



**THE DATASHEET OF  
AZ23C5V1-TP**





Micro Commercial Components



Micro Commercial Components  
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# AZ23C2V7 THRU AZ23C51

**300 mW  
 Zener Diode  
 2.7 to 51 Volts**

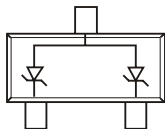
## Features

- Dual zeners in common anode configuration.
- 300mW power dissipation rating.
- Ideally suited for automatic insertion.
- $\Delta v_z$  for both diodes in one case is  $\leq 5\%$ .
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

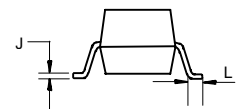
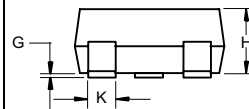
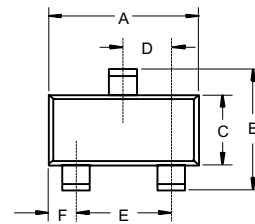
## Absolute Maximum Ratings

Symbol	Parameter	Rating	Unit
$P_D$	Power dissipation	300	mW
$R_{thJA}$	Thermal Resistance, Junction to Ambient Air	417	$^{\circ}C/W$
$T_{STG}$	Storage Temperature Range	-65 to +175	$^{\circ}C$

\*Pin Configuration - Top View



## SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	
L	.007	.020	.20	.50	

**AZ23C2V7 THRU AZ23C51**
**Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

Type Number	Marking Code	Zener voltage Range (note1)	Maximum zener Impedance (note 2)		Typical Temperature coefficient	Min reverse Voltage (note1)
		@ I <sub>ZT</sub> =5.0mA	Z <sub>ZT</sub> @I <sub>ZT</sub> =5.0mA	Z <sub>Zk</sub> @I <sub>Zk</sub> =1.0mA		@I <sub>R</sub> =0.1uA
		V <sub>Z</sub> (volts )	Ohms	Ohms	T <sub>c</sub> (%/°C)	V <sub>R</sub> (volts)
AZ23C2V7	KD1	2.5-2.9	83	500	-0.065	—
AZ23C3V0	KD2	2.8-3.2	95	500	-0.060	—
AZ23C3V3	KD3	3.1-3.5	95	500	-0.055	—
AZ23C3V6	KD4	3.4-3.8	95	500	-0.055	—
AZ23C3V9	KD5	3.7-4.1	95	500	-0.050	—
AZ23C4V3	KD6	4.0-4.6	95	500	-0.035	—
AZ23C4V7	KD7	4.4-5.0	78	500	-0.015	—
AZ23C5V1	KD8	4.8-5.4	60	480	+0.005	0.8
AZ23C5V6	KD9	5.2-6.0	40	400	+0.020	1.0
AZ23C6V2	KDA	5.8-6.6	10	200	+0.030	2.0
AZ23C6V8	KDB	6.4-7.2	8.0	150	+0.045	3.0
AZ23C7V5	KDC	7.0-7.9	7.0	50	+0.050	5.0
AZ23C8V2	KDD	7.7-8.7	7.0	50	+0.055	6.0
AZ23C9V1	KDE	8.5-9.6	10	50	+0.065	7.0
AZ23C10	KDF	9.4-10.6	15	70	+0.065	7.5
AZ23C11	KDG	10.4-11.6	20	70	+0.070	8.5
AZ23C12	KDH	11.4-12.7	20	90	+0.075	9.0
AZ23C13	KDI	12.4-14.1	25	110	+0.080	10.0
AZ23C15	KDJ	13.8-15.6	30	110	+0.080	11.0
AZ23C16	KDK	15.3-17.1	40	170	+0.090	12.0
AZ23C18	KDL	16.8-19.1	50	170	+0.090	14.0
AZ23C20	KDM	18.8-21.2	50	220	+0.090	15.0
AZ23C22	KDN	20.8-23.3	55	220	+0.090	17.0
AZ23C24	KDO	22.8-25.6	80	220	+0.090	18.0
AZ23C27	KDP	25.1-28.9	80	250	+0.090	20.0
AZ23C30	KDQ	28-32	80	250	+0.090	22.5
AZ23C33	KDR	31-35	80	250	+0.090	25.0
AZ23C36	KDS	34-38	90	250	+0.090	27.0
AZ23C39	KDT	37-41	90	300	+0.110	29.0
AZ23C43	D30	40-46	100	700	+0.110	32.0
AZ23C47	D31	44-50	100	750	+0.110	35.0
AZ23C51	D32	48-54	100	750	+0.110	38.0

Notes: 1. Short duration test pulse used to minimize self-heating effect.

2. f=1KHz

**AZ23C2V7-AZ23C51**

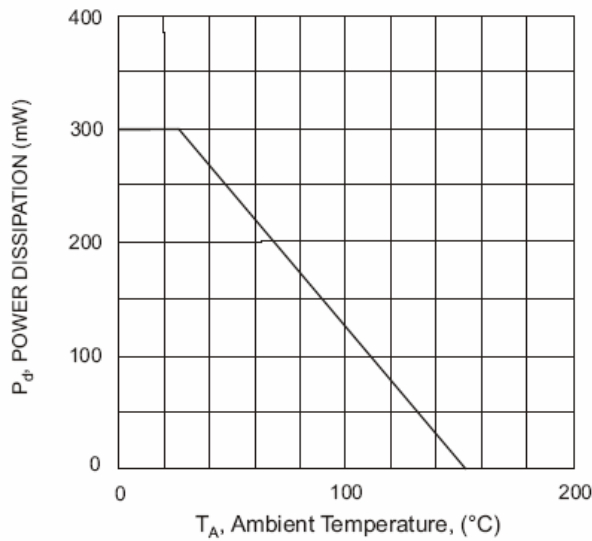


Fig. 1 Power Derating Curve

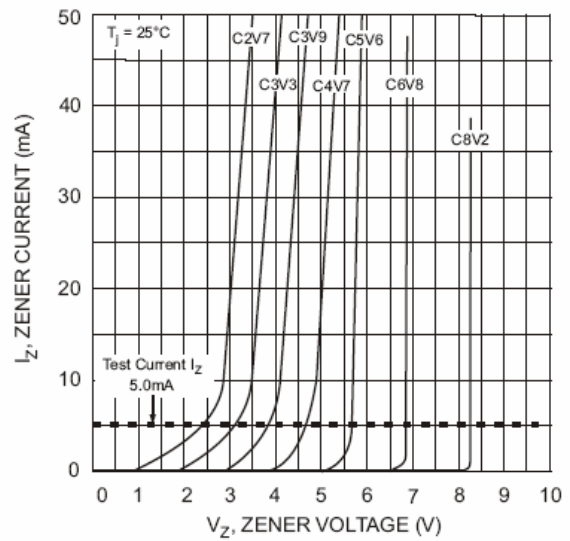


Fig. 2 Zener Breakdown Characteristics

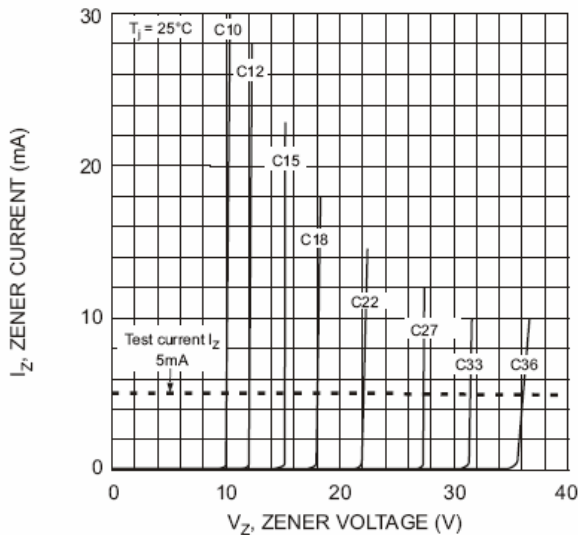


Fig. 3 Zener Breakdown Characteristics

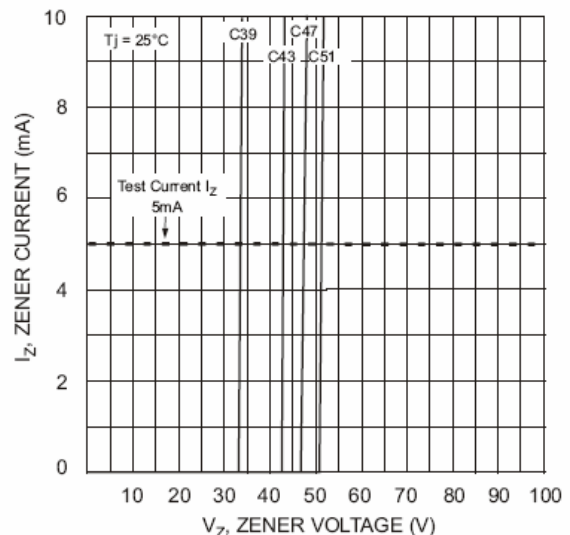


Fig. 4 Zener Breakdown Characteristics

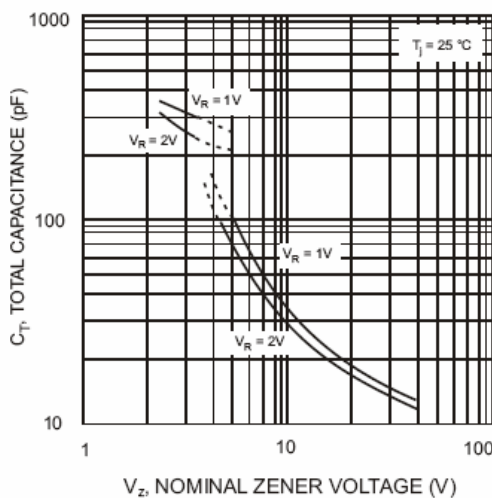


Fig. 5 Total Capacitance vs Nominal Zener Voltage



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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