

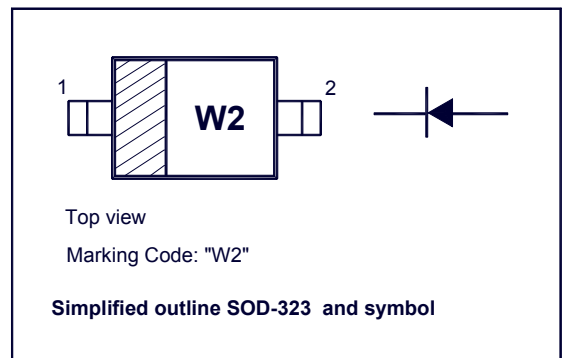
SILICON EPITAXIAL PLANAR SMALL SIGNAL DIODE

Features

- SOD 323 package
- Fast switching
- These diodes are also available in other case style including the DO-35 case with the type designation 1N4148, the MiniMELF case with the type designation LL4148 and the MicroMELF case with the type designation MCL4148.

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



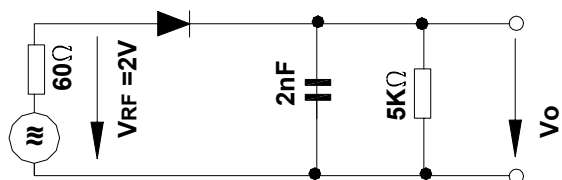
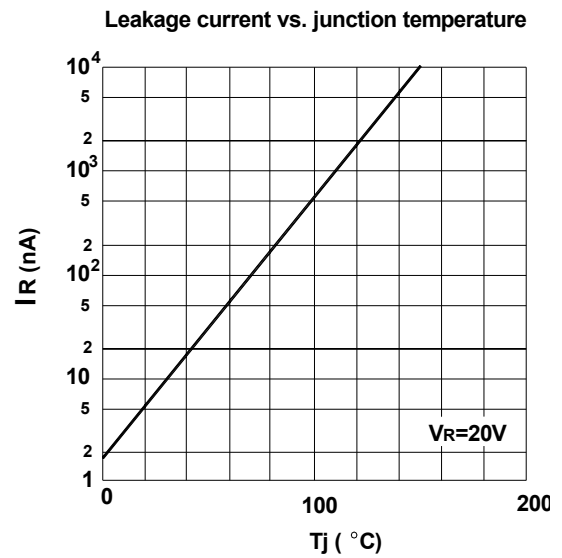
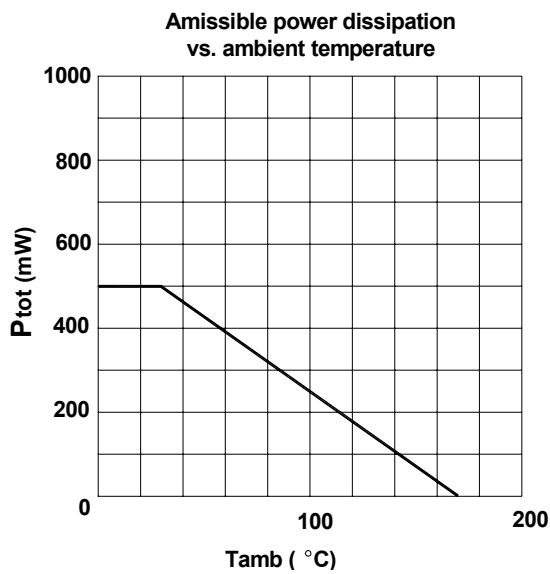
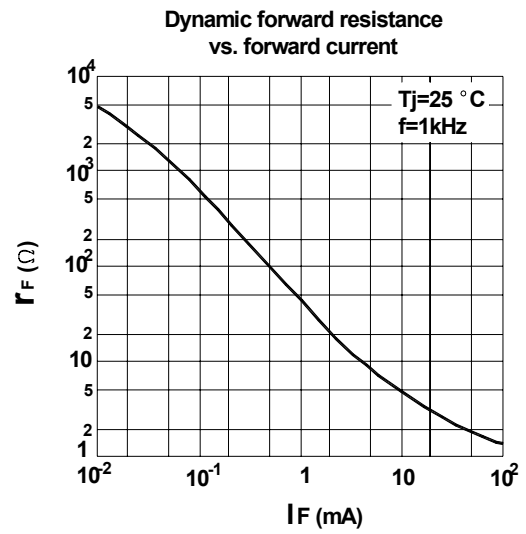
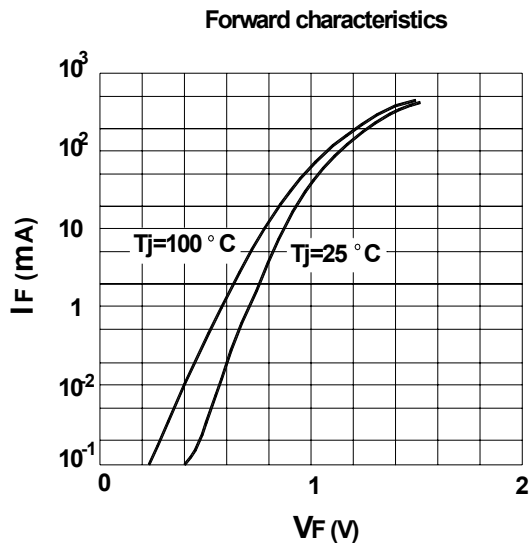
Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Peak reverse voltage	V_{RM}	100	V
Reverse voltage	V_R	75	V
Average rectified current half wave Rectification with resistive load $f \geq 50\text{Hz}$	$I_{F(AV)}$	150*	mA
Surge forward current $t < 1\text{s}$ $T_J = 25^\circ\text{C}$	I_{FSM}	350	mA
Power dissipation	P_{tot}	200*	mW
Thermal resistance from junction to ambient air	$R_{\theta JA}$	650*	$^\circ\text{C/W}$
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

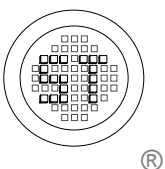
* Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (Ta = 25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V_F	-	-	1.0	V	$I_F = 10\text{mA}$
Reverse current	I_R	-	-	25 5.0 50	nA μA μA	$V_R = 20\text{V}$ $V_R = 75\text{V}$ $V_R = 20\text{V}, T_J = 150^\circ\text{C}$
Capacitance	C_{tot}	-	-	4.0	pF	$V_F = V_R = 0\text{V}$
Reverse recovery time	t_{rr}	-	-	4.0	ns	$V_R = 6\text{V}, I_F = 10\text{mA}, R_L = 100\Omega, I_R = 1\text{mA},$
Voltage rise when switching ON (tested with 50 mA pulse)	V_{fr}	-	-	2.5	V	$t_p = 0.1\mu\text{s}, \text{rise time} < 30\text{ns}, f_p = (5 \text{ to } 100) \text{ kHz}$
Rectification efficiency	η_v	0.45	-	-	-	$f = 100\text{MHz}, V_{RF} = 2\text{V}$



Rectification Efficiency Measurement Circuit



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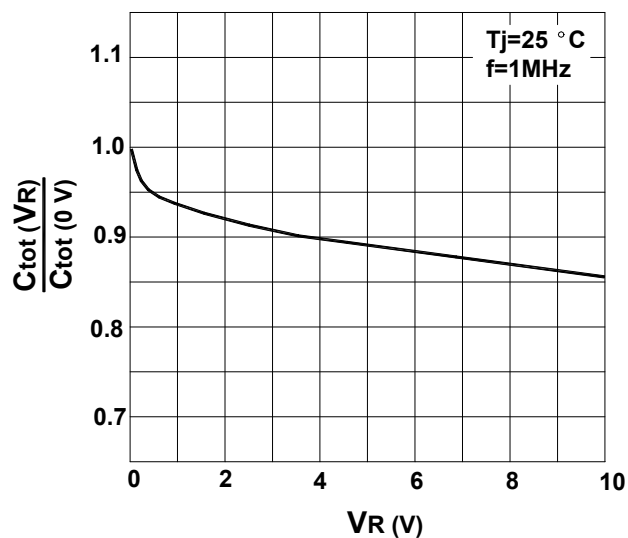
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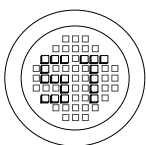
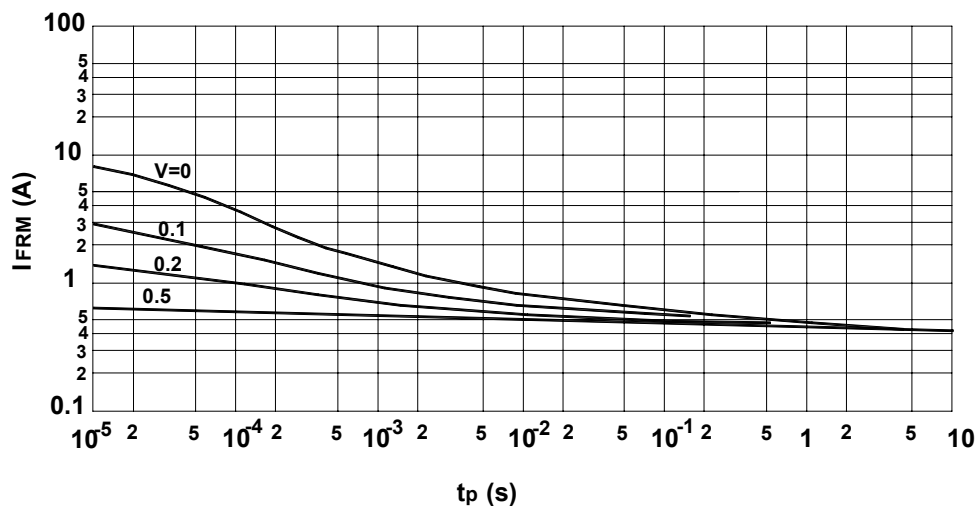
ISO 14001 Certificate No. 7116

Dated : 30/08/2004

Reverse capacitance vs. reverse voltage



Ammissible repetitive peak forward current vs. pulse duration



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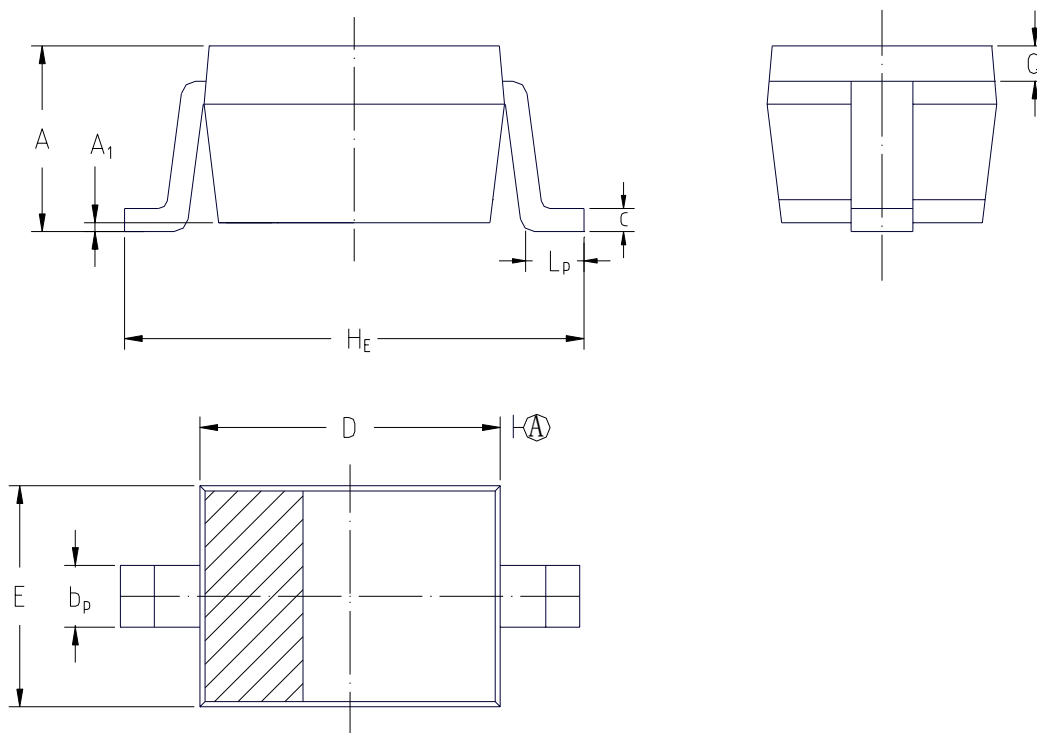
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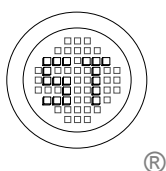
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	A ₁	b _p	c	D	E	H _E	L _p	Q
mm	1.10 0.80	0.1 0	0.40 0.25	0.15 0.00	1.80 1.60	1.35 1.15	2.80 2.30	0.50 0.10	0.15 REF.



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