

1N4148WS

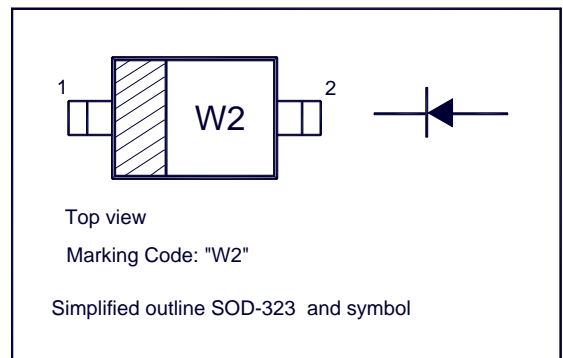
SILICON EPITAXIAL PLANAR SMALL SIGNAL DIODE

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



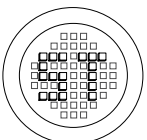
Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

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 $f = 50\text{Hz}$	$I_{F(AV)}$	150*	mA
Surge forward current $t < 1\text{s}$ $T_j = 25\text{ }^{\circ}\text{C}$	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 ($T_a = 25\text{ }^{\circ}\text{C}$)

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	$V_R = 20\text{V}$ $V_R = 75\text{V}$ $V_R = 20\text{V}, T_j = 150\text{ }^{\circ}\text{C}$
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	$t_p = 0.1\mu\text{s}$, rise time $< 30\text{ns}$, $f_p = (5\text{ to }100)\text{ kHz}$
Rectification efficiency	η_v	0.45	-	-	-	$f = 100\text{MHz}, V_{RF} = 2\text{V}$



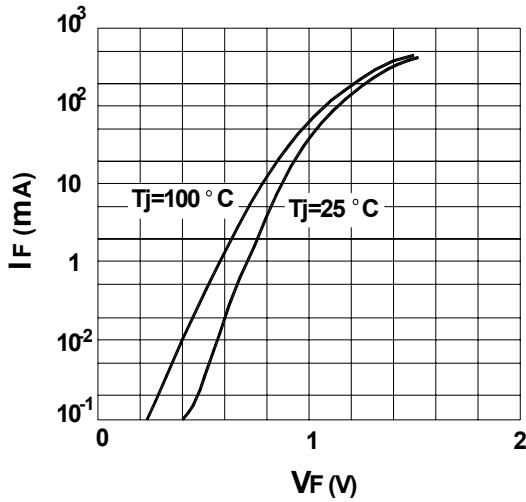
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РАДИОТЕХ

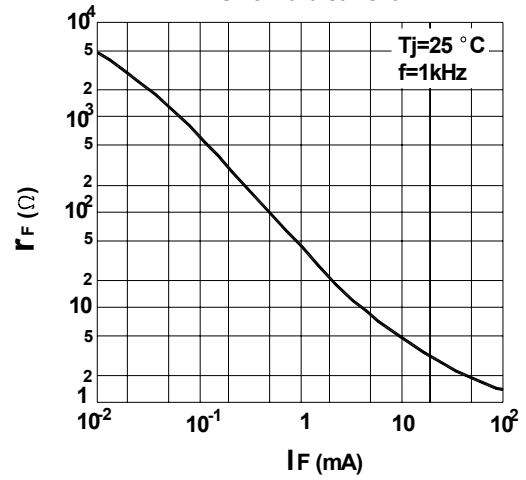
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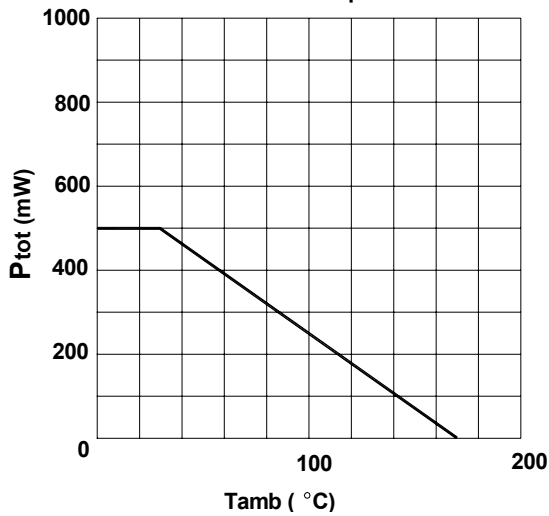
Forward characteristics



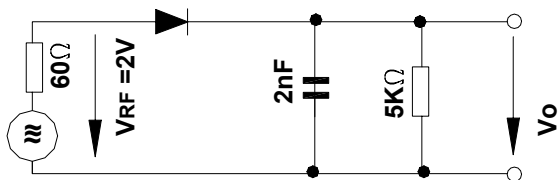
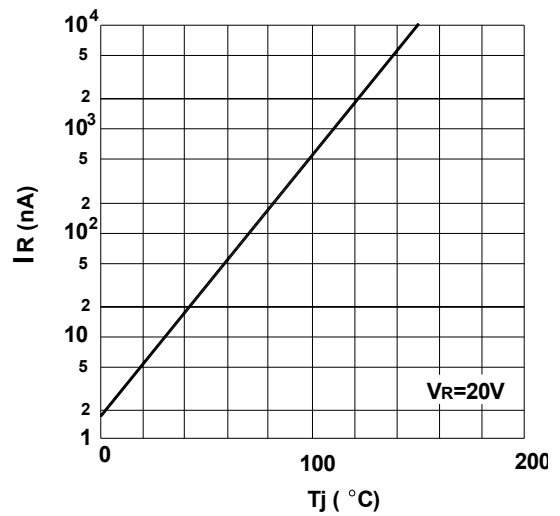
Dynamic forward resistance vs. forward current



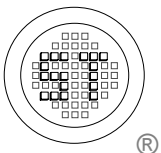
Ammissible power dissipation vs. ambient temperature



Leakage current vs. junction temperature

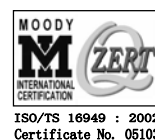


Rectification Efficiency Measurement Circuit



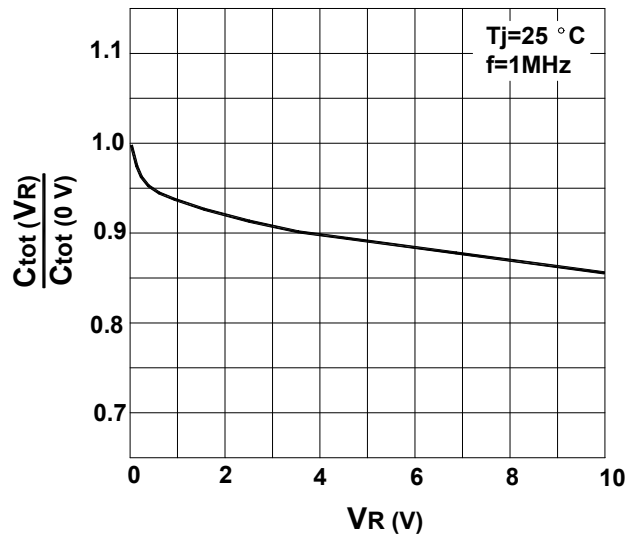
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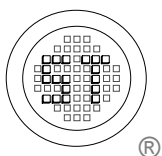
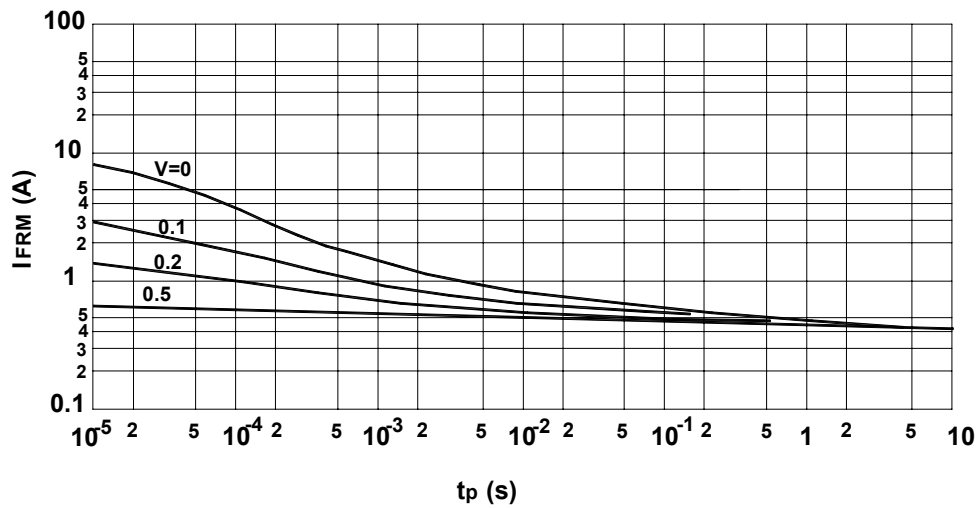


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Reverse capacitance vs. reverse voltage

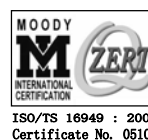


Ammissible repetitive peak forward current vs. pulse duration



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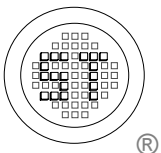
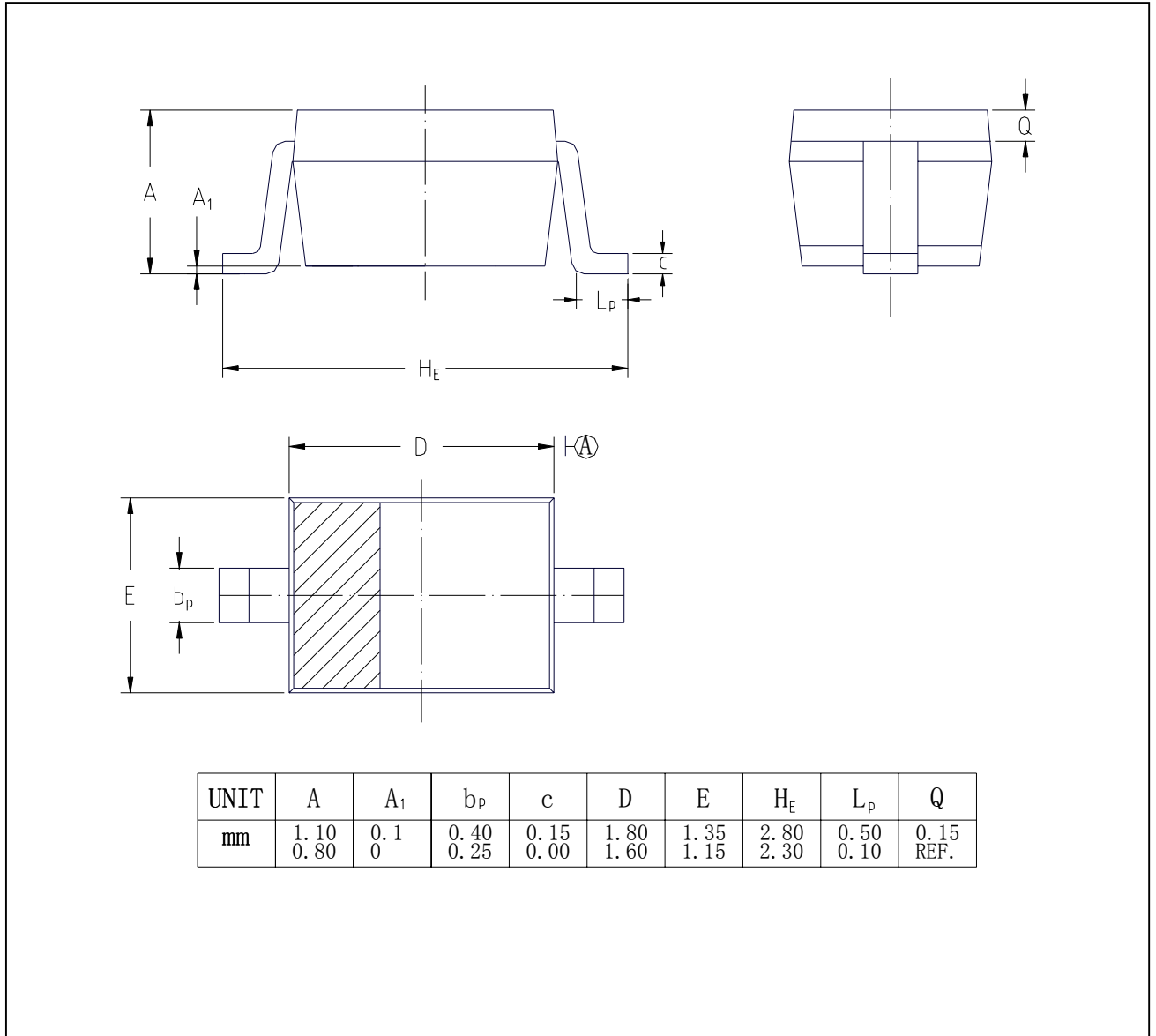
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PACKAGE OUTLINE

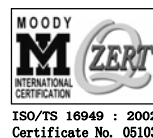
Plastic surface mounted package; 2 leads

SOD-323



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