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Diodes Incorporated
ZLLS350TA

For any questions, you can email us directly:
sales@integrated-circuit.com

Lead-free Green

A Product Line of
Diodes Incorporated

ZLLS350

40V LOW LEAKAGE SCHOTTKY DIODE

Description

Packaged in the SOD523 package offering an ideal low V_F /I_R performance combined with a low package height making the device suitable for various converter, charger and LED driver circuits.

Mechanical Data

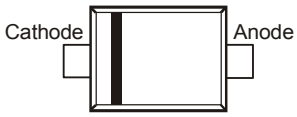
- Case: SOD523
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.001 grams (approximate)

Features

- Low V_F
- 380mA continuous current rating
- Low profile SOD523 package
- **Totally Lead-Free & Fully RoHS compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

SOD523

Top View



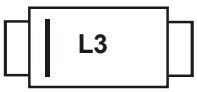
Top View
Pin-Out

Ordering Information (Note 4)

Part Number	Case	Packaging
ZLLS350TA	SOD523	3000/Tape & Reel

Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. For packaging details, go to our website at http://www.diodes.com/products/packages.html.

Marking Information



L3 = Product Type Marking Code

Maximum Ratings @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic		Symbol	Value	Unit
DC Blocking Voltage		V_{RM}	40	V
Continuous Forward current		I_F	380	mA
Average Peak Forward Current; duty cycle = 50%		I_{FAV}	650	mA
Non-Repetitive Forward Current	@ t < 100µs @ t < 10ms	I_{FSM}	6.0 1.3	A
Power Dissipation at T_A = +25°C (Note 5)		P_D	357	mW
Power Dissipation at T_A = +25°C (Note 6)		P_D	413	mW
Operating and storage temperature range		T_{STG}	-55 to +150	°C
Junction Temperature		T_J	+150	°C

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	350	°C/W
Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	303	

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	40	53	—	V	I_R = 100 µA
Forward Voltage Drop (Note 7)	V_F	—	395	450	mV	I_F = 30mA
		—	430	520		I_F = 50mA
		—	490	635		I_F = 100mA
		—	650	1000		I_F = 275mA
Leakage Current	I_R	—	0.15	4	µA	V_R = 30V
Total Capacitance	C_T	—	2.5	6	—	f = 1MHz; V_R = 30V
Reverse Recovery Time	t_{rr}	—	1	—	nS	Switch from I_F = 100mA to I_R = 100mA. Measured at I_R = 10mA

Notes: 5. For a single device surface mounted on 25mm x 25mm x 1.6mm FR4 PCB with high coverage of 1oz copper in still air conditions
6. As above measured @ t < 5 seconds
7. Measured under pulsed conditions. Pulse width ≤ 300µs; duty cycle ≤ 2%

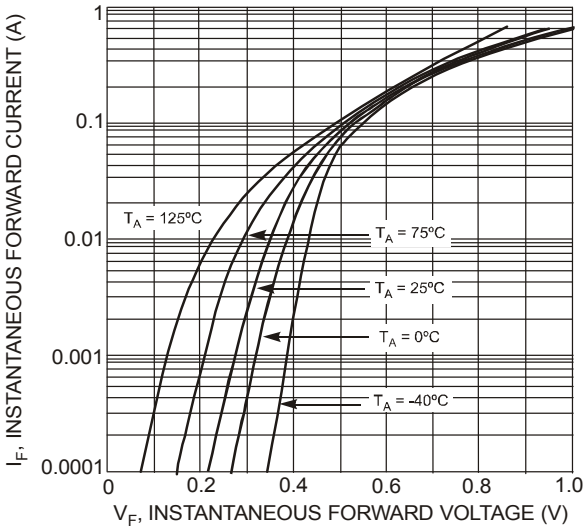


Fig. 1 Forward Characteristics

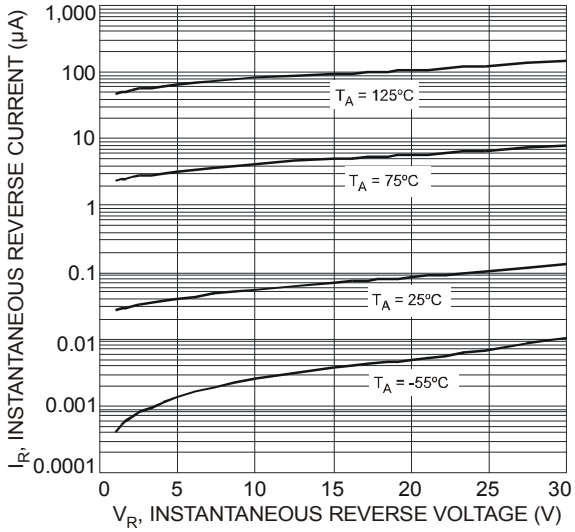


Fig. 2 Typical Reverse Characteristics

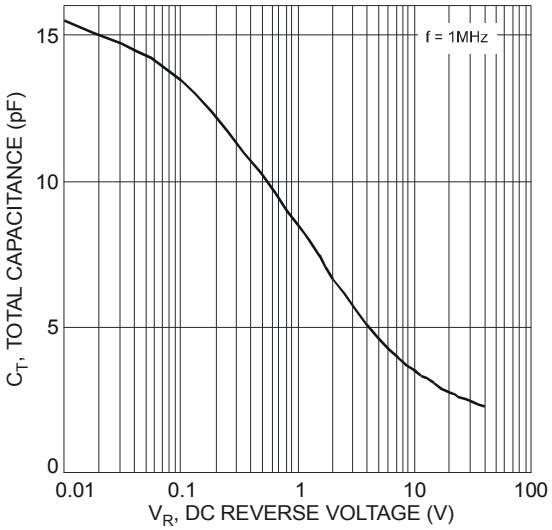


Fig. 3 Total Capacitance vs. Reverse Voltage

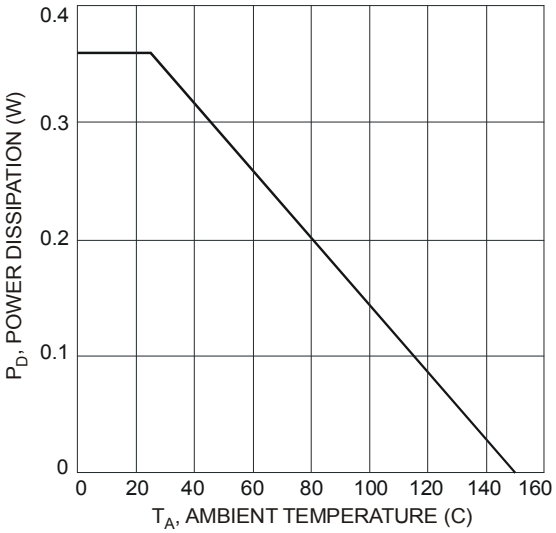
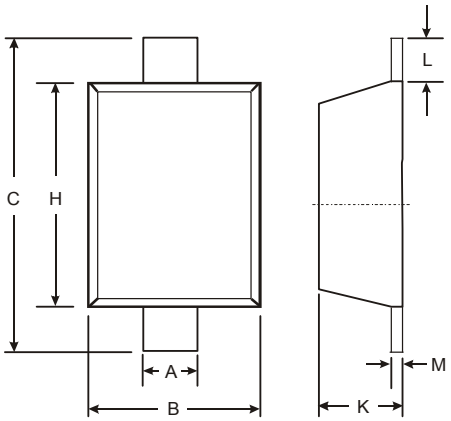


Fig. 4 Power Dissipation vs. Ambient Temperature

Package Outline Dimensions

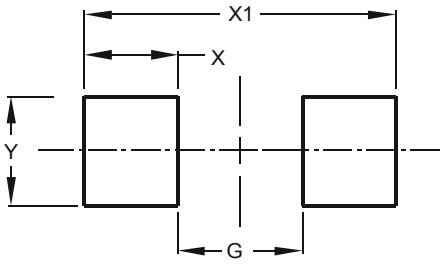
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



SOD523		
Dim	**Min**	**Max**
A	0.25	0.35
B	0.70	0.90
C	1.50	1.70
H	1.10	1.30
K	0.55	0.65
L	0.10	0.30
M	0.10	0.12
All Dimensions in mm		

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
G	0.80
X	0.60
X1	2.00
Y	0.70