

500mW SOD-123 Fast Switching Diode

Features

- 4.0nS; Fast Switching device (TRR <4.0 nS)
- 425mW; Power dissipation of 425mW
- 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: 5I SOD-123

Maximum Ratings & Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameters	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Power Dissipation	P_D	425	mW
Operating junction temperature	T_J	150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-65-+150	$^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	290	$^{\circ}\text{C}/\text{W}$
Average Rectified Current	I_O	150	mA
Non-repetitive Peak Forward Current	I_{FM}	300	mA
Peak Forward Surge Current @ $t_p=1\mu\text{s}$; $T_A=25^{\circ}\text{C}$	I_{FSM}	2.0	A

Valid provided that electrodes are kept at ambient temperature.

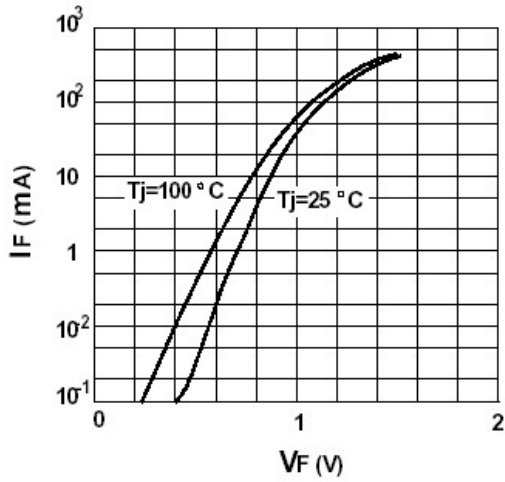
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Breakdown Voltage	BV	$I_R=100\mu\text{A}$	100		V
Reverse Leakage Current	IR	$V_R=20\text{V}$		25	nA
		$V_R=20\text{V } T_J=150^{\circ}\text{C}$		50	μA
		$V_R=75$		5	μA
Forward Voltage	V_F	$I_F=10\text{mA}$		1.00	V
		$I_F=100\text{mA}$		1.25	
Reverse Recovery Time	T_{RR}	$I_F = I_R = 10\text{mA}$,		4	nS
		$I_{rr}=0.1 \times I_R$			
		$R_L=100 \Omega$			
Capacitance	C	$V_R=0\text{V}, f=1\text{MHZ}$		4	pF

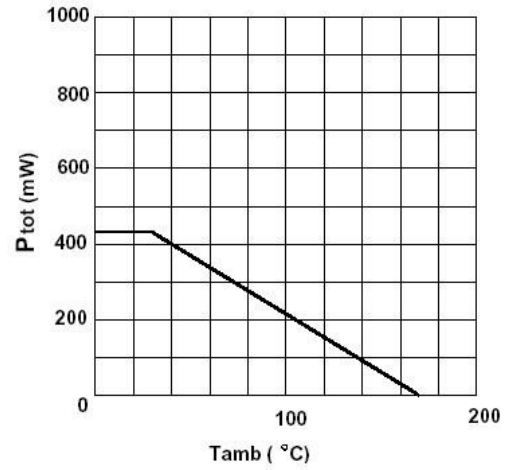
Ratings and Characteristics Curves

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

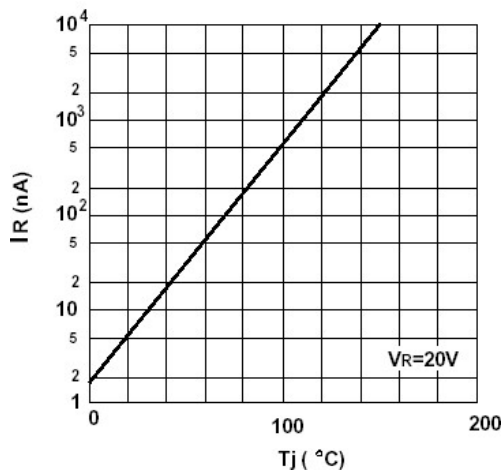
Forward characteristics



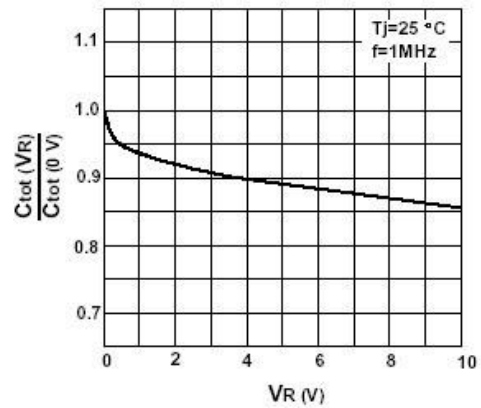
Admissible power dissipation versus ambient temperature



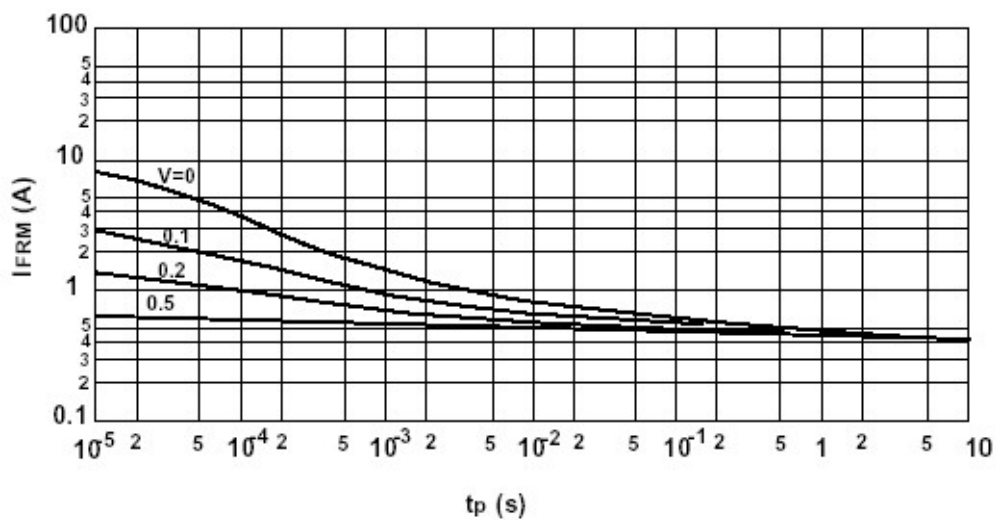
Leakage current versus junction temperature



Reverse capacitance VS. reverse voltage

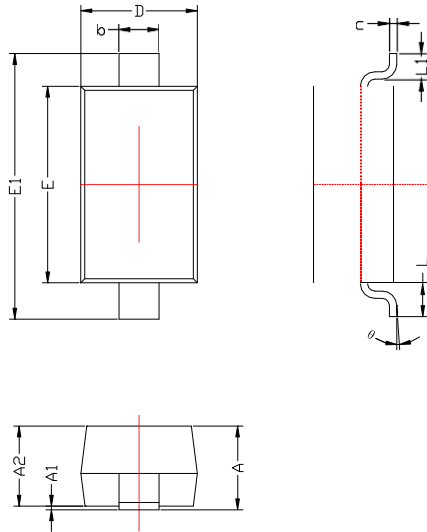


Admissible repetitive peak forward current VS. pulse duration



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
θ	0°	8°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.05.09	First issue

Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.

(<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.