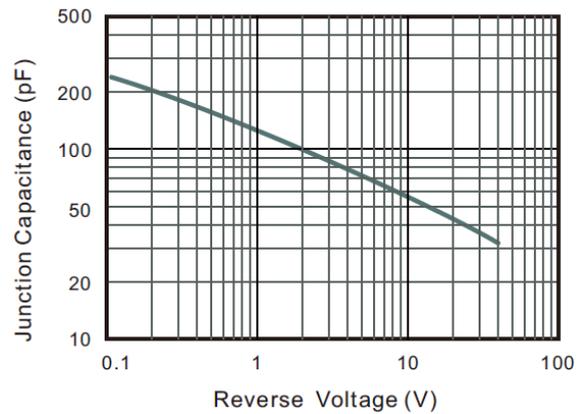


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

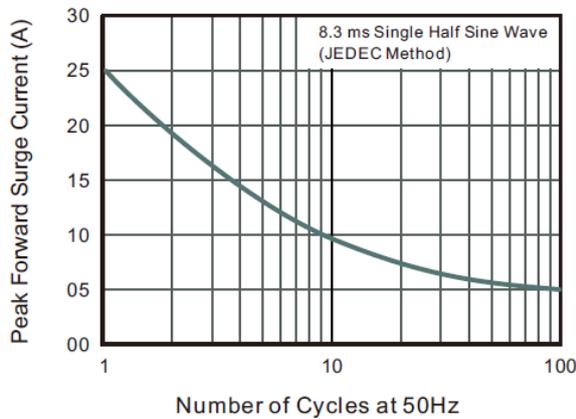
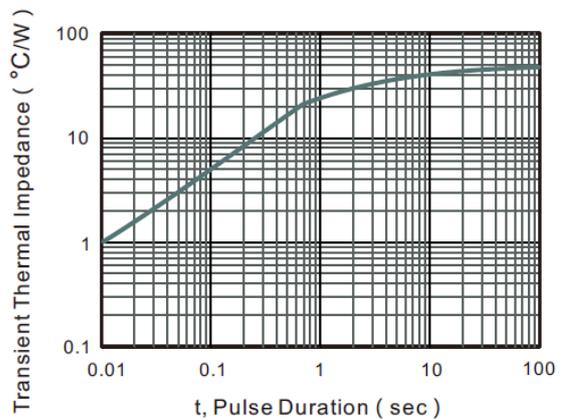


Fig.6 Typical Transient Thermal Impedance

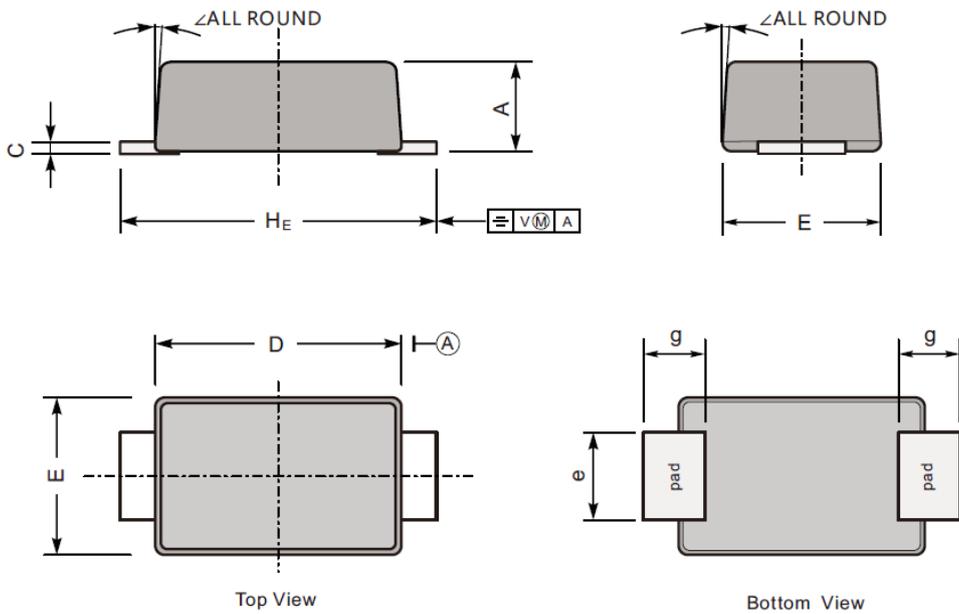




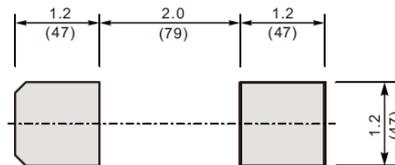
**PACKAGE INFORMATION**

Dimension in SOD-123FL (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit:  $\frac{\text{mm}}{\text{mil}}$

UNIT		A	C	D	E	e	g	HE	∠
mm	Max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	0.3
	Min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	Max	43	7.9	114	75	43	35	150	12
	Min	35	4.7	102	67	31	28	138	



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