



## Silicon Planar Zener Diodes: BZX584CxxxAU-UPA Series

Rev.1.0

### FEATURE

- ◇ Total power dissipation: max 200mW.
- ◇ Small plastic package suitable for surface mounted design.
- ◇ Voltage range includes breakdown voltages from 3.3V to 4.3V with approximately  $\pm 5\%$  for BZX584CxxxAU-UPA series.
- ◇ High temperature soldering: 260°C/10s at terminals.
- ◇ AEC-Q101 qualified.



SOD-523



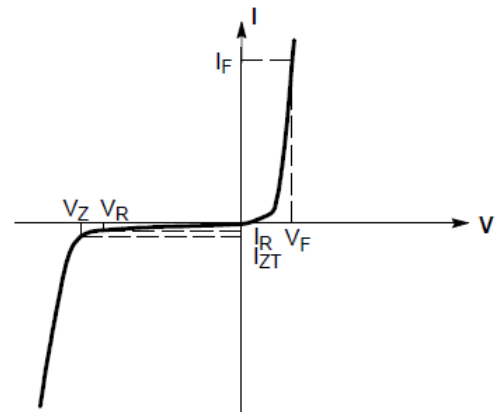
Symbol

### ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Max Value	Unit
Total power dissipation @ $T_A=25^\circ\text{C}$	$P_D$	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction temperature range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

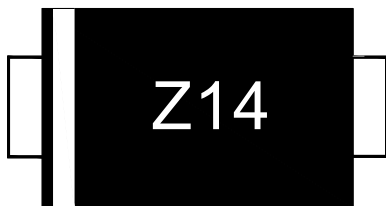
### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ )

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

### MARKING



Z14: Device Marking Code

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

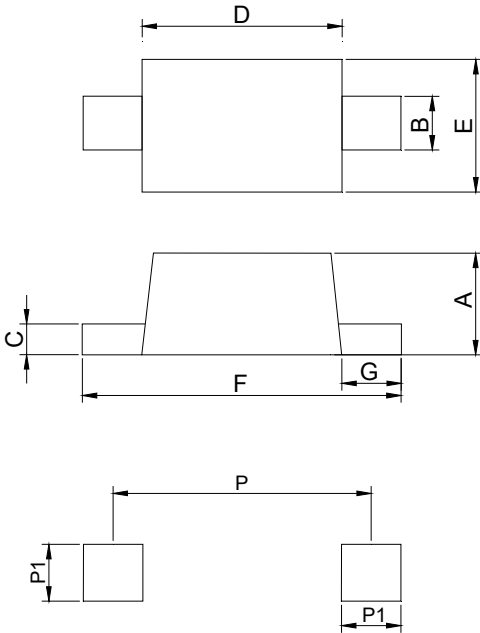
Maximum  $V_F=0.9\text{V}$  at  $I_F=10\text{mA}$

Type number	Zener voltage range at $I_{ZT}^{(1)}$				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)	$Z_{zt}$ ( $\Omega$ )	$Z_{zk}$ ( $\Omega$ )	$I_{zk}$ (mA)	$I_R$ ( $\mu\text{A}$ )	$V_R$ (V)	Min (mV/ $^{\circ}\text{C}$ )	Max (mV/ $^{\circ}\text{C}$ )	mA	
BZX584C3V3AU-UPA	3.3	3.1	3.5	5.0	95	600	1.0	1	1.0	-3.5	0	5	Z14
BZX584C3V6AU-UPA	3.6	3.4	3.8	5.0	90	600	1.0	1	1.0	-3.5	0	5	Z15
BZX584C3V9AU-UPA	3.9	3.7	4.1	5.0	90	600	1.0	1	1.0	-3.5	0	5	Z16
BZX584C4V3AU-UPA	4.3	4.0	4.6	5.0	90	600	1.0	1	1.0	-3.5	0	5	Z17

**ORDERING INFORMATION**

<b>BZX</b>	<b>584</b>	<b>C</b>	<b>3V3</b>	<b>AU</b>	<b>-UPA</b>
Zener Diode Series	$P_D:200\text{mW}$		Voltage:3.3V	AEC-Q101 qualified	Product version code
C: Approximately $\pm 5\%$ $V_z$ Voltage tolerance					

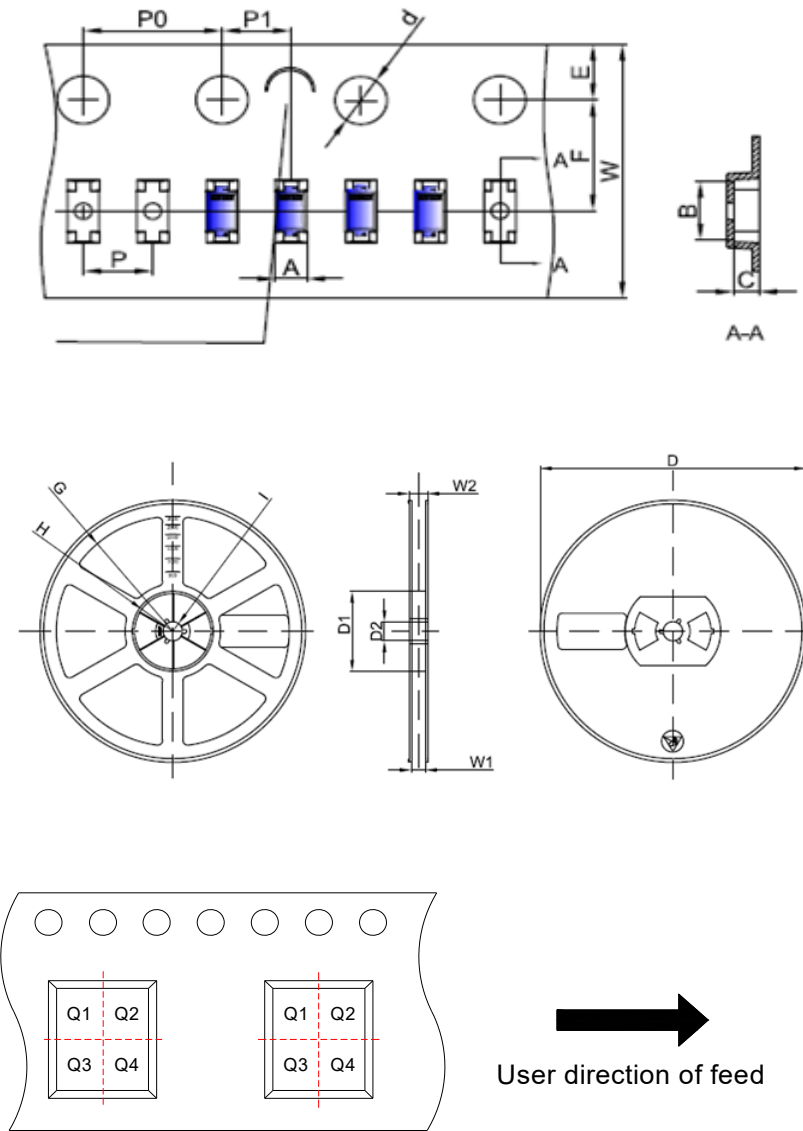
**PACKAGE MECHANICAL DATA**



**Land Pattern**

Symbol	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	0.50	0.61	0.77	0.020	0.024	0.030
B	0.25	0.30	0.40	0.010	0.012	0.016
C	0.07	0.13	0.20	0.003	0.005	0.008
D	1.10	1.20	1.30	0.043	0.047	0.051
E	0.70	0.80	0.90	0.028	0.031	0.035
F	1.50	1.60	1.70	0.059	0.063	0.067
G	0.15	0.20	0.25	0.006	0.008	0.010
P1	0.60			0.024		
P	1.42			0.056		

TAPE AND REEL SPECIFICATION-SOD-523



Pin 1 quadrant:Q1&Q2

Symbol	Millimeters	Inches
	Typ.	Typ.
A	0.95	0.037
B	1.92	0.076
C	0.73	0.029
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	2.00	0.079
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

ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
BZX584CxxxAU-UPA Series	SOD-523	8,000	7 inch reel pack

**RATINGS AND CHARACTERISTICS CURVES** ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

Fig.1 Power dissipation vs ambient temperature

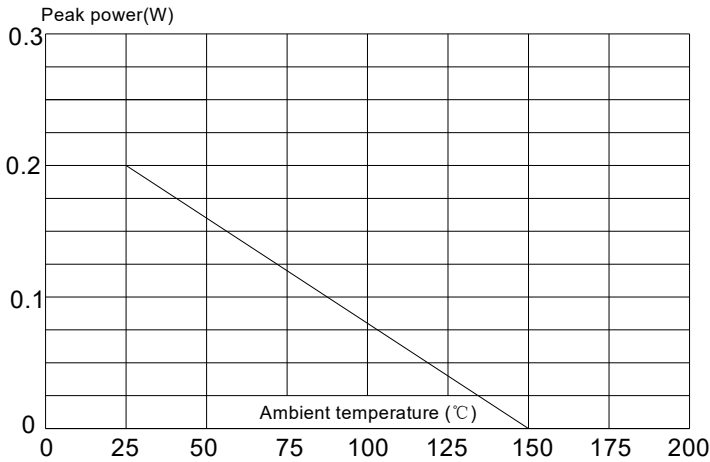
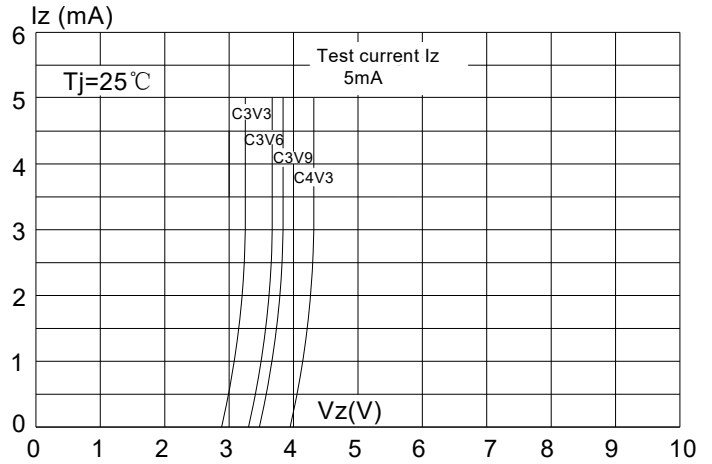


Fig.2 Zener breakdown characteristics




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