

## 500mW SOD- 123 Fast Switching Diode

### Features

- 4.0nS; Fast switching device (TRR <4.0nS)
- 500mW; power dissipation of 500mW
- High stability and high reliability
- Low reverse leakage

### Mechanical Data

- SOD-123 small outline plastic package
- Polarity: color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting position: any



**Marking: T6 SOD-123**

### Maximum Ratings & Thermal Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	75	V
Peak reverse voltage	V <sub>RM</sub>	100	V
Power dissipation	P <sub>D</sub>	500	mW
Operating junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>S</sub>	-65-+150	°C
Working inverse voltage	W <sub>IV</sub>	75	V
Average rectified current	I <sub>O</sub>	150	mA
Non-repetitive peak forward current	I <sub>FM</sub>	300	mA
Peak forward surge current @tp=1us; TA=25 °C	I <sub>FSM</sub>	2.0	A

Valid provided that electrodes are kept at ambient temperature.

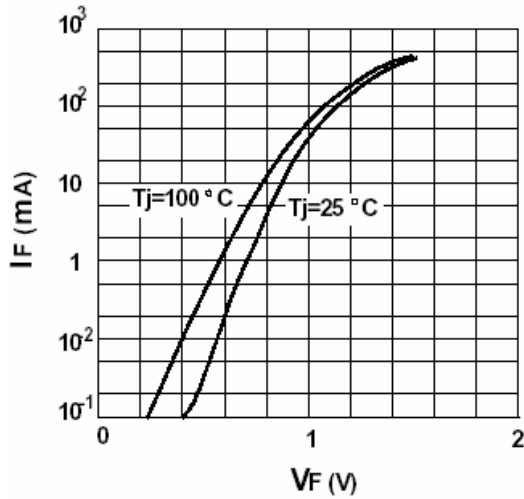
### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Breakdown voltage	BV	IR=100uA	100		V
		IR=5uA	75		
Reverse leakage current	IR	VR=20V		25	nA
		VR=75		1	uA
Forward voltage	VF	IF=150mA		1.25	V
		IF=50mA		1.00	
		IF=10mA		0.885	
		IF=1.0mA		0.715	
Reverse recovery time	TRR	IF = 10ma IR= 60mA,		4	nS
		Irr=1mA			
		RL=100Ω			
Capacitance	CJ	VR=0V, f=1MHZ		2	pF

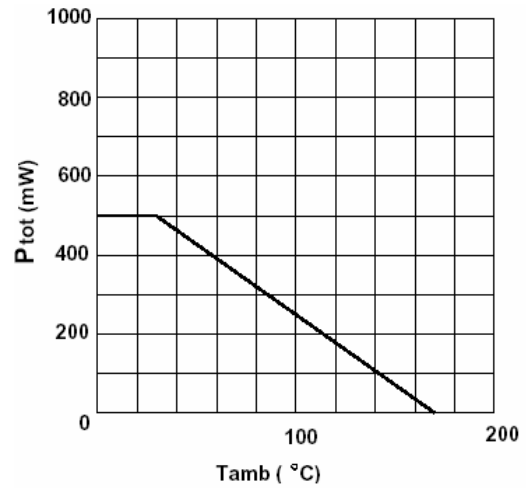
## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

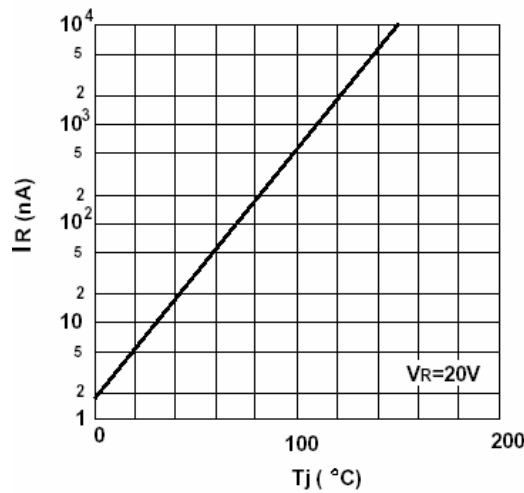
Forward characteristics



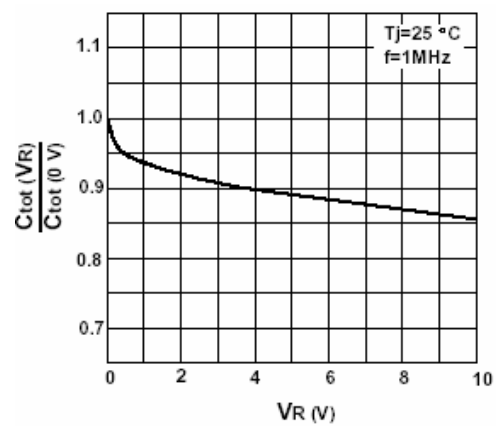
Admissible power dissipation versus ambient temperature



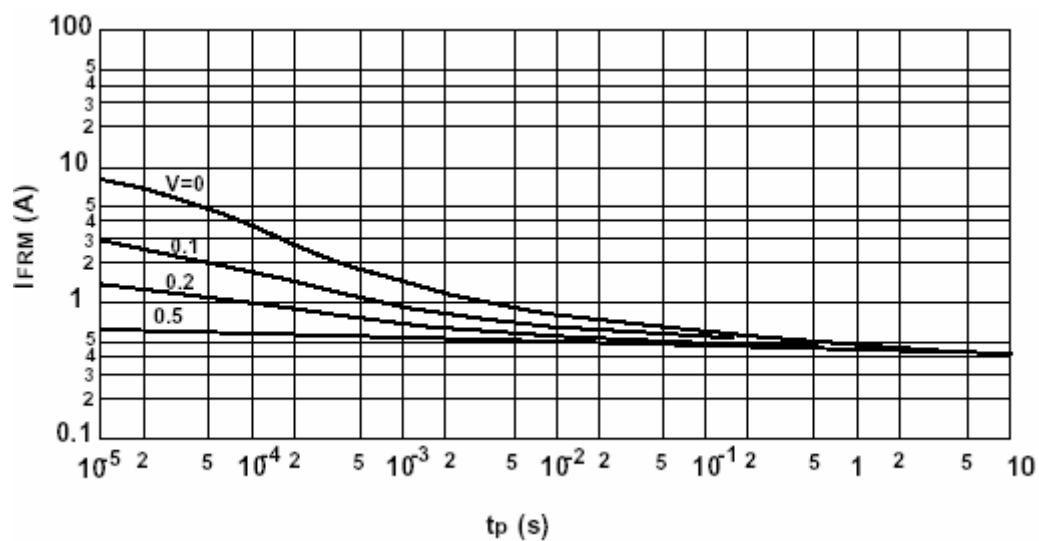
Leakage current versus junction temperature



Reverse capacitance VS. reverse voltage

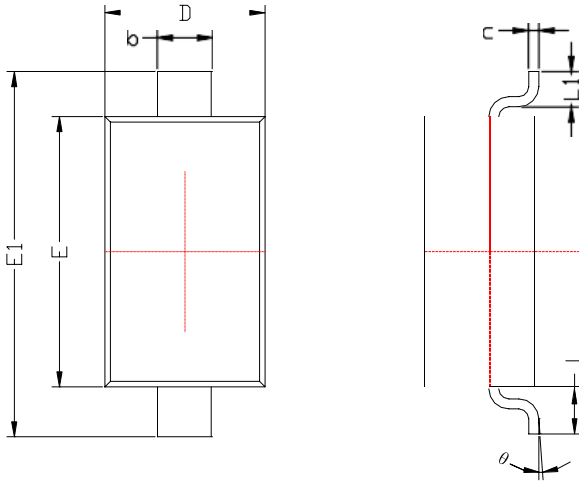


Admissible repetitive peak forward current VS. pulse duration

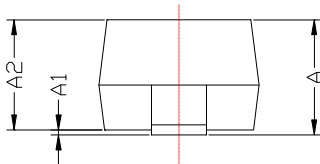


## Package Outline Dimensions

millimeters



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
$\theta$	0°	8°



## Revision History

Document Version	Date of release	Description of changes
Rev.A	2015.04.10	First issue

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