

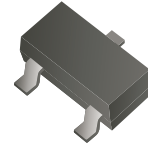
AUAZ23C2V4-HF Thru. AUAZ23C47-HF

Zener Voltage: 2.4V to 47V

Power Dissipation: 300mW

RoHS Device

Halogen Free



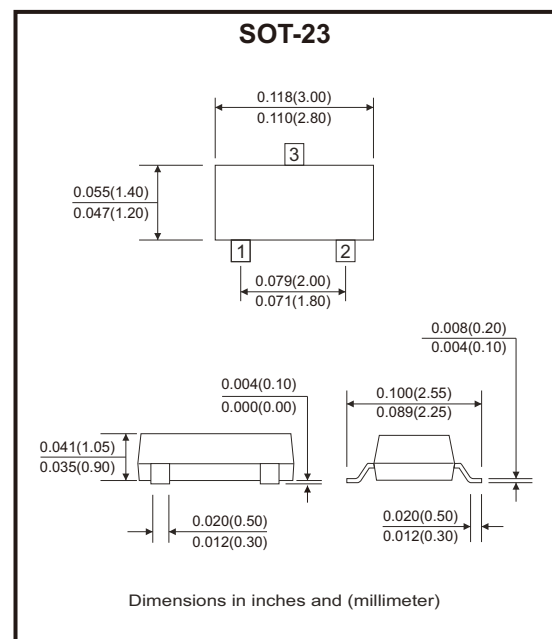
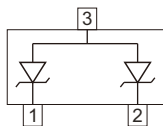
Features

- Zener voltage: 2.4V~47V.
- Vz-tolerance for both diodes in one case is $\leq \pm 5\%$.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Power dissipation (Note 1)	P _D	300	mW
Maximum forward voltage @ I _F = 10mA _{dc}	V _F	0.9	V
Maximum regulator current (Note 1)	I _{ZM}	P _D /V _Z	mA
Thermal resistance, junction to ambient	R _{θJA}	417	°C/W
Operating temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Note: 1. Single diode loaded.

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

Part Number	Zener Voltage				Maximum Zener Impedance				Maximum Reverse Current		Typical Temperature Coefficient @I _{ZTC} mV/°C		Test Current I _{ZTC}	Typ. Junction Capacitance	Marking Code
	V _Z (V)			I _{ZT}	I _{ZT}	Z _{ZT}	I _{ZK}	Z _{ZK}	I _R @ V _R						
	Min	Typ	Max	mA	mA	Ω	mA	Ω	μA	V	Min	Max	mA	pF	
AUAZ23C2V4-HF	2.28	2.4	2.56	5	5	100	1.0	600	50	1.0	-3.5	0	5	116	KD0.
AUAZ23C2V7-HF	2.5	2.7	2.9	5	5	100	1.0	600	20	1.0	-3.5	0	5	111	KD1.
AUAZ23C3V0-HF	2.8	3.0	3.2	5	5	95	1.0	600	10	1.0	-3.5	0	5	129	KD2.
AUAZ23C3V3-HF	3.1	3.3	3.5	5	5	95	1.0	600	5	1.0	-3.5	0	5	123	KD3.
AUAZ23C3V6-HF	3.4	3.6	3.8	5	5	90	1.0	600	5	1.0	-3.5	0	5	120	KD4.
AUAZ23C3V9-HF	3.7	3.9	4.1	5	5	90	1.0	600	3	1.0	-3.5	0	5	118	KD5.
AUAZ23C4V3-HF	4.0	4.3	4.6	5	5	90	1.0	600	3	1.0	-3.5	0	5	105	KD6.
AUAZ23C4V7-HF	4.4	4.7	5.0	5	5	80	1.0	500	3	2.0	-3.5	0.2	5	96	KD7.
AUAZ23C5V1-HF	4.8	5.1	5.4	5	5	60	1.0	480	2	2.0	-2.7	1.2	5	72	KD8.
AUAZ23C5V6-HF	5.2	5.6	6.0	5	5	40	1.0	400	1	2.0	-2	2.5	5	62	KD9.
AUAZ23C6V2-HF	5.8	6.2	6.6	5	5	10	1.0	150	3	4.0	0.4	3.7	5	54	KDA.
AUAZ23C6V8-HF	6.4	6.8	7.2	5	5	15	1.0	80	2	4.0	1.2	4.5	5	49	KDB.
AUAZ23C7V5-HF	7.0	7.5	7.9	5	5	15	1.0	80	1	5.0	2.5	5.3	5	44	KDC.
AUAZ23C8V2-HF	7.7	8.2	8.7	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5	40	KDD.
AUAZ23C9V1-HF	8.5	9.1	9.6	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5	38	KDE.
AUAZ23C10-HF	9.4	10	10.6	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5	33	KDF.
AUAZ23C11-HF	10.4	11	11.6	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5	30	KDG.
AUAZ23C12-HF	11.4	12	12.7	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5	28	KDH.
AUAZ23C13-HF	12.4	13	14.1	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5	25	KDI.
AUAZ23C15-HF	13.8	15	15.6	5	5	30	1.0	200	0.1	10.5	9.2	13.0	5	23	KDJ.
AUAZ23C16-HF	15.3	16	17.1	5	5	40	1.0	200	0.1	11.2	10.4	14.0	5	22	KDK.
AUAZ23C18-HF	16.8	18	19.1	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5	19	KDL.
AUAZ23C20-HF	18.8	20	21.2	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5	18	KDM.
AUAZ23C22-HF	20.8	22	23.3	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5	17	KDN.
AUAZ23C24-HF	22.8	24	25.6	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5	16	KDO.
AUAZ23C27-HF	25.1	27	28.9	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2	15	KDP.
AUAZ23C30-HF	28	30	32	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2	14	KDQ.
AUAZ23C33-HF	31	33	35	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2	14	KDR.
AUAZ23C36-HF	34	36	38	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2	13	KDS.
AUAZ23C39-HF	37	39	41	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2	13	KDT.
AUAZ23C43-HF	40	43	46	2	2	100	0.5	700	0.1	32	37.6	50.6	2	13	D30.
AUAZ23C47-HF	44	47	50	2	2	100	0.5	750	0.1	35	42.0	55.8	2	12	D31.

Typical Rating and Characteristic Curves (AUAZ23Cxxx-HF Series)

Fig.1 - Zener Voltage vs Zener Current

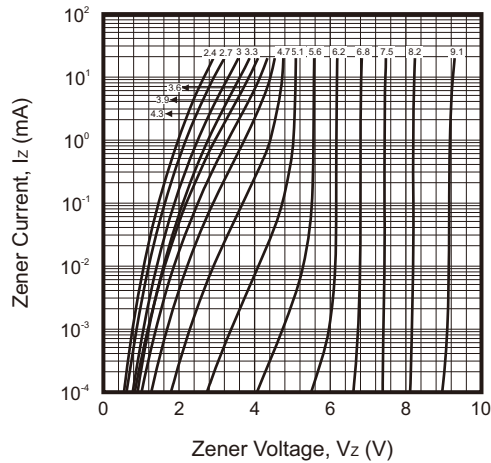


Fig.2 - Zener Voltage vs Zener Current

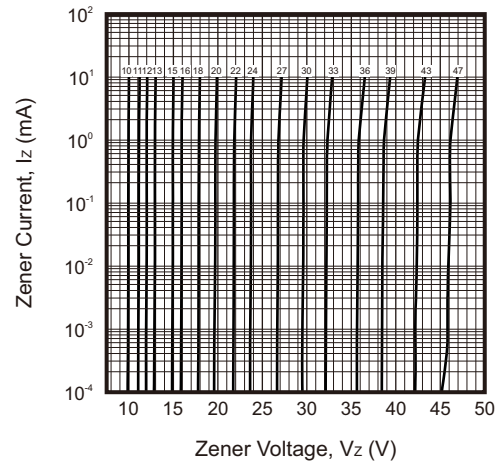


Fig.3 - Typical Temperature Coefficient

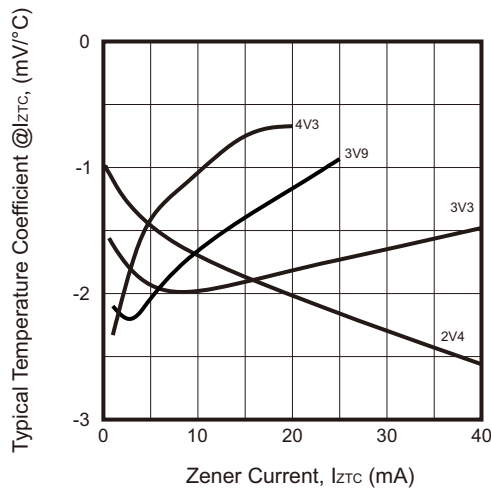


Fig.4 - Typical Temperature Coefficient

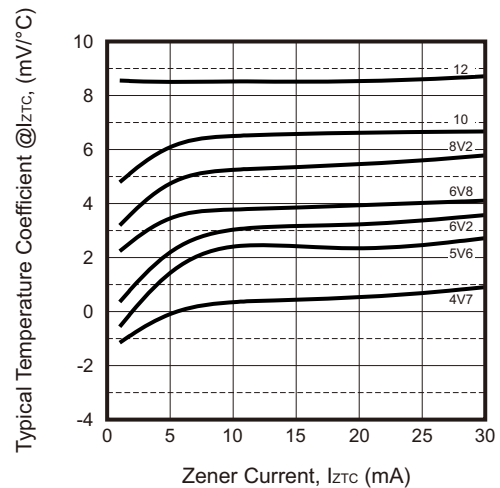


Fig.5 - Typical Capacitance

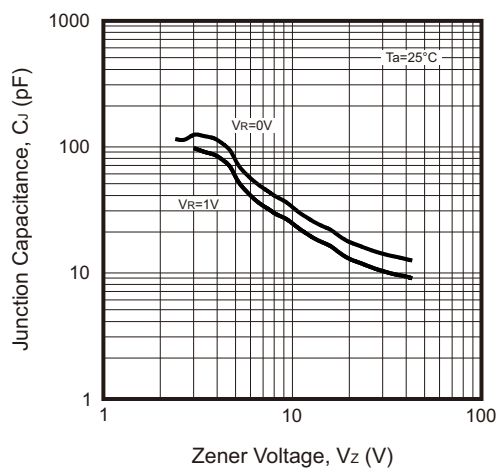
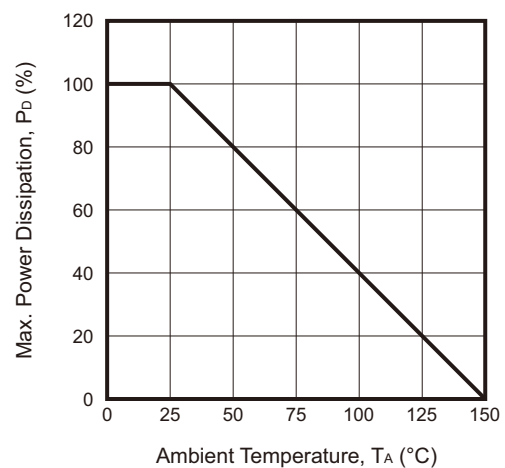
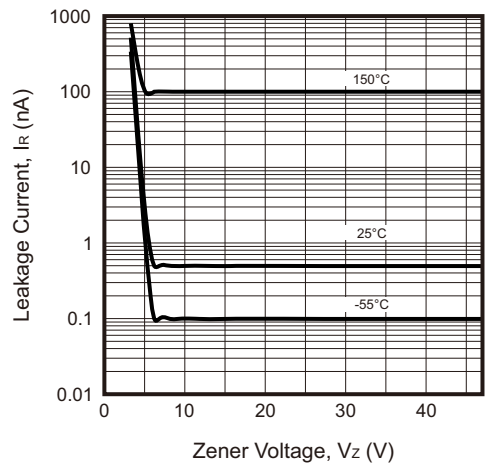


Fig.6 - Steady State Power Derating

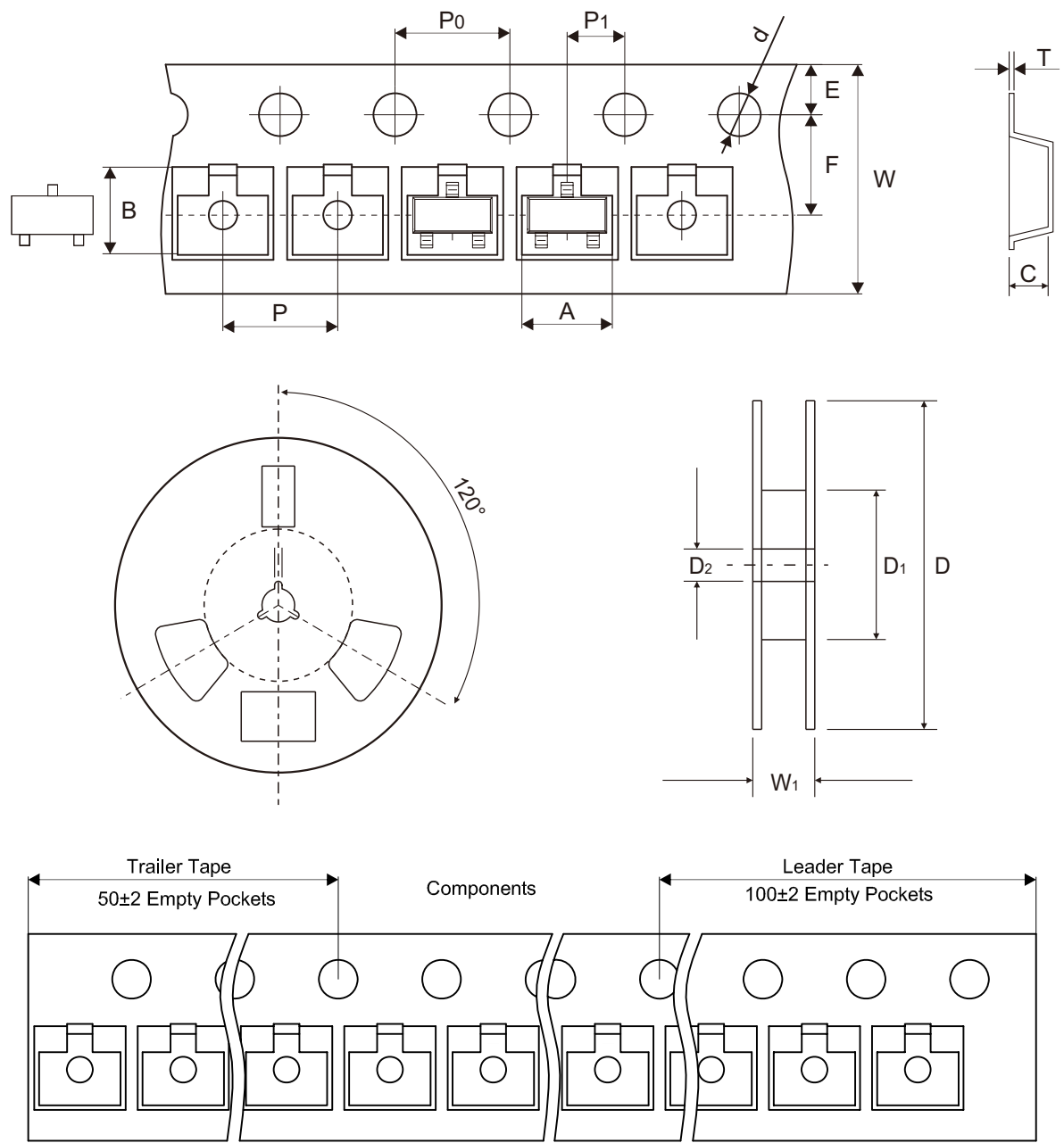


Typical Rating and Characteristic Curves (AUAZ23Cxxx-HF Series)

Fig.7 - Typical Leakage Current



Reel Taping Specification

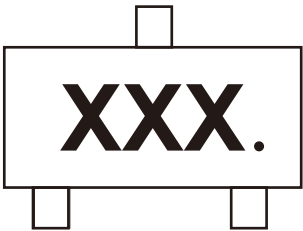


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOT-23	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.484 ± 0.039

Marking Code

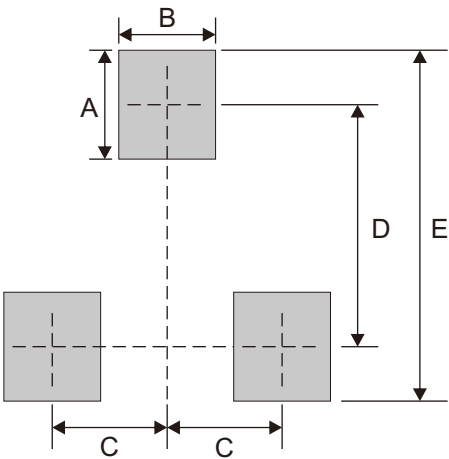
Part Number	Marking Code
AUAZ23Cxxx-HF Series	See Page 2



xxx = Product type marking code (See Page 2)

Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114



Standard Packaging

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