# Silicon Zener Diode





#### **Features**

- · Planar die construction
- 350mW power dissipation
- Zener voltages from 3.3V
- · Ideally suited for automated assembly processes
- · Epoxy meets UL 94 V-0 flammability rating
- · Moisture sensitivity level 1
- Weight: 0.008 grams (approx.)

## RoHS Compliant



### Max. Ratings and Electrical Characteristics

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Parameter	Symbol	Rating	Units
Maximum Forward Voltage @ IF = 10mA	VF	0.9	V
Power Dissipation (Note A)	P(AV)	350	mW
Operation and Storage Temperature	ТЈ, Тѕтс	-55 to +150	°C
Peak Forward Surge Current (Note B)	IFSM	2	А
Thermal Resistance (Note C)	RthJA	357	°C/W

- Notes: A. Mounted on 5mm<sup>2</sup> (0.013mm thick) land areas.
  - B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
  - C. Valid provided the terminals are kept at ambient temperature.

### Electrical Characteristics (TA = 25°C unless otherwise noted)

	Nominal Zener Voltage			Max. Zener Impedance			Max. Reverse Leakage Current			
Part Number	Vz(V) @ IzT		Zzt @ lzt		Zzk @ lzk		IR @ VR		Marking	
	Nom.	Min.	Max.	Ω	mA	Ω	mA	μΑ	V	
BZX84C3V3+	3.3	3.1	3.5	95	5	600	1	5	1	F8

#### Notes:

- 1. Standard zener voltage tolerance is ±5% with a 'C' suffix.
- Zener Voltage (Vz) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (TL) AT 30°C from the diode body.
- 3. Zener Impedance (Zz) Derivation. The zener impedance os dervied from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the DC zener current (Izt or Izk) is superimposed on IzT or Izk.
- 4. Surge Current (IR) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, IzT, per JEDEC registration.

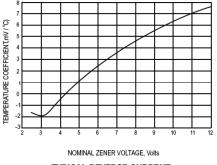
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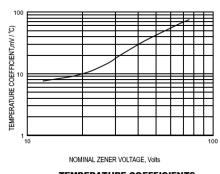


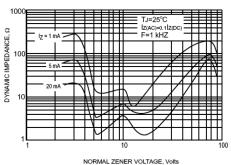
# Silicon Zener Diode



## **Rating and Characteristic Curves**



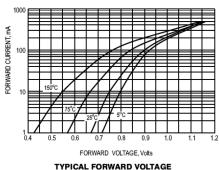


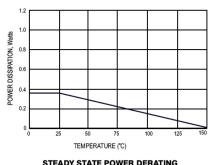


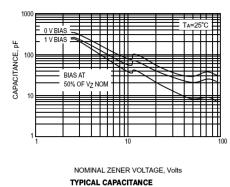
**TYPICAL REVERSE CURRENT** 

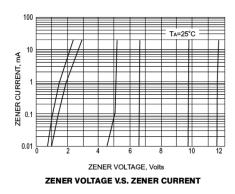
**TEMPERATURE COEFFICIENTS** 

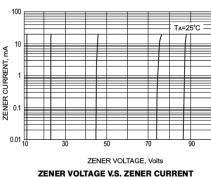
**EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE** 

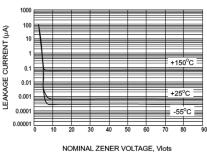












TYPICAL LEAKGE CURRENT

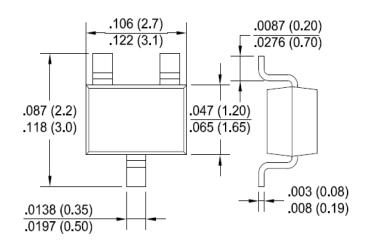
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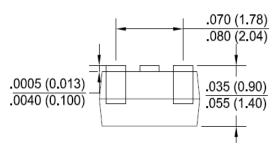
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# Silicon Zener Diode



#### **Dimension:**





Dimensions: Millimetres

### **Part Number Table**

Description	Part Number	
Single Zener Diode, 350mW, 3.3V, SOT-23	BZX84C3V3+	

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