

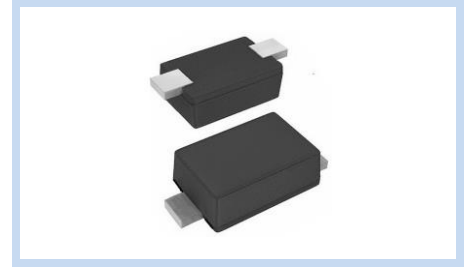
# Zener Diodes SOD-523F, AEC-Q101

BZX584C-A Series

**MERITEK**

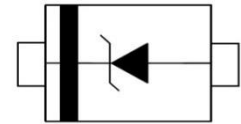
## FEATURE

- Zener Voltage Range: 2.4V to 75V
- Zener Voltage Tolerance:  $\pm 5\%$
- Power Dissipation: 200mW
- Silicon Planar Zener Diode
- Ideally Suited for Automated Assembly Processes
- Application: Power Management Systems, Voltage Regulation
- AEC-Q101 Qualified



## MECHANICAL DATA

- Case: SOD-523F, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Band Marking Denotes Cathode End



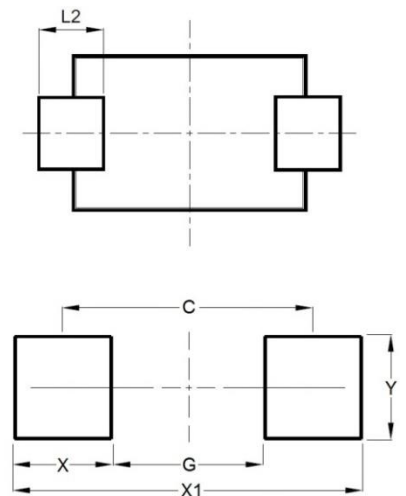
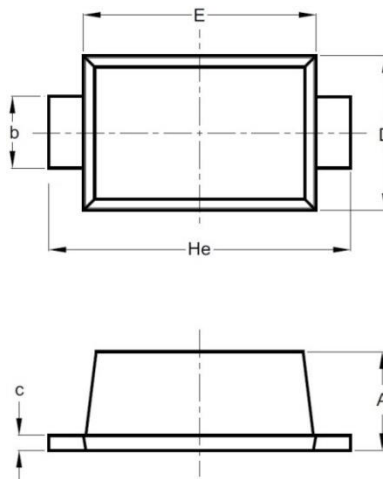
## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbols	Value	Unit
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	-55~+150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150	$^{\circ}\text{C}$

Note:  $T_A = 25^{\circ}\text{C}$  unless otherwise noted

## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.55	0.65
B	0.25	0.35
c	0.05	0.15
D	0.75	0.85
E	1.15	1.25
He	1.50	1.70
L2	0.20	0.20
C	1.47	1.47
G	0.80	0.80
X	0.53	0.53
X1	2.00	2.00
Y	0.50	0.50



# Zener Diodes

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### ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage $V_Z$ at $I_{ZT}$			Max Zener Impedance $Z_{ZT}$ at $I_{ZT}$ , $Z_{ZK}$ at $I_{ZK}=1mA$			Reverse Leakage Current $I_R$ at $V_R$	
	Nom	Min	Max	$Z_{ZT}$	$I_{ZT}$	$Z_{ZK}$	$I_R$ max	$V_R$
	(V)	(V)	(V)	( $\Omega$ )	(mA)	( $\Omega$ )	( $\mu A$ )	(V)
BZX584C2V4-A	2.4	2.28	2.52	100	5.0	600	50	1.0
BZX584C2V7-A	2.7	2.57	2.84	100	5.0	600	20	1.0
BZX584C3V0-A	3.0	2.85	3.15	95	5.0	600	10	1.0
BZX584C3V3-A	3.3	3.14	3.47	95	5.0	600	5.0	1.0
BZX584C3V6-A	3.6	3.42	3.78	90	5.0	600	5.0	1.0
BZX584C3V9-A	3.9	3.71	4.10	90	5.0	600	3.0	1.0
BZX584C4V3-A	4.3	4.09	4.52	90	5.0	600	3.0	1.0
BZX584C4V7-A	4.7	4.47	4.94	80	5.0	500	3.0	2.0
BZX584C5V1-A	5.1	4.85	5.36	60	5.0	480	2.0	2.0
BZX584C5V6-A	5.6	5.32	5.88	40	5.0	400	1.0	2.0
BZX584C6V2-A	6.2	5.89	6.51	10	5.0	150	3.0	4.0
BZX584C6V8-A	6.8	6.46	7.14	15	5.0	80	2.0	4.0
BZX584C7V5-A	7.5	7.13	7.88	15	5.0	80	1.0	5.0
BZX584C8V2-A	8.2	7.79	8.61	15	5.0	80	0.7	5.0
BZX584C8V7-A	8.7	8.27	9.14	15	5.0	100	0.7	5.0
BZX584C9V1-A	9.1	8.65	9.56	15	5.0	100	0.5	6.0
BZX584C10-A	10	9.50	10.50	20	5.0	150	0.2	7.0
BZX584C11-A	11	10.45	11.55	20	5.0	150	0.1	8.0
BZX584C12-A	12	11.40	12.60	25	5.0	150	0.1	8.0
BZX584C13-A	13	12.35	13.65	30	5.0	170	0.1	8.0
BZX584C14-A	14	13.30	14.70	30	5.0	170	0.1	10.0
BZX584C15-A	15	14.25	15.75	30	5.0	200	0.1	10.5
BZX584C16-A	16	15.20	16.80	40	5.0	200	0.1	11.2
BZX584C17-A	17	16.15	17.85	40	5.0	200	0.1	12.2
BZX584C18-A	18	17.10	18.90	45	5.0	225	0.1	12.6
BZX584C20-A	20	19.00	21.00	55	5.0	225	0.1	14.0
BZX584C22-A	22	20.90	23.10	55	5.0	250	0.1	15.4
BZX584C24-A	24	22.80	25.20	70	5.0	250	0.1	16.8
BZX584C27-A	27	25.65	28.35	80	5.0	300	0.1	18.9
BZX584C28-A	28	26.60	29.40	80	5.0	300	0.1	20.5
BZX584C30-A	30	28.50	31.50	80	5.0	300	0.1	21.0
BZX584C33-A	33	31.35	34.65	80	5.0	325	0.1	23.1
BZX584C36-A	36	34.20	37.80	90	5.0	350	0.1	25.2
BZX584C39-A	39	37.05	40.95	130	5.0	350	0.1	27.3
BZX584C43-A	43	40.85	45.15	150	5.0	375	0.1	30.1
BZX584C47-A	47	44.65	49.35	170	5.0	375	0.1	32.9
BZX584C51-A	51	48.45	53.55	100	5.0	400	0.1	38.0
BZX584C56-A	56	53.20	58.80	135	2.5	1000	0.1	42.0

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## ELECTRICAL CHARACTERISTICS

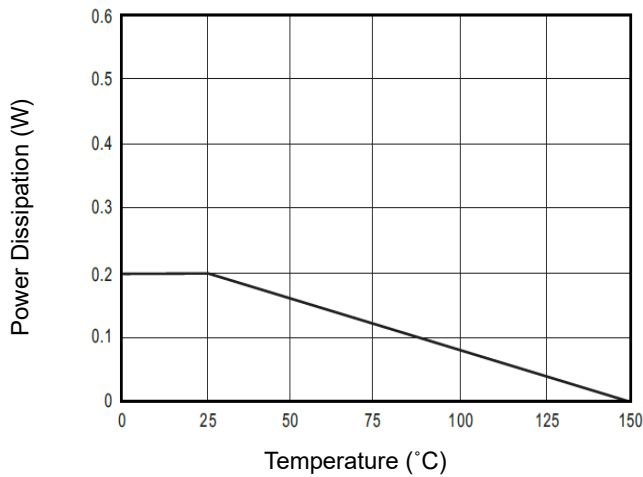
Part Number	Nominal Zener Voltage $V_Z$ at $I_{ZT}$			Max Zener Impedance $Z_{ZT}$ at $I_{ZT}$ , $Z_{ZK}$ at $I_{ZK}=1\text{mA}$			Reverse Leakage Current $I_R$ at $V_R$	
	Nom	Min	Max	$Z_{ZT}$	$I_{ZT}$	$Z_{ZK}$	$I_R$ max	$V_R$
	(V)	(V)	(V)	( $\Omega$ )	(mA)	( $\Omega$ )	( $\mu\text{A}$ )	(V)
BZX584C62-A	62	58.90	65.10	150	2.5	1000	0.1	46.0
BZX584C68-A	68	64.60	71.40	200	2.5	1000	0.1	51.0
BZX584C75-A	75	71.25	78.75	250	2.5	1000	0.1	56.0

Note:

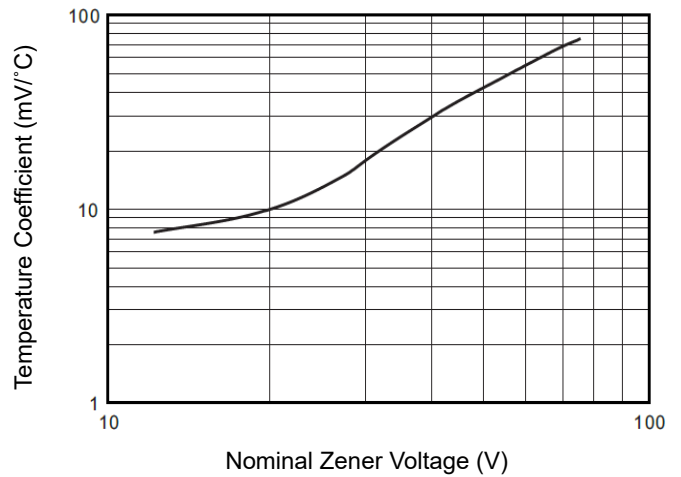
- $T_A=25^\circ\text{C}$  unless otherwise noted
- Mounted on  $100\text{cm}^2$  (1mm thick) copper areas.

## CHARACTERISTIC CURVES

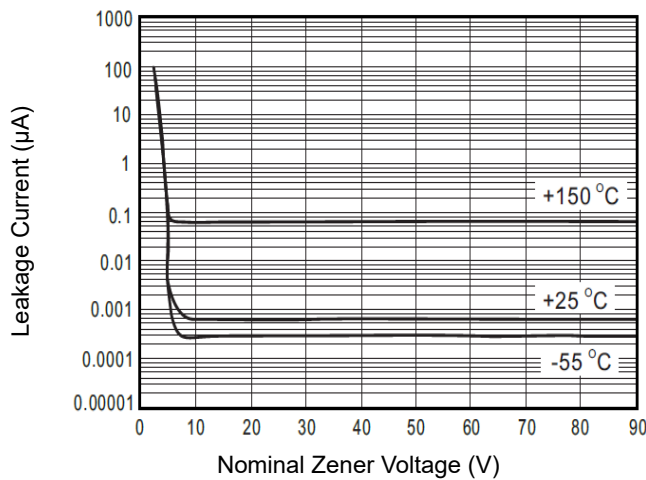
Steady-State Power Derating



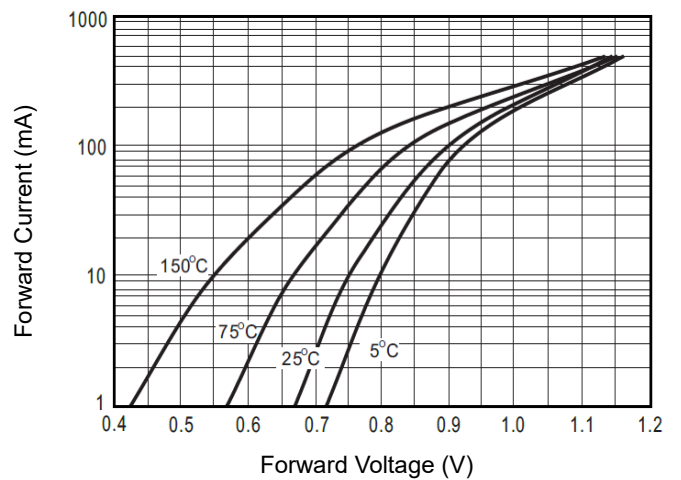
Temperature Coefficient



Typical Leakage Current



Typical Forward Voltage



\*Specifications subject to change without notice.