



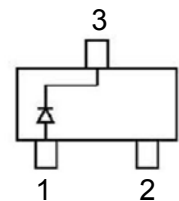
## Features

Planar Die Construction.  
300mW Power Dissipation.  
Zener Voltages from 2.4V - 43V.  
Ultra-Small Surface Mount Package Power Dissipation



## Package Marking and Ordering Information

Product ID	Pack	Brand	Qty(PCS)
BZX84C3V9LT1G	SOT-23	HXY MOSFET	3000



## Absolute Maximum Ratings(Ta=25°C)

Symbol	Parameter	Value	Unit
$V_F$	Forward Voltage (Note 2) @ $I_F=10\text{mA}$	0.9	V
$P_d$	Power Dissipation (Note 1)	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
$T_J$	Operation Junction Temperature Range	-40~+125	°C
$T_{STG}$	Storage Temperature Range	-55~+150	°C

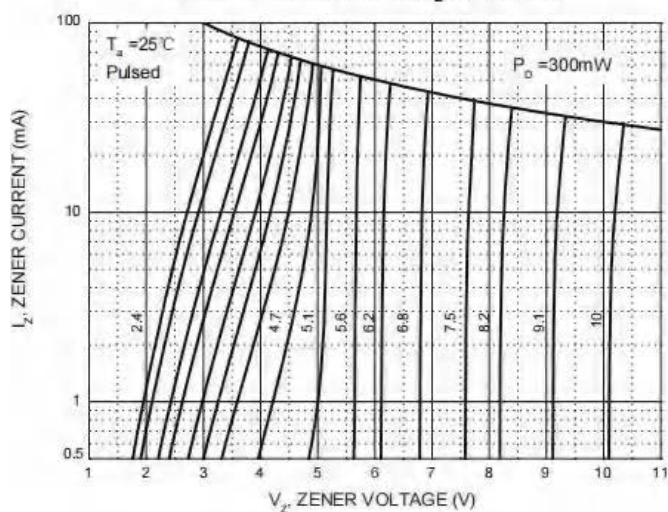
## Electrical Characteristics (Ta=25°C unless otherwise specified)

Type Number	Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Temperature Coefficient of Zener voltage @ $I_{ZT}=5\text{mA}$ mV/°C	
		$V_Z@I_{ZT}$			$I_{ZT}$	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$Z_R$	$I_R$	$V_R$	Min	Max
		Nom(V)	Min(V)	Max(V)	(mA)	(Ω)		(mA)	(μA)	(V)		
BZX84C3V9LT1G	Z16	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0

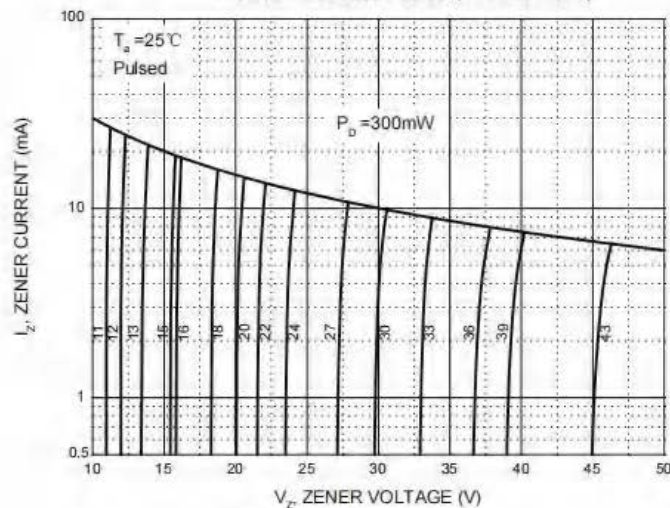


## Typical Characteristics

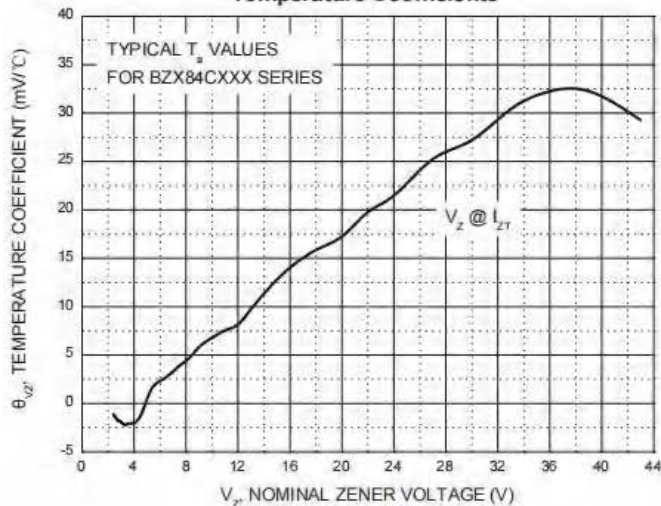
Zener Characteristics ( $V_z$  Up to 10 V)



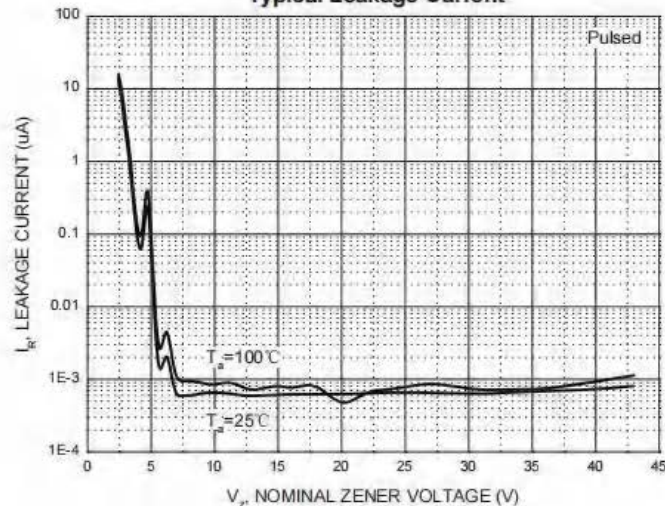
Zener Characteristics (11 V to 43 V)



Temperature Coefficients

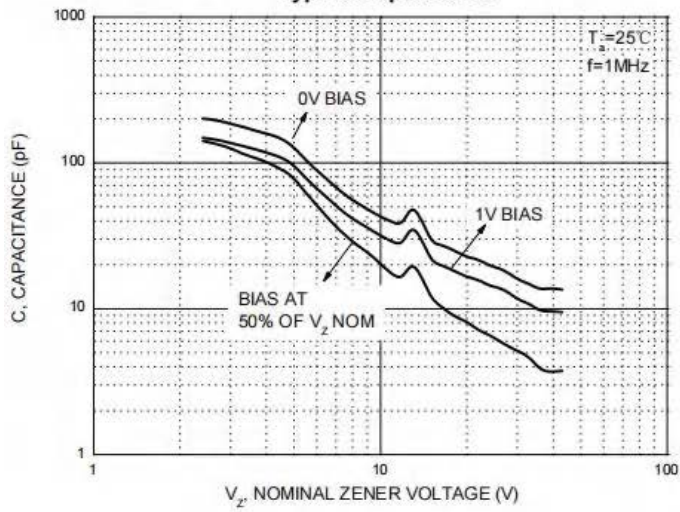


Typical Leakage Current

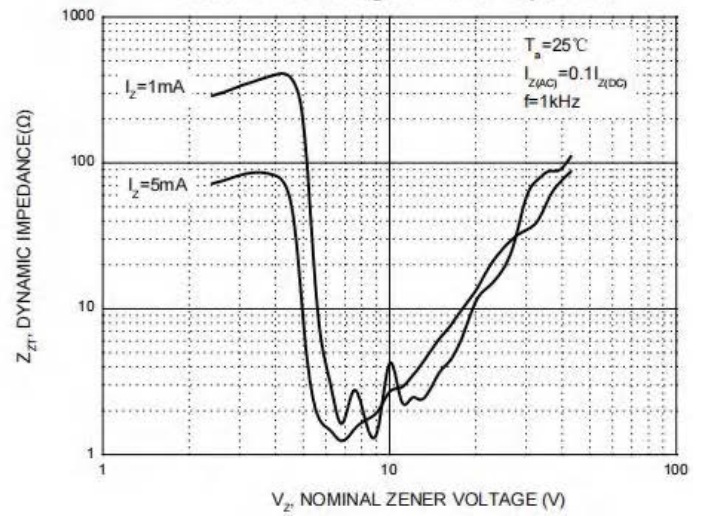




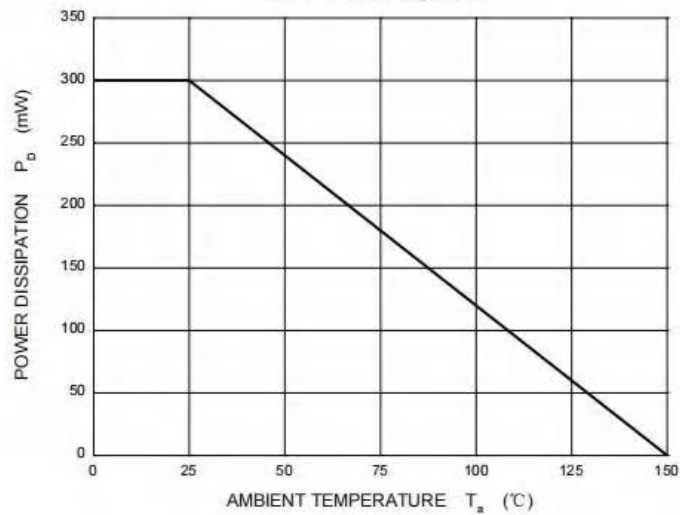
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

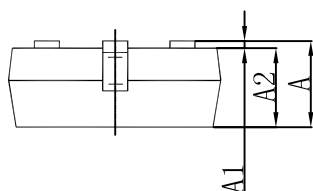
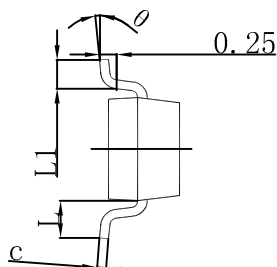
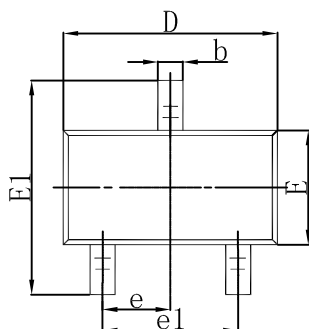


Power Derating Curve



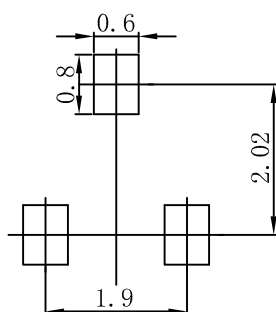


## SOT-23 Package Outline Dimensions



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	3.000	0.110	0.118
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:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.



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