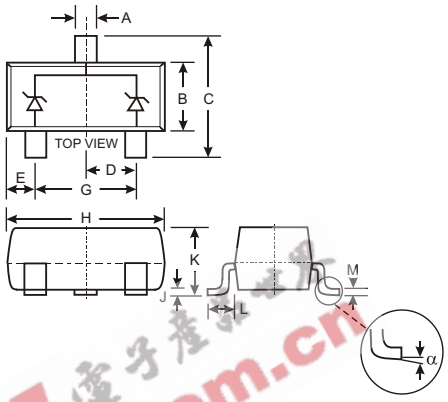
DZ23C2V7 - DZ23C51

300mW DUAL SURFACE MOUNT ZENER DIODE

Features

- Dual Zeners in Common Cathode Configuration
- 300 mW Power Dissipation
- Ideally Suited for Automatic Insertion
- V_Z For Both Diodes in One Case is 5%
- Common Anode Style Available
  See AZ Series
- **Lead Free/RoHS Compliant (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**



SOT-23		
Dim	**Min**	**Max**
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
	0	8
All Dimensions in mm		

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagram
- Marking: Marking Code (See Page 2)
- Weight: 0.008 grams (approximate)

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_d	300	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}	417	°C/W
Operating and Storage Temperature Range	T_j,T_{STG}	–65 to +150	°C

Note: 1. Mounted on FR4 PC Board with recommended pad layout which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.

Ordering Information (Note 2)

Device	Packaging	Shipping
(Type Number)-7-F	SOT-23	3000/Tape & Reel

* Add "-7-F" to the appropriate type number in Table on Page 2 example: 6.2V Zener = DZ23C6V2-7-F.

Note: 2. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
3. No purposefully added lead.

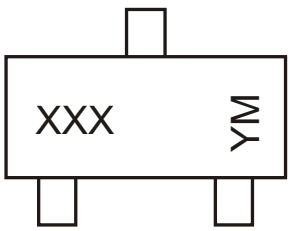
Electrical Characteristics

@T_A = 25°C unless otherwise noted

Type Number	Marking Code	Zener Voltage Range (Note 4)	Maximum Zener Impedance (Note 5)		Typical Temperature Coefficient	Min. Reverse Voltage (Note 4)
		@ I_{ZT} = 5.0mA	Z_{ZT} @ I_{ZT} = 5.0mA	Z_{ZK} @ I_{ZK} = 1.0mA		@ I_R = 0.1µA
		V_Z (Volts)	Ohms	Ohms	T_C (%/°C)	V_R (Volts)
DZ23C2V7	KV1	2.5-2.9	83	500	-0.065	—
DZ23C3V0	KV2	2.8-3.2	95	500	-0.060	—
DZ23C3V3	KV3	3.1-3.5	95	500	-0.055	—
DZ23C3V6	KV4	3.4-3.8	95	500	-0.055	—
DZ23C3V9	KV5	3.7-4.1	95	500	-0.050	—
DZ23C4V3	KV6	4.0-4.6	95	500	-0.035	—
DZ23C4V7	KV7	4.4-5.0	78	500	-0.015	—
DZ23C5V1	KV8	4.8-5.4	60	480	+0.005	0.8
DZ23C5V6	KV9	5.2-6.0	40	400	+0.020	1.0
DZ23C6V2	KVA	5.8-6.6	10	200	+0.030	2.0
DZ23C6V8	KVB	6.4-7.2	8.0	150	+0.045	3.0
DZ23C7V5	KVC	7.0-7.9	7.0	50	+0.050	5.0
DZ23C8V2	KVD	7.7-8.7	7.0	50	+0.055	6.0
DZ23C9V1	KVE	8.5-9.6	10	50	+0.065	7.0
DZ23C10	KVF	9.4-10.6	15	70	+0.065	7.5
DZ23C11	KVG	10.4-11.6	20	70	+0.070	8.5
DZ23C12	KVH	11.4-12.7	20	90	+0.075	9.0
DZ23C13	KVI	12.4-14.1	25	110	+0.080	10.0
DZ23C15	KVJ	13.8-15.6	30	110	+0.080	11.0
DZ23C16	KVK	15.3-17.1	40	170	+0.090	12.0
DZ23C18	KVL	16.8-19.1	50	170	+0.090	14.0
DZ23C20	KVM	18.8-21.2	50	220	+0.090	15.0
DZ23C22	KVN	20.8-23.3	55	220	+0.090	17.0
DZ23C24	KVO	22.8-25.6	80	220	+0.090	18.0
DZ23C27	KVP	25.1-28.9	80	250	+0.090	20.0
DZ23C30	KVQ	28-32	80	250	+0.090	22.5
DZ23C33	KVR	31-35	80	250	+0.090	25.0
DZ23C36	KVS	34-38	90	250	+0.090	27.0
DZ23C39	KVT	37-41	90	300	+0.110	29.0
DZ23C43	V30/KVU	40-46	100	700	+0.110	32.0
DZ23C47	V31/KVV	44-50	100	750	+0.110	35.0
DZ23C51	V32/KVW	48-54	100	750	+0.110	38.0

Note: 4. Short duration test pulse used to minimize self-heating effect.
5. f = 1KHz.

Marking Information



XXX = Product Type Marking Code
YM = Date Code Marking
Y = Year ex: N = 2002
M = Month ex: 9 = September

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	J	K	L	M	N	P	R	S	T	U	V	W

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

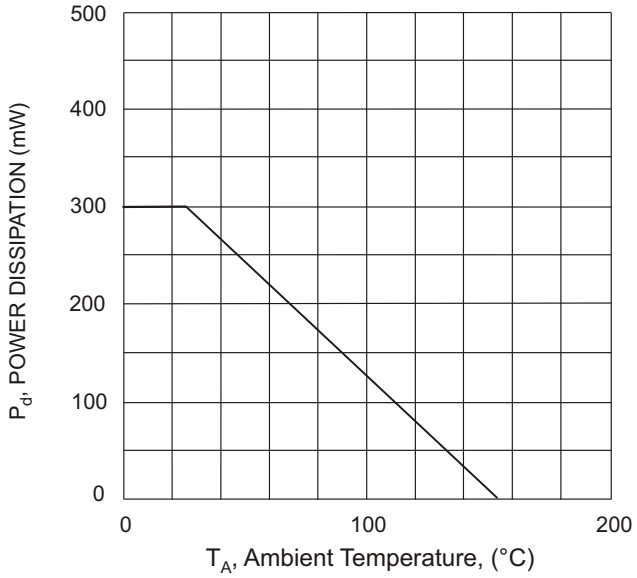


Fig. 1 Power Derating Curve

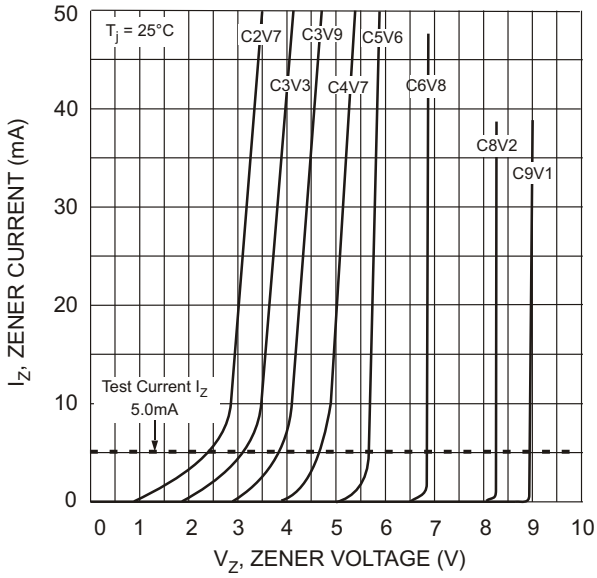


Fig. 2 Zener Breakdown Characteristics

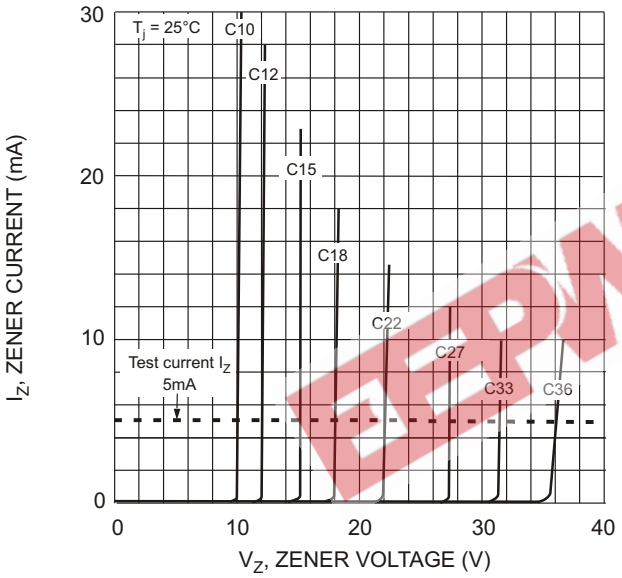


Fig. 3 Zener Breakdown Characteristics

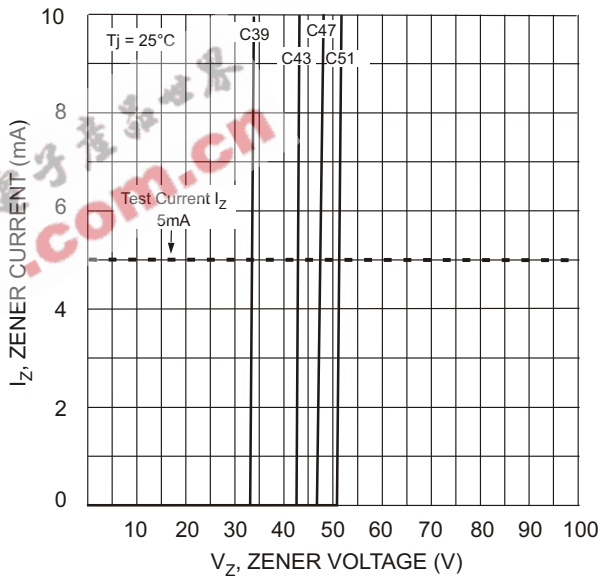


Fig. 4 Zener Breakdown Characteristics

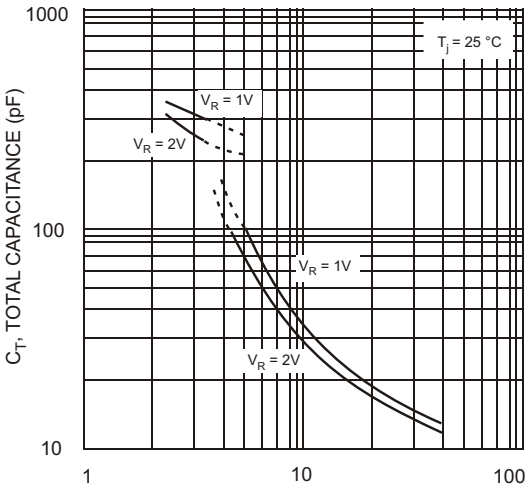


Fig. 5 Total Capacitance vs Nominal Zener Voltage

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