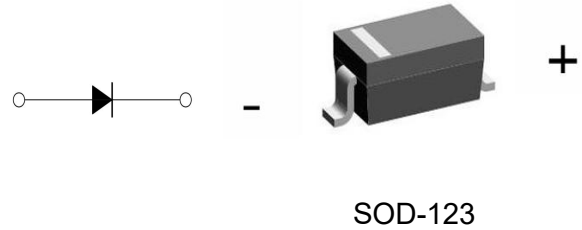


### Schottky Barrier Diode

Parameter	Value	Unit
$V_R$	20~40	V
$I_{F(AV)}$	1.0	A



### Features

- Low Forward Voltage
- Surface Mount device
- For use in low voltage high frequency inverters and polarity protection applications

### Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

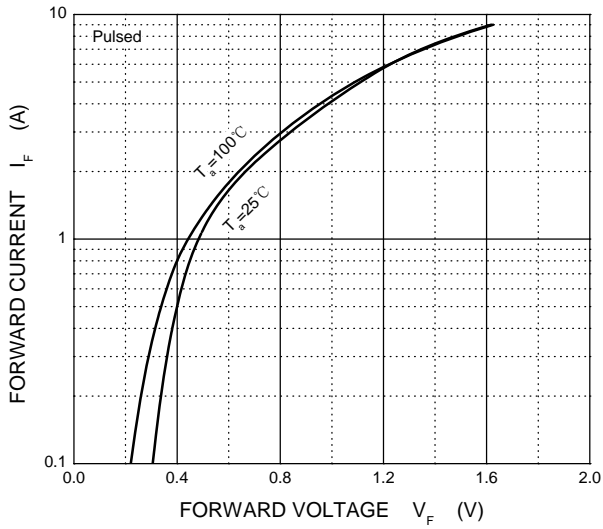
Parameter	Symbol	Value	Unit
Reverse Voltage	1N5817W	20	V
	1N5818W	30	
	1N5819W	40	
Average Forward Rectified Current	$I_{F(AV)}$	1.0	A
Non-Repetitive Peak Forward Surge Current (t = 8.3ms)	$I_{FSM}$	9	A
Power Dissipation	$P_{tot}$	450	mW
Operating Temperature Range	$T_j$	- 55 to + 125	°C
Storage Temperature Range	$T_{stg}$	- 55 to + 125	°C

### Electrical Characteristics (Ta=25°C unless otherwise noted)

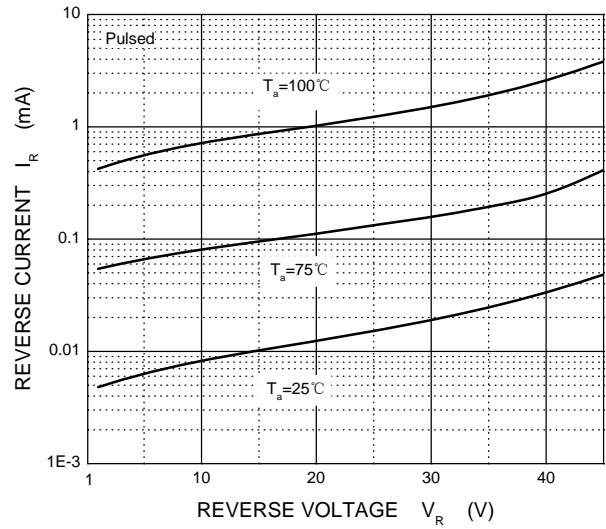
Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1mA$	1N5817W	20	-	V
	1N5818W	30	-	
	1N5819W	40	-	
Forward Voltage at $I_F = 1A$  at $I_F = 3A$	1N5817W	-	0.45	V
	1N5818W	-	0.55	
	1N5819W	-	0.6	
	1N5817W	-	0.75	
	1N5818W	-	0.875	
	1N5819W	-	0.9	
Reverse Voltage Leakage Current at $V_R = 20V$ at $V_R = 30V$ at $V_R = 40V$	1N5817W	-	1.0	mA
	1N5818W	-	1.0	
	1N5819W	-	1.0	
Total Capacitance at $V_R = 4V, f = 1MHz$	$C_{tot}$	-	120	pF

**Typical Characteristics**

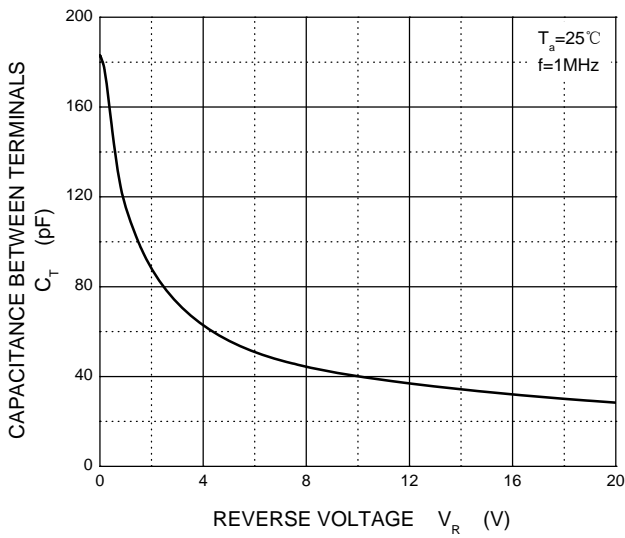
**Fig. 1 Forward Characteristics**



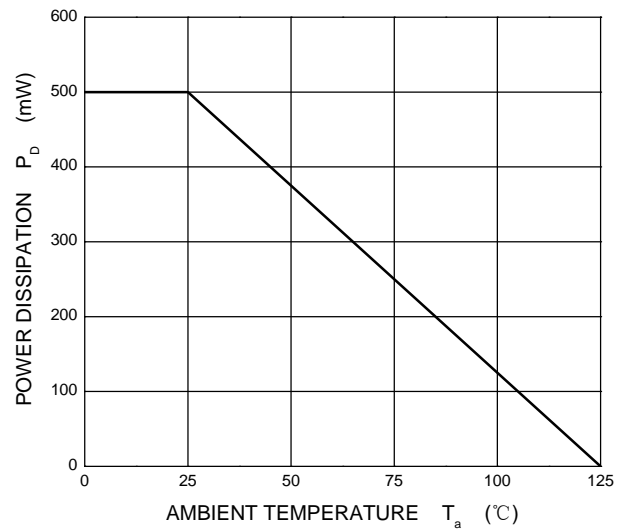
**Fig. 2 Reverse Characteristics**



**Fig. 3 Capacitance Characteristics**

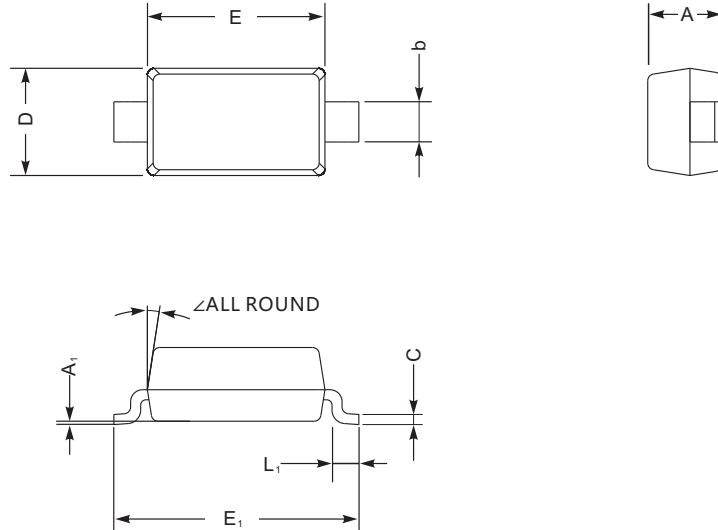


**Fig. 4 Power Derating Curve**



### Package Outlines (Units: mm)

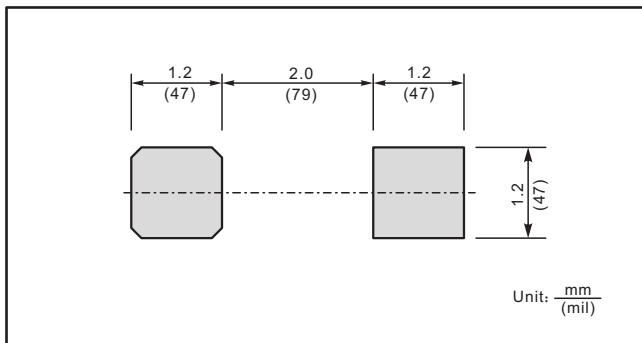
Plastic surface mounted package; 2 leads



SOD-123 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

### The recommended mounting pad size



### Marking

Type number	Marking code
1N5817W	SJ
1N5818W	SK
1N5819W	SL

**\*Important Usage Information and Disclaimer**

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