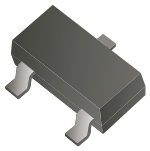
AZ23C2V7-P2-HF Thru. AZ23C51-P2-HF

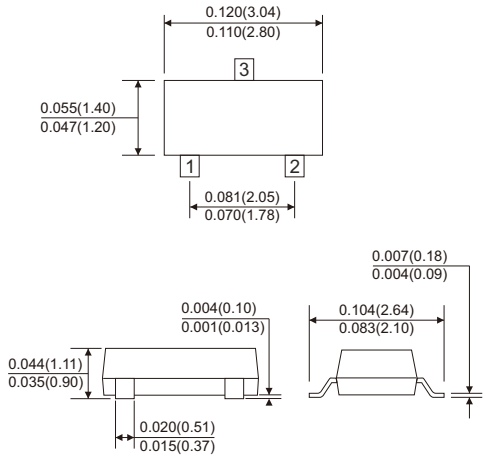
Zener Voltage: 2.7V to 51V
Power Dissipation: 300mW
RoHS Device
Halogen Free



Features

- Zener voltages: 2.7V~51V.
- Planar die construction.
- Vz for both diodes in one case is < 5%.

SOT-23

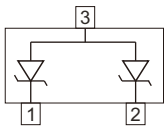


Dimensions in inches and (millimeter)

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Forward voltage @ IF=10mA	V_F	0.9	V
Power dissipation	P_D	300	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	417	°C/W
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (TA=25°C unless otherwise noted)

Part Number	Zener Voltage				Maximum Zener Impedance @ IZK=1mA		Typical Temperature Coefficient	Maximum Reverse Current		Marking Code
	VZ (V)			IZT	ZZT @ IZT	ZZK				
	Min	Typ	Max	(mA)	(Ω)	(Ω)	TC (%/°C)	IR (μA)	@VR (V)	
AZ23C2V7-P2-HF	2.5	2.7	2.9	5	83	500	-0.065	0.1		KD1
AZ23C3V0-P2-HF	2.8	3.0	3.2	5	95	500	-0.060	0.1		KD2
AZ23C3V3-P2-HF	3.1	3.3	3.5	5	95	500	-0.055	0.1		KD3
AZ23C3V6-P2-HF	3.4	3.6	3.8	5	95	500	-0.055	0.1		KD4
AZ23C3V9-P2-HF	3.7	3.9	4.1	5	95	500	-0.050	0.1		KD5
AZ23C4V3-P2-HF	4.0	4.3	4.6	5	95	500	-0.035	0.1		KD6
AZ23C4V7-P2-HF	4.4	4.7	5.0	5	78	500	-0.015	0.1		KD7
AZ23C5V1-P2-HF	4.8	5.1	5.4	5	60	480	0.005	0.1	0.8	KD8
AZ23C5V6-P2-HF	5.2	5.6	6.0	5	40	400	0.020	0.1	1.0	KD9
AZ23C6V2-P2-HF	5.8	6.2	6.6	5	10	200	0.030	0.1	2.0	KDA
AZ23C6V8-P2-HF	6.4	6.8	7.2	5	8	150	0.045	0.1	3.0	KDB
AZ23C7V5-P2-HF	7.0	7.5	7.9	5	7	50	0.050	0.1	5.0	KDC
AZ23C8V2-P2-HF	7.7	8.2	8.7	5	7	50	0.055	0.1	6.0	KDD
AZ23C9V1-P2-HF	8.5	9.1	9.6	5	10	50	0.065	0.1	7.0	KDE
AZ23C10-P2-HF	9.4	10	10.6	5	15	70	0.065	0.1	7.5	KDF
AZ23C11-P2-HF	10.4	11	11.6	5	20	70	0.070	0.1	8.5	KDG
AZ23C12-P2-HF	11.4	12	12.7	5	20	90	0.075	0.1	9.0	KDH
AZ23C13-P2-HF	12.4	13	14.1	5	25	110	0.080	0.1	10.0	KDI
AZ23C15-P2-HF	13.8	15	15.6	5	30	110	0.080	0.1	11.0	KDJ
AZ23C16-P2-HF	15.3	16	17.1	5	40	170	0.090	0.1	12.0	KDK
AZ23C18-P2-HF	16.8	18	19.1	5	50	170	0.090	0.1	14.0	KDL
AZ23C20-P2-HF	18.8	20	21.2	5	50	220	0.090	0.1	15.0	KDM
AZ23C22-P2-HF	20.8	22	23.3	5	55	220	0.090	0.1	17.0	KDN
AZ23C24-P2-HF	22.8	24	25.6	5	80	220	0.090	0.1	18.0	KDO
AZ23C27-P2-HF	25.1	27	28.9	5	80	250	0.090	0.1	20.0	KDP
AZ23C30-P2-HF	28.0	30	32.0	5	80	250	0.090	0.1	22.5	KDQ
AZ23C33-P2-HF	31.0	33	35.0	5	80	250	0.090	0.1	25.0	KDR
AZ23C36-P2-HF	34.0	36	38.0	5	90	250	0.090	0.1	27.0	KDS
AZ23C39-P2-HF	37.0	39	41.0	5	90	300	0.110	0.1	29.0	KDT
AZ23C43-P2-HF	40.0	43	46.0	5	100	700	0.110	0.1	32.0	D30
AZ23C47-P2-HF	44.0	47	50.0	5	100	750	0.110	0.1	35.0	D31
AZ23C51-P2-HF	48.0	51	54.0	5	100	750	0.110	0.1	38.0	D32

Typical Rating and Characteristic Curves (AZ23Cxxx-P2-HF Series)

Fig.1 - Power Derating Curve

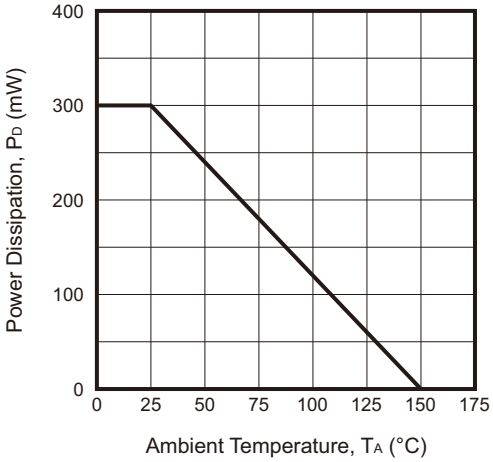


Fig.2 - Typical Zener Breakdown Characteristics

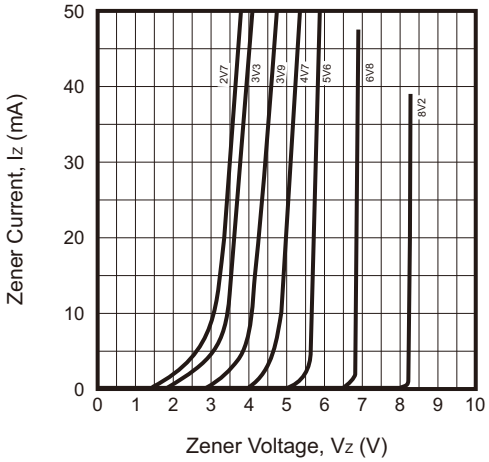
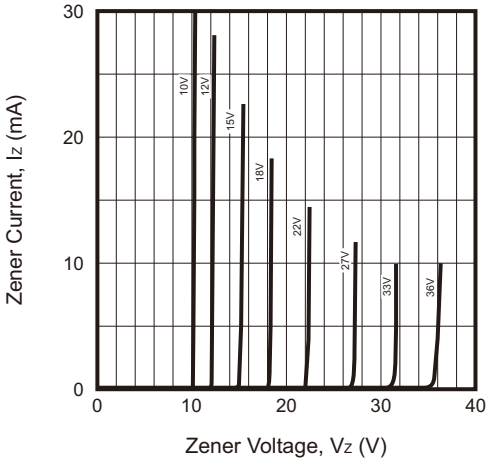
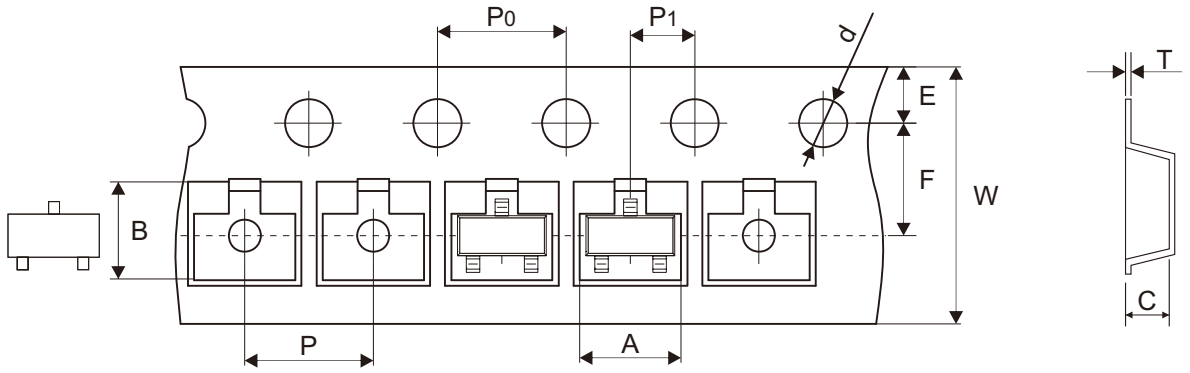
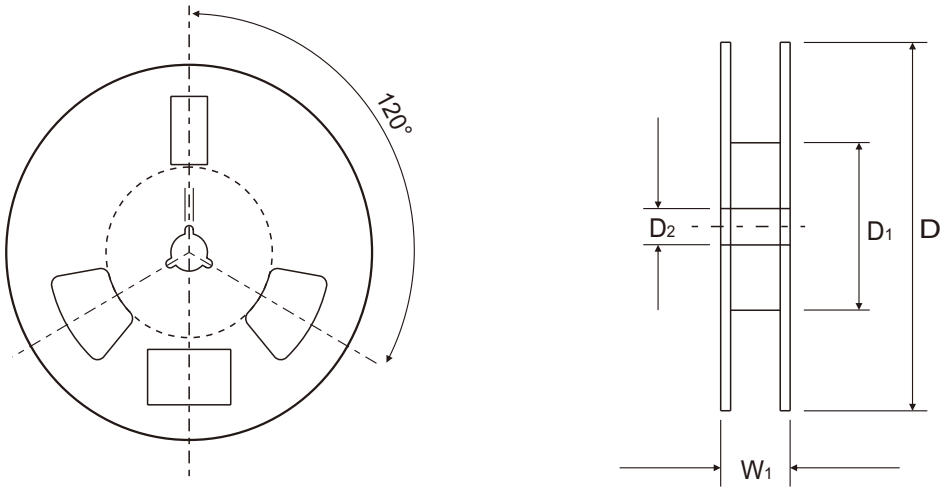


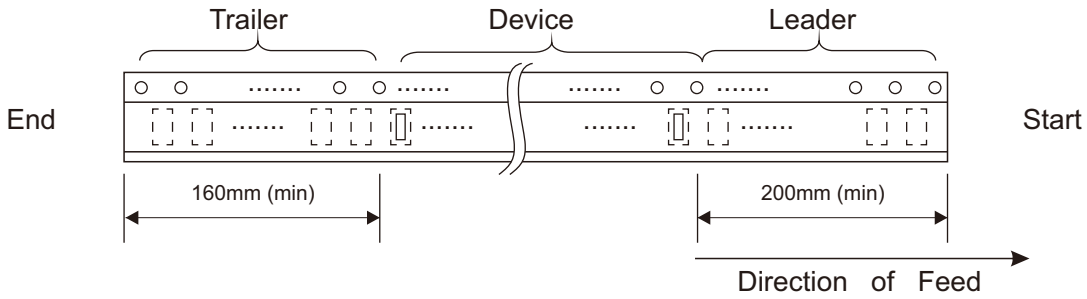
Fig.3 - Typical Zener Breakdown Characteristics



Reel Taping Specification





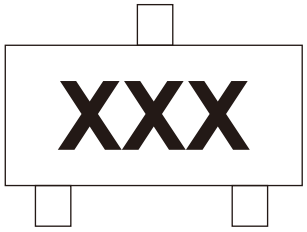


	SYMBOL	A	B	C	d	D	D1	D2
SOT-23	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 + 0.08 − 0.10	1.50 + 0.10 − 0.00	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 + 0.003 − 0.004	0.059 + 0.004 − 0.000	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

	SYMBOL	E	F	P	P0	P1	T	W	W1
SOT-23	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.30 − 0.10	9.50 ± 0.50
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 − 0.004	0.374 ± 0.020

Marking Code

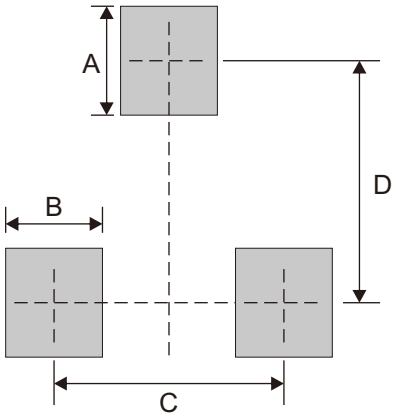
Part Number	Marking Code
AZ23Cxxx-P2-HF	See Page 2



xxx = Product type marking code

Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	1.90	0.075
D	2.00	0.079



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7