

## Features

- Ultra-Small Surface Mount Package
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Note 4)

## ESD Sensitivity Rating

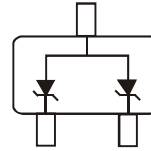
- IEC61000-4-2, HBM - 16kV, MM - 400V

## Mechanical Data

- Case: SOT-523
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.002 grams (approximate)



Top View


 TOP VIEW  
Device Schematic

## Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation	$P_D$	220	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Type Number	Marking Code	Zener Voltage Range (Note 1)			Maximum Zener Impedance (Note 2)				Maximum Reverse Current (Note 1)		Temperature Coefficient of Zener Voltage @ $I_{ZT} = 5\text{mA}$	
		$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		TC (mV/ $^\circ\text{C}$ )	
		Nom (V)	Min (V)	Max (V)	$\Omega$	mA	$\Omega$	mA	$\mu\text{A}$	V	Min	Max
DZL6V8AXV3	K96	6.8	6.46	7.14	15	5.0	100	1.0	1.0	4.5	1.2	4.5

- Notes:
1. Short duration pulse test used to minimize self-heating.
  2.  $f = 1\text{KHz}$ .
  3. No purposefully added lead.
  4. Diodes Inc.'s "Green" Policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).

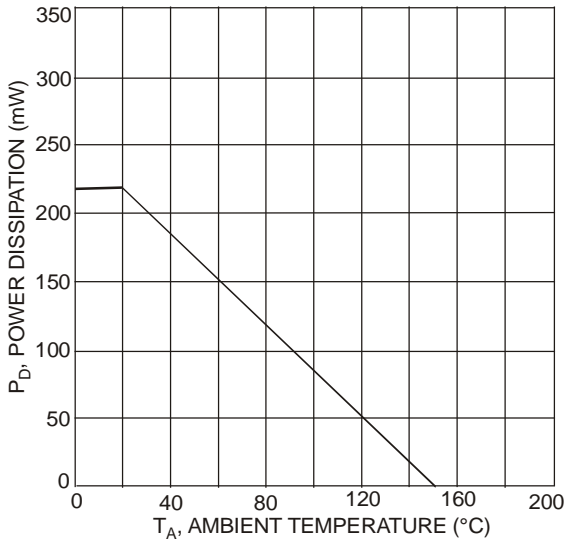


Fig. 1 Power Derating Curve

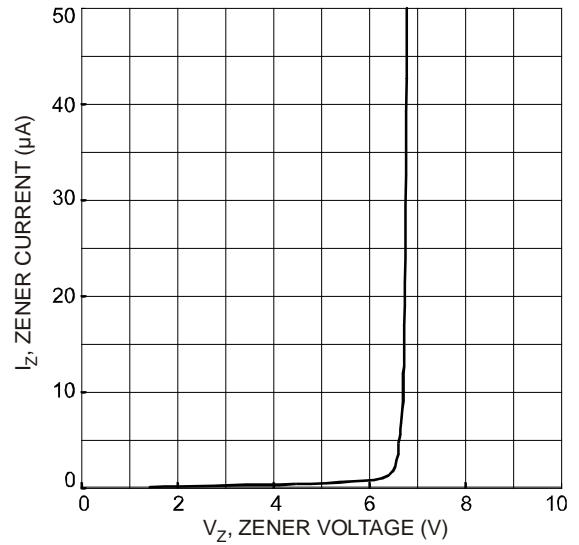


Fig. 2 Typical Zener Breakdown Characteristics

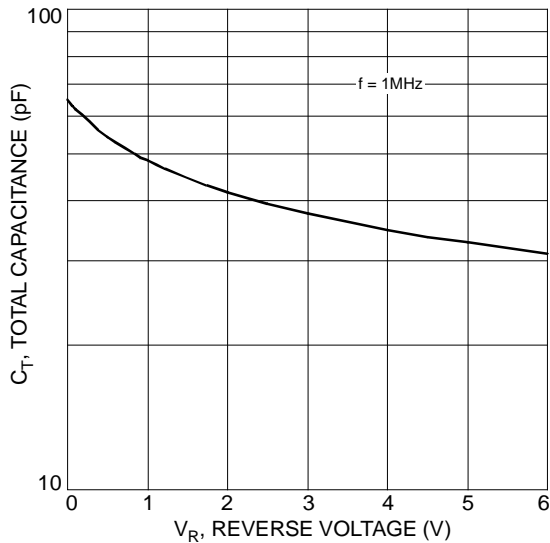


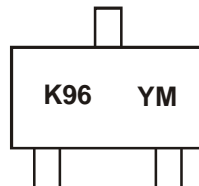
Fig. 3 Typical Total Capacitance

**Ordering Information** (Note 5)

Part Number	Case	Packaging
DZL6V8AXV3-7	SOT-523	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



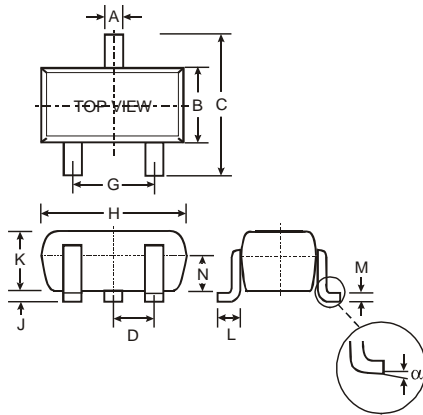
K96 = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year (ex: U = 2007)  
 M = Month (ex: 9 = September)

Date Code Key

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	U	V	W	X	Y	Z	A	B	C

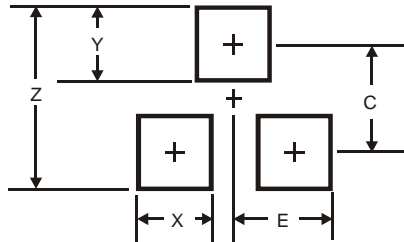
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

**Package Outline Dimensions**



SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
alpha	0°	8°	—
All Dimensions in mm			

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	1.8
X	0.4
Y	0.51
C	1.3
E	0.7

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