

1N4151W

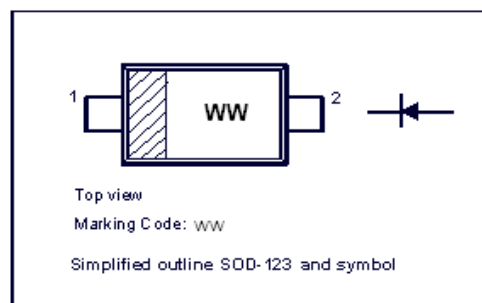
Silicon Epitaxial Planar Small Signal Diode

Features

- SOD 123 package
- Fast switching

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



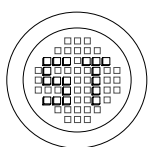
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Peak reverse voltage	V_{RM}	75	V
Reverse voltage	V_R	50	V
Average rectified current half wave Rectification with resistive load $f \geq 50\text{Hz}$	I_O	150*	mA
Surge forward current $t < 1\text{s}$ $T_J = 25^\circ\text{C}$	I_{FSM}	500	mA
Power dissipation	P_{tot}	410*	mW
Thermal resistance junction to ambient air	R_{thJA}	450*	$^\circ\text{C}/\text{W}$
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

* Valid provided that electrodes are kept at ambient temperature.

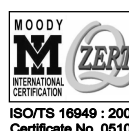
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Conditons
Forward voltage	V_F	-	-	1.0	V	$I_F = 50\text{mA}$
Leakage current	I_R	-	-	50 50	nA μA	$V_R = 50\text{V}$ $V_R = 20\text{V}$, $T_J = 150^\circ\text{C}$
Reverse breakdown voltage	$V_{(BR)R}$	75	-	-	V	Tested with $5\mu\text{A}$ pulses
Capacitance	C_{tot}	-	-	2	pF	$V_F = V_R = 0\text{V}$
Reverse recovery time	t_{rr}	- -	- -	4.0 2.0	ns ns	From $I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1\text{mA}$ From $I_F = 10\text{mA}$ to $I_R = 1\text{mA}$, $V_R = 6\text{V}$, $R_L = 100\Omega$
Rectification efficiency	η_v	0.45	-	-	-	$f = 100\text{MHz}$, $V_{RF} = 2\text{V}$



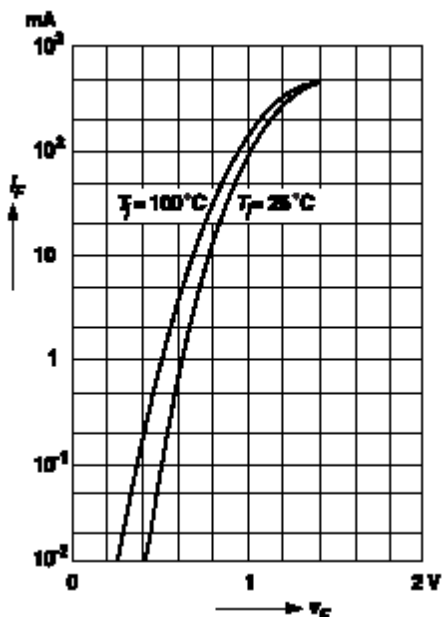
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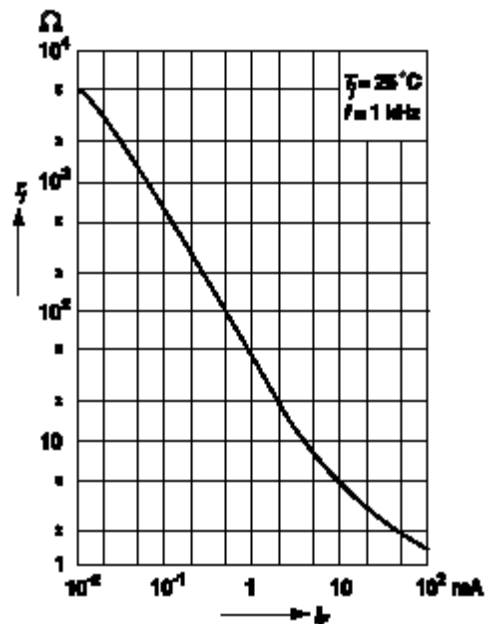


Dated : 12/05/2005

Forward characteristics

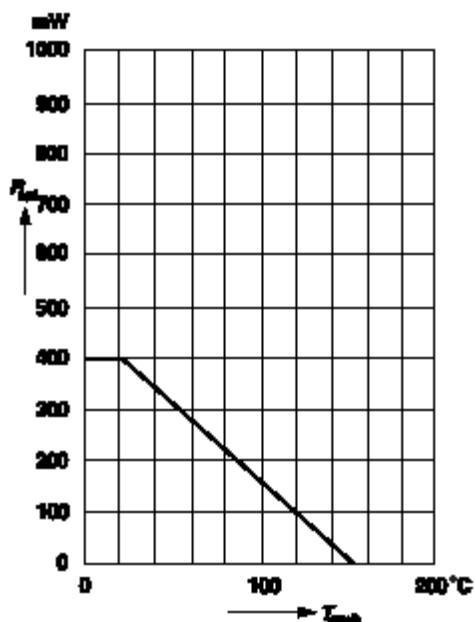


Dynamic forward resistance
Versus forward current

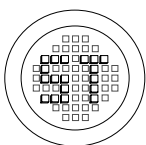
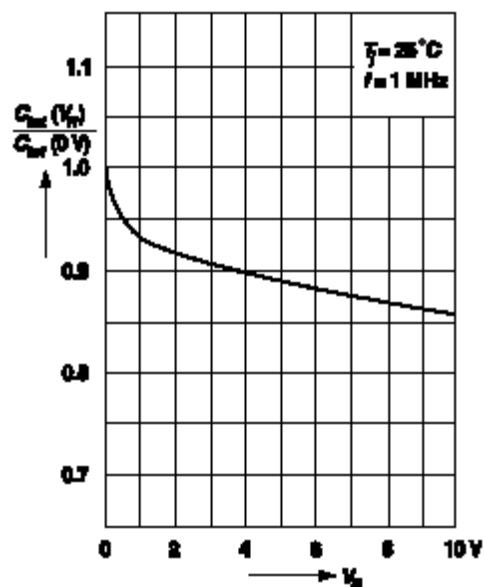


Admissible power dissipation
Versus ambient temperature

For conditions, see footnote in table
"Absolute Maximum Ratings"

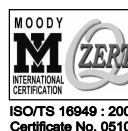


Relative capacitance
versus reverse voltage



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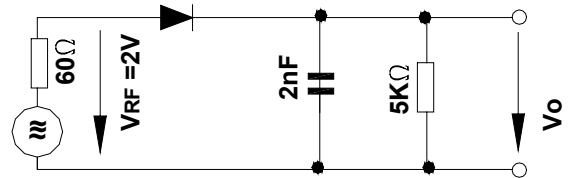
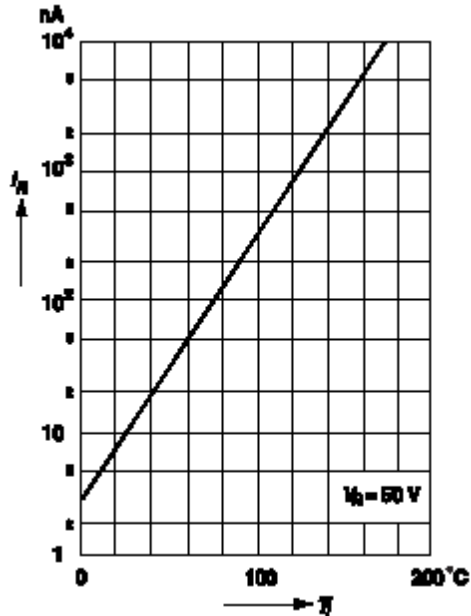
ISO/TS 16949 : 2002
Certificate No. 05103

ISO 14001:2004
Certificate No. 7116

ISO 9001:2000
Certificate No. 0506098

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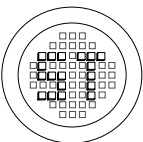
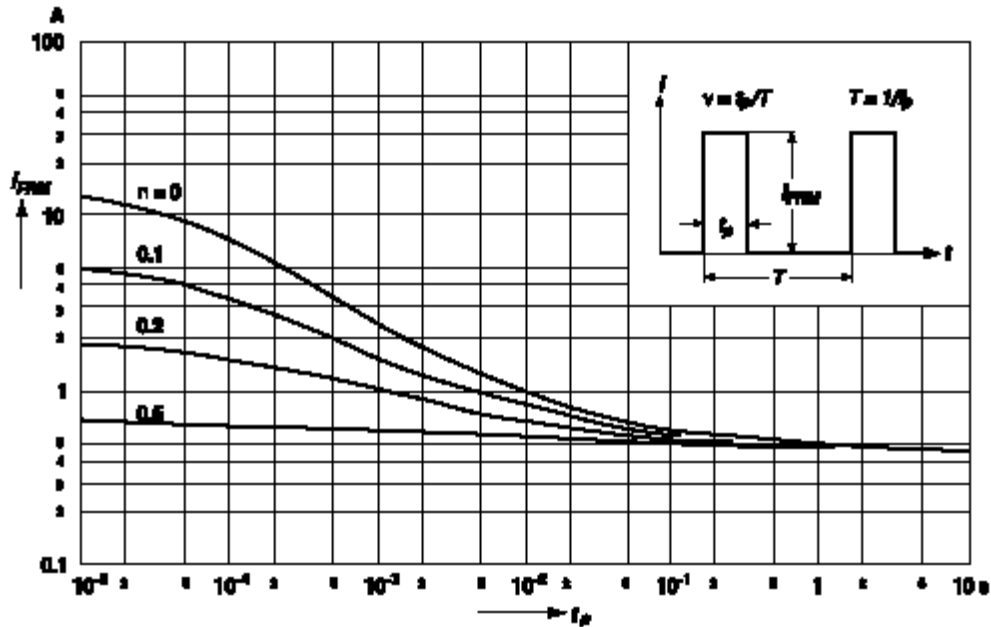
Leakage current
versus junction temperature



Rectification Efficiency Measurement Circuit

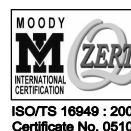
Admissible repetitive peak forward current versus pulse duration

For condition, see footnote in table "Absolute Maximum Ratings"



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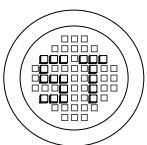
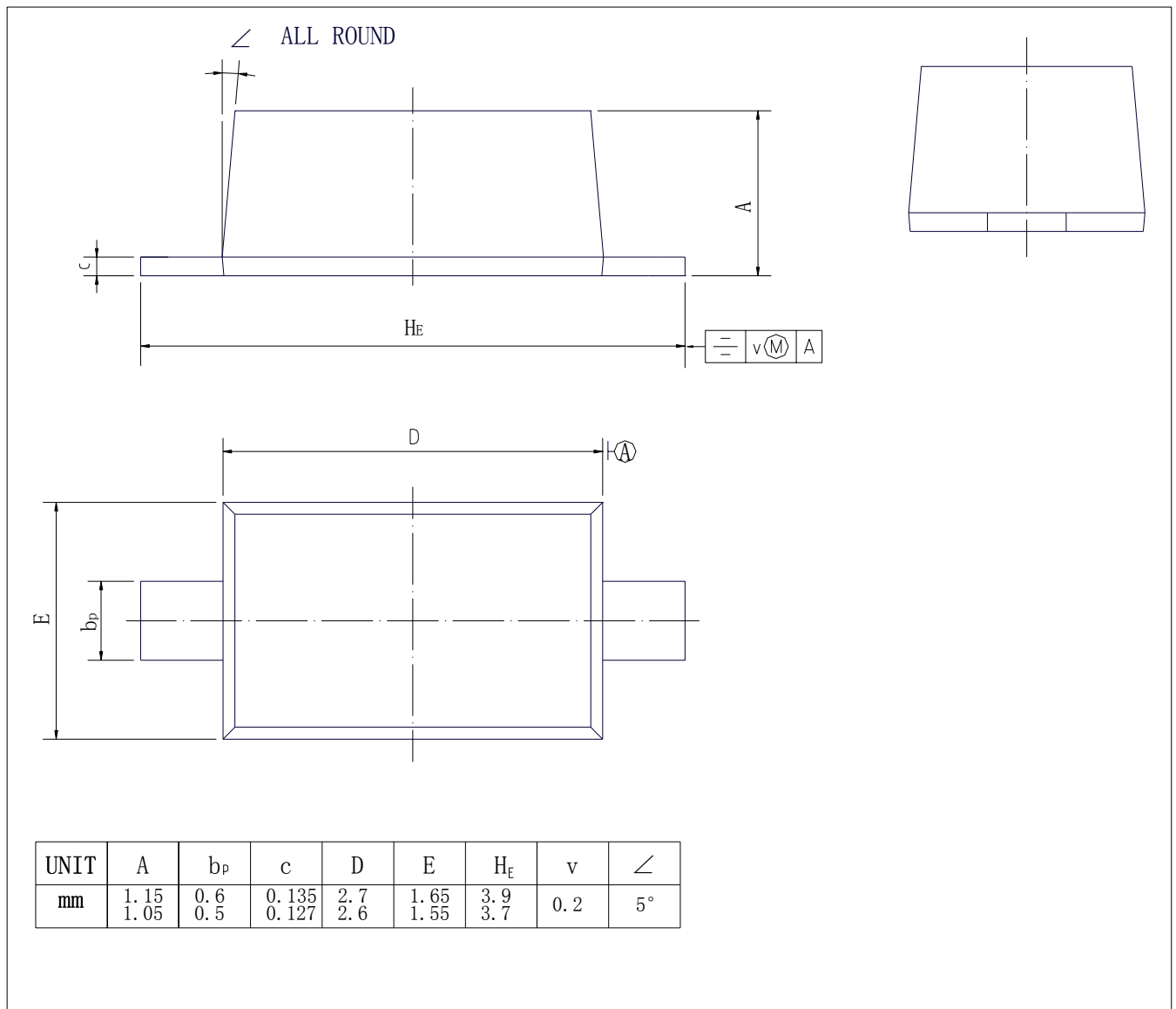
1N4151W

Silicon Epitaxial Planar Small Signal Diodes

PACKAGE OUTLINE

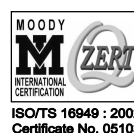
Plastic surface mounted package; 2 leads

SOD-123



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