



AZ23C5V6W, AZ23C6V8W, AZ23C10W, AZ23C18W

200mW DUAL SURFACE MOUNT ZENER DIODE

Features

- Nominal Zener Voltages: 5.6V, 6.8V, 10V, 18V
- Ultra-Small Surface Mount Package
- Ideal For Transient Suppression
- Lead Free/RoHS Compliant (Note 4)
- "Green" Device (Note 5 and 6)

ESD Sensitivity Rating

- AEC-Q101, HBM 8kV, MM 400V (AZ23C5V6W - AZ23C18W)
- IEC 61000-4-2, Air Exceeds 25kV, Contact 8kV (AZ23C5V6W, AZ23C6V8W)
- IEC 61000-4-2, Air Exceeds 15kV, Contact 8kV (AZ23C10W, AZ23C18W)



Top View

Mechanical Data

- Case: SOT-323
- Case Material: Molded Plastic, "Green" Molding Compound, Note 6. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Marking Information: See Table Below & Page 2
- Ordering Information: See Page 2
- Weight: 0.006 grams (approximate)



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
Forward Voltage @ I _F = 10mA	V_{F}	0.9	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_{D}	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{ hetaJA}$	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

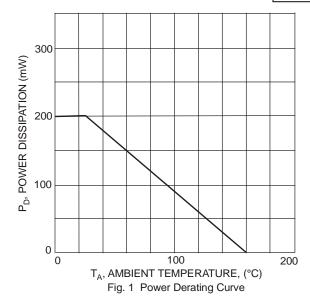
Type Number	Marking Code	Zener Voltage Range (Note 2)			Maxi	mum Zen (Not		lance		n Reverse (Note 2)		-
		V _{Z @ IZT}		Z _{ZT} @ I _{ZT} Z _{ZK} @ I _{ZK}			I _R @ V _R		T _C (mV/°C)			
		Nom (V)	Min (V)	Max (V)	Ω	mA	Ω	mA	μА	V	Min	Max
AZ23C5V6W	KD9	5.6	5.32	5.88	40	5.0	400	1.0	1.0	2.0	-2.0	2.5
AZ23C6V8W	KDB	6.8	6.47	7.14	15	5.0	80	1.0	2.0	4.0	1.2	4.5
AZ23C10W	KDF	10	9.4	10.6	15	5.0	70	1.0	0.2	7.0	4.5	8.0
AZ23C18W	KDL	18	16.8	19.1	50	5.0	170	1.0	0.1	12.6	12.4	16.0

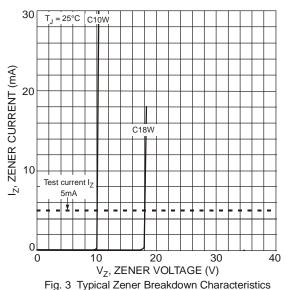
Notes:

- 1. Mounted on FR4 PC Board with recommended pad layout at http://www.diodes.com/datasheets/ap02001.pdf.
- 2. Short duration pulse test used to minimize self-heating.
- 3. f = 1KHz.
- 4. No purposefully added lead.
- 5. Diodes Inc.'s "Green" Policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
- Product manufactured with date code 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.



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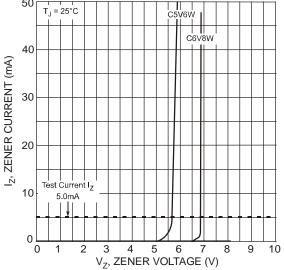


Fig. 2 Typical Zener Breakdown Characteristics

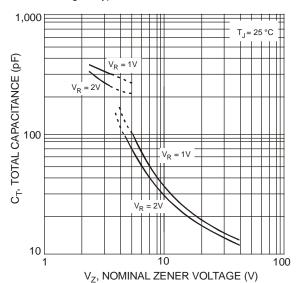


Fig. 4 Typical Total Capacitance vs. Nominal Zener Voltage

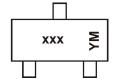
Ordering Information (Notes 6 & 7)

Part Number	Case	Packaging		
(Type Number)-7-F*	SOT-323	3000/Tape & Reel		

^{*} Add "-7-F" to the appropriate type number in Electrical Characteristics Table from Page 1 example: 6.8V Zener = AZ23C6V8W-7-F.

Notes: 7. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



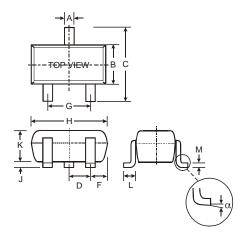
xxx = Product Type Marking Code See Electrical Characteristics Table YM = Date Code Marking Y = Year (ex: N = 2002) M = Month (ex: 9 = September)

Date Code Kev

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2111	2012
Code	J	K	L	М	N	Р	R	S	Т	U	V	W	Χ	Υ	Z
Month	Jan	Fe	b	Mar	Apr	May	Ju	n	Jul	Aug	Sep	Oc	t I	Nov	Dec
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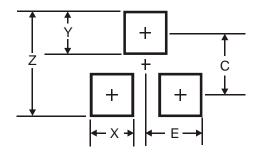


Package Outline Dimensions



SOT-323					
Dim	Min	Max			
Α	0.25	0.40			
В	1.15	1.35			
С	2.00	2.20			
D	0.65 N	ominal			
F	0.30	0.40			
G	1.20	1.40			
Н	1.80	2.20			
7	0.0	0.10			
K	0.90	1.00			
٦	0.25	0.40			
М	0.10	0.18			
α	0°	8°			
All Dimensions in mm					

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.8
Х	0.7
Y	0.9
С	1.9
E	1.0

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