Silicon Planar Zener Diodes：BZX84CxxxAU-UPA Series

Rev.1.0

FEATURE

- ✧ Total power dissipation: max 300mW.
- ✧ Low zener impedance.
- ✧ High reliability and high stability.
- ✧ Voltage range includes breakdown voltages from 3.3V to 4.3V with approximately ±5% for BZX84CxxxAU-UPA series.
- ✧ AEC-Q101 qualified.

SOT-23

Symbol

DESCRIPTION

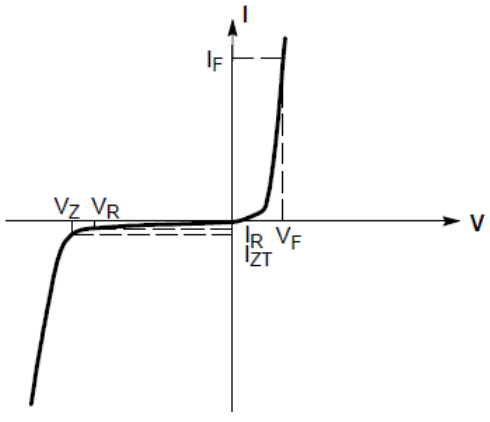
- ✧ SOT-23 small outline plastic package
- ✧ Color band denotes cathode end
- ✧ Epoxy UL: 94V-0
- ✧ Mounting position: any

ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Total power dissipation @T_A=25℃	P_D	300	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	℃/W
Junction temperature range	T_J	-55 to +150	℃
Storage temperature range	T_{STG}	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Symbol	Parameter
V_Z	Reverse zener voltage at I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance at I_{ZT}
I_R	Reverse leakage current at V_R
V_R	Reverse voltage
I_F	Forward current
V_F	Forward voltage at I_F



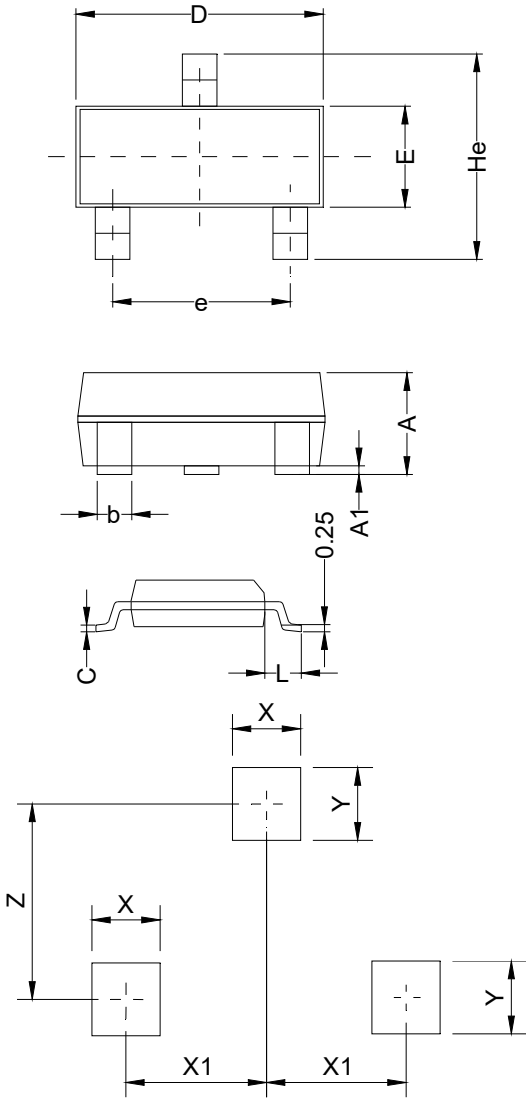
Zener voltage regulator

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

Maximum V_F=0.9V at I_F=10mA

Type number	Zener voltage range at I_{ZT}				Maximum zener impedance			Maximum reverse leakage current		Typical temperature coefficient @I_{ZTC}		Test current I_{ZTC}	Marking
	Nom (V)	Min (V)	Max (V)	I_{zt} (mA)	Z_{zt} (Ω)	Z_{zk} (Ω)	I_{zk} (mA)	I_R (μA)	V_R (V)	Min (mV/°C)	Max (mV/°C)	mA	
BZX84C3V3AU-UPA	3.3	3.1	3.5	5.0	95	600	1.0	1	1.0	-3.5	0	5	Z14
BZX84C3V6AU-UPA	3.6	3.4	3.8	5.0	90	600	1.0	1	1.0	-3.5	0	5	Z15
BZX84C3V9AU-UPA	3.9	3.7	4.1	5.0	90	600	1.0	1	1.0	-3.5	0	5	Z16
BZX84C4V3AU-UPA	4.3	4.0	4.6	5.0	90	600	1.0	1	1.0	-3.5	0	5	Z17

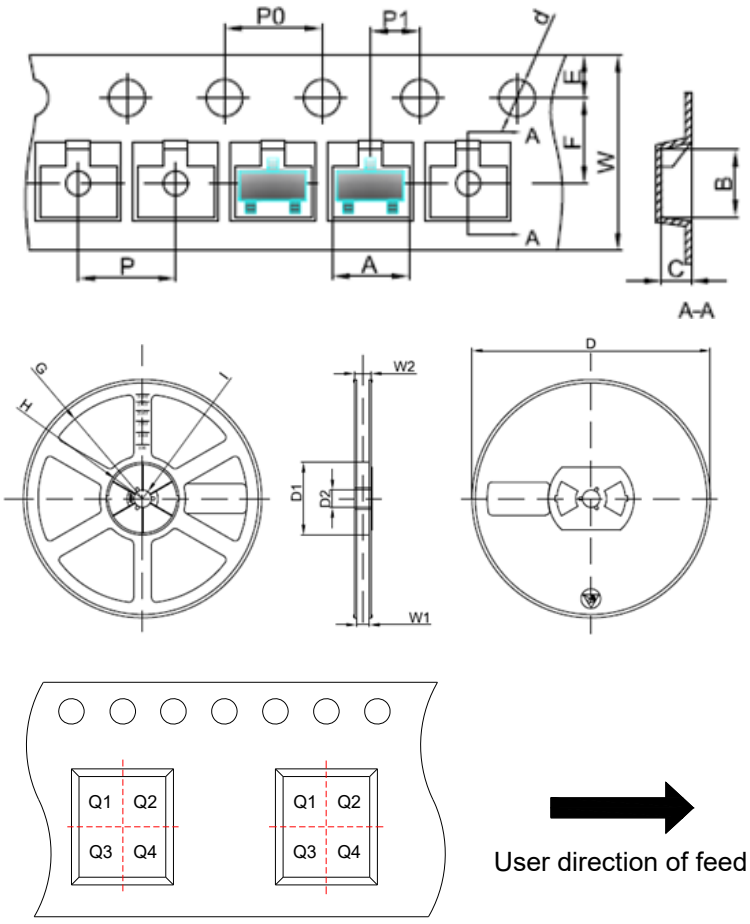
PACKAGE MECHANICAL DATA



Land Pattern

Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.90	1.063	1.15	0.035	0.042	0.045
A1	0.00	0.075	0.14	0.000	0.003	0.006
b	0.30	0.40	0.50	0.012	0.016	0.020
C	0.07	0.10	0.15	0.003	0.004	0.006
D	2.80	2.90	3.00	0.110	0.114	0.118
e	1.80	1.90	2.00	0.071	0.075	0.079
E	1.20	1.30	1.40	0.047	0.051	0.055
L	0.55REF			0.022REF		
He	2.25	2.40	2.55	0.089	0.094	0.100
X	0.80			0.031		
X1	0.95			0.037		
Y	0.80			0.031		
Z	2.02			0.080		

TAPE AND REEL SPECIFICATION-SOT-23



Pin 1 quadrant: Q3

Symbol	Millimeters	Inches
	Typ.	Typ.
A	3.15	0.124
B	2.77	0.109
C	1.22	0.048
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	4.00	0.157
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

Packaging Description:

SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

ORDERING INFORMATION

Part Number	Package	Reel Size	Quantity Per Reel
BZX84CxxxAU-UPA Series	SOT-23	7 Inch	3,000 pcs

RATINGS AND CHARACTERISTICS CURVES (T_A=25ºC, unless otherwise noted)

Fig.1 Power dissipation vs ambient temperature

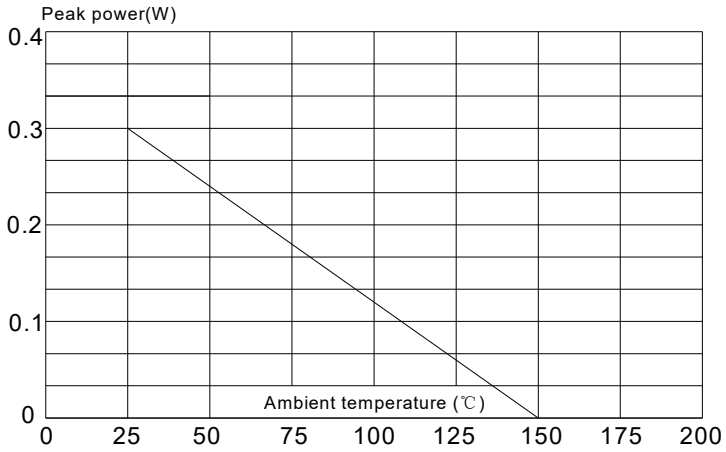
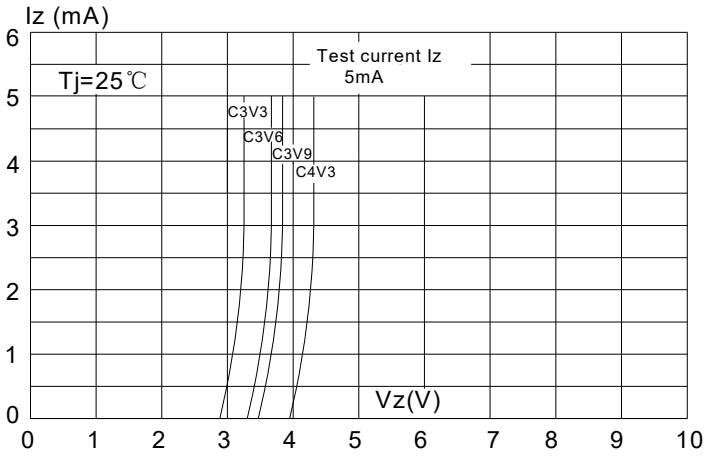


Fig.2 Zener breakdown characteristics



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