ZENER DIODE

Features

Total power dissipation: 300mW max

Package designed for optimal automated board assembly

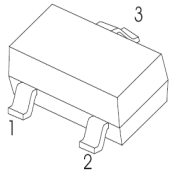
Small package size for high density applications

Wide zener reverse voltage range:2.7V to 51V

AEC-Q101 qualified (Automotive grade with suffix "Q".)

Exsemi technology

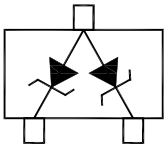
SOT-23



1.Cathode1 2.Cathode2
3.Anode1、 Anode2

Equivalent Circuit

3.Anode1、Anode2



1.Cathode1 2.Cathode2

Absolute Maximum Ratings at T_A = 25 ℃

Symbol	Parameter	Value	Units
VF	Maximum Forward Voltage @ IF=10mA	0.9	V
P(AV)	Power Dissipation	300	mW
T_J, Tstg	Operating And StorageTemperature	−55 to 150	℃
Tstg	Storage Temperature Rance	−55 to 150	℃
Rj	Thermal Resistance Junction to Ambient	417	℃/W

Electrical Characteristics at T_A = 25 ℃

Type Number	Marking Code	Zener voltage Range (note1)	Maximum zener Impedance (note 2)		Typical Temperature coefficient	Min reverse Voltage (note1)
		@ IZT=5.0mA	ZZT@IZT=5.0mA	ZZk@IZk=1.0mA		@IR=0.1uA
		VZ (volts)	Ohms	Ohms	Tc (%/ć)	VR (volts)
BZX84C2V7CK	KD1	2.5−2.9	83	500	−0.065	-

BZX84C3V0CK	KD2	2.8–3.2	95	500	–0.060	–
BZX84C3V3CK	KD3	3.1–3.5	95	500	–0.055	–
BZX84C3V6CK	KD4	3.4–3.8	95	500	–0.055	–
BZX84C3V9CK	KD5	3.7–4.1	95	500	–0.050	–
BZX84C4V3CK	KD6	4.0–4.6	95	500	–0.035	–
BZX84C4V7CK	KD7	4.4–5.0	78	500	–0.015	–
BZX84C5V1CK	KD8	4.8–5.4	60	480	+0.005	0.8
BZX84C5V6CK	KD9	5.2–6.0	40	400	+0.020	1.0
BZX84C6V2CK	KDA	5.8–6.6	10	200	+0.030	2.0
BZX84C6V8CK	KDB	6.4–7.2	8.0	150	+0.045	3.0
BZX84C7V5CK	KDC	7.0–7.9	7.0	50	+0.050	5.0
BZX84C8V2CK	KDD	7.7–8.7	7.0	50	+0.055	6.0
BZX84C9V1CK	KDE	8.5–9.6	10	50	+0.065	7.0
BZX84C10CK	KDF	9.4–10.6	15	70	+0.065	7.5
BZX84C11CK	KDG	10.4–11.6	20	70	+0.070	8.5
BZX84C12CK	KDH	11.4–12.7	20	90	+0.075	9.0
BZX84C13CK	KDI	12.4–14.1	25	110	+0.080	10.0
BZX84C15CK	KDJ	13.8–15.6	30	110	+0.080	11.0
BZX84C16CK	KDK	15.3–17.1	40	170	+0.090	12.0
BZX84C18CK	KDL	16.8–19.1	50	170	+0.090	14.0
BZX84C20CK	KDM	18.8–21.2	50	220	+0.090	15.0
BZX84C22CK	KDN	20.8–23.3	55	220	+0.090	17.0
BZX84C24CK	KDO	22.8–25.6	80	220	+0.090	18.0
BZX84C27CK	KDP	25.1–28.9	80	250	+0.090	20.0
BZX84C30CK	KDQ	28–32	80	250	+0.090	22.5
BZX84C33CK	KDR	31–35	80	250	+0.090	25.0
BZX84C36CK	KDS	34–38	90	250	+0.090	27.0
BZX84C39CK	KDT	37–41	90	300	+0.110	29.0
BZX84C43CK	D30	40–46	100	700	+0.110	32.0
BZX84C47CK	D31	44–50	100	750	+0.110	35.0
BZX84C51CK	D32	48–54	100	750	+0.110	38.0

Typical Characteristic Curves

Fig. 1 - Power Derating Curve

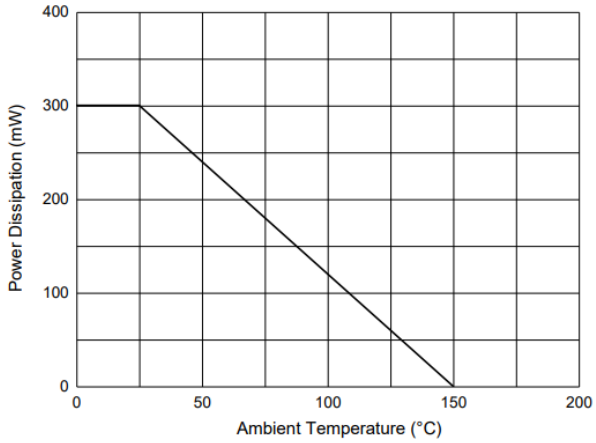


Fig. 2 - Typical Zener Breakdown Characteristics

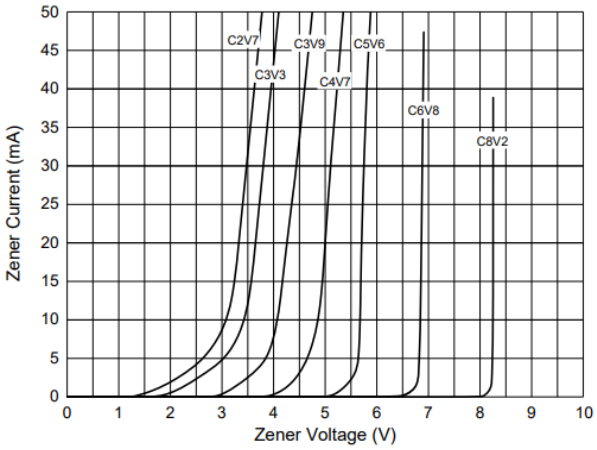
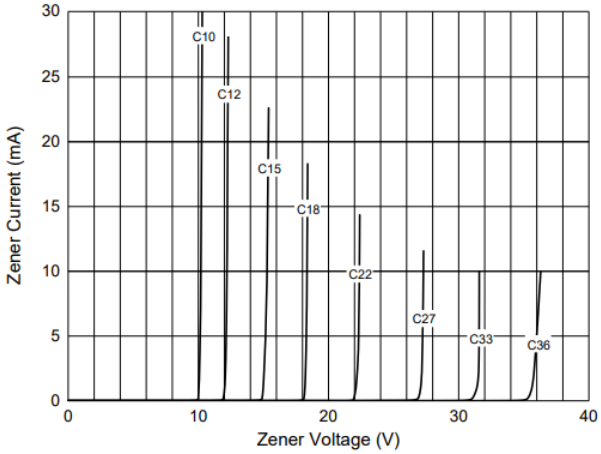
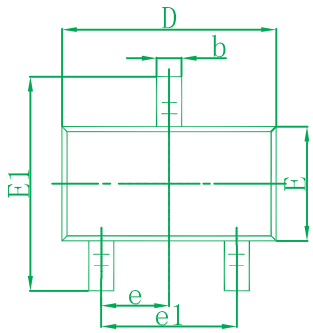
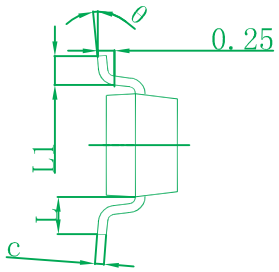


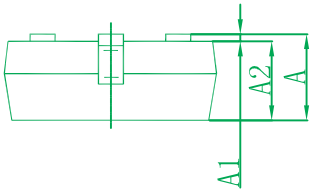
Fig. 3 - Typical Zener Breakdown Characteristics



SOT-23 Package Information

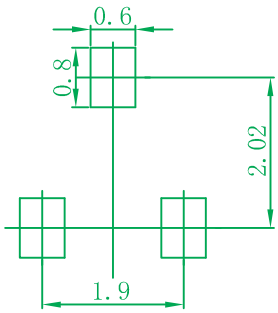






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.050	0.110	0.120
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

Device	Package	Shipping
BZX84C...CK Series	SOT-23	3,000PCS/Reel&7inches