DUAL SURFACE MOUNT ZENER DIODE

Features

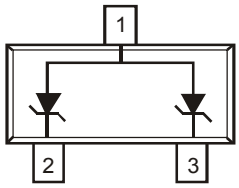
- Dual Zeners in Common Anode Configuration
- Low Capacitance (15pF typical)
- Ideally Suited for Automated Insertion
- ΔV_Z For Both Diodes in One Case is $\leq 5\%$
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: SOT23
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208 e3
- Polarity: See Diagram
- Approximate Weight: 0.008 grams

SOT23

Top View



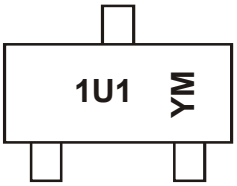
Device Schematic

Ordering Information (Note 4)

Part Number	Case	Packaging
GZ23C5V6-7	SOT23	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



1U1 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: Z = 2012)
M = Month (ex: 9 = September)

Date Code Key

Year	2012	2013	2014	2015	2016	2017	2018
Code	Z	A	B	C	D	E	F

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

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit	Conditions
ESD Protection – Contact Discharge	$V_{ESD\_Contact}$	-10, +30	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V_{ESD_Air}	-10, +30	kV	Standard IEC 61000-4-2
ESD Protection – Human Body Model	V_{ESD_HBM}	±8	kV	MIL-STD-883
ESD Protection – Machine Model	V_{ESD_MM}	±400	V	MIL-STD-883

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 5)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	–65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Type Number	Marking Code	Zener Voltage Range (Note 6 & 7)	Maximum Zener Impedance f = 1kHz (Note 7)		Maximum Total Capacitance (Note 7)	Maximum Reverse Current (Note 6 & 7)
		@ I_{ZT} = 5.0mA	Z_{ZT} @ I_{ZT} = 5.0mA	Z_{ZK} @ I_{ZK} = 1.0mA	C_T @ V_R = 0V, f = 1MHz	I_R @ V_R = 2.5V
		V_Z (Volts)	Ω	Ω	pF	μA
GZ23C5V6	1U1	5.310 - 5.920	10	30	20	1.0

Notes: 5. Mounted on FR4 PC Board with recommended pad layout which can be found on our website at http://www.diodes.com.
6. Short duration pulse test used to minimize self-heating effect.
7. Electrical characteristics are applicable for each diode element. Pin 1 to 3 or pin 2 to 3.

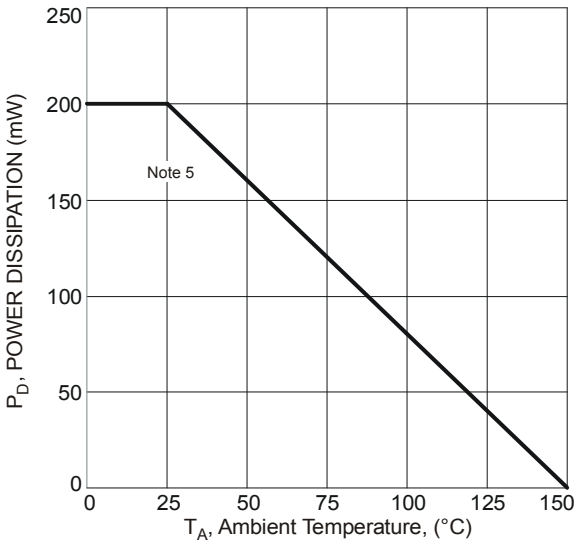


Figure 1 Power Derating Curve

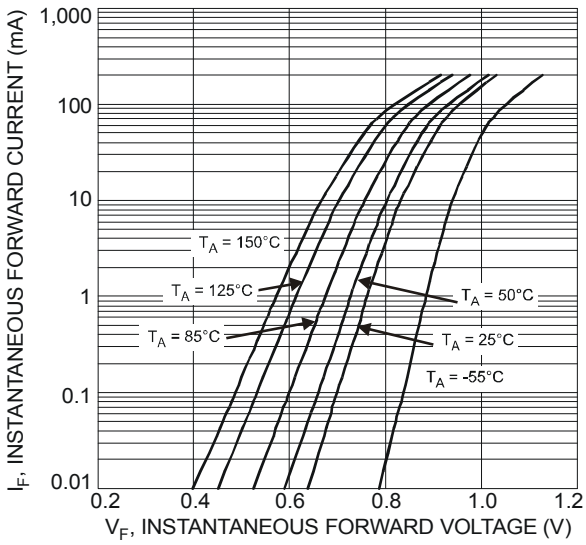


Figure 2 Typical Forward Characteristics, Per Element

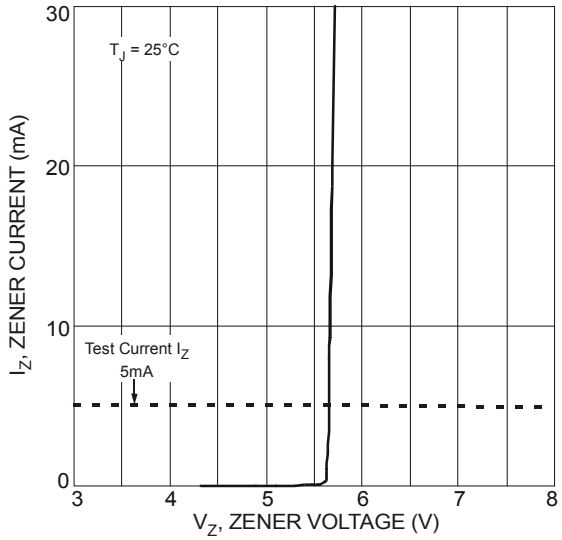
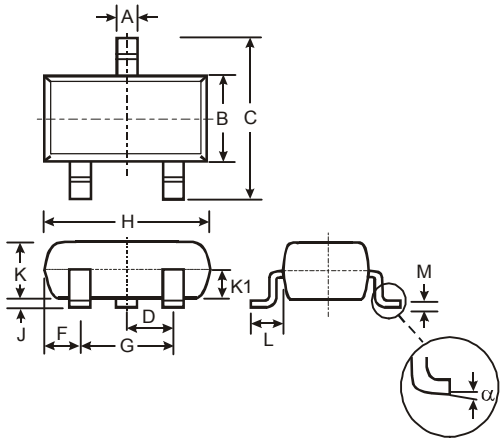


Figure 3 Typical Zener Breakdown Characteristics, Per Element

Package Outline Dimensions

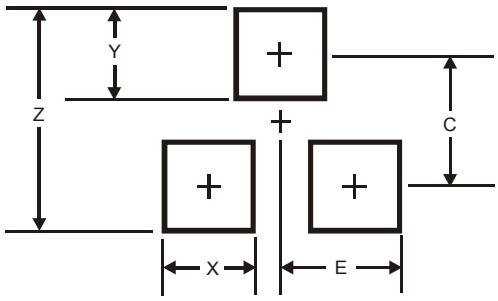
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



SOT23			
Dim	**Min**	**Max**	**Typ**
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.903	1.10	1.00
K1	-	-	0.400
L	0.45	0.61	0.55
M	0.085	0.18	0.11
α	0°	8°	-
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)
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

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