

# Zener Diode



## Features

- Silicon epitaxial planar diode
- High speed switching diode
- 500mW power dissipation
- Reverse Voltage: 2.4 to 75 Volts

## Application

- Voltage stabilization

## Absolute Maximum Ratings

T<sub>J</sub> = 25°C

Characteristics	Test Conditions	Symbol	Values	Unit
Power Dissipation	I = 4mm TL ≤ 25°C	P <sub>v</sub>	500	Mw
Z-current		I <sub>z</sub>	P <sub>v</sub> /V <sub>z</sub>	MA
Junction Temperature		T <sub>J</sub>	175	°C
Storage Temperature Range		T <sub>STG</sub>	-55 to +200	°C

## Max. Thermal Resistance

T<sub>J</sub> = 25°C

Characteristics	Test Conditions	Symbol	Values	Unit
Junction Ambient	I = 4mm TL = Constant	R <sub>thJA</sub>	350	K/W

## Electrical Characteristics

T<sub>J</sub> = 25°C

Characteristics	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	I <sub>F</sub> = 200mA	V <sub>F</sub>	-	-	1.5	V

Operating and Storage Temperature : -55°C to +200°C

Part Number	Nominal Zener Voltage V <sub>z</sub> @ I <sub>zT</sub>		Test Current I <sub>zT</sub>	Max. Zener Impedance (Ω)		I <sub>zK</sub>	Max. Reverse Leakage Current		Max. Surge Current	Max. Regulation Current I <sub>zM</sub>
	Min.	Max.		Z <sub>ZT</sub> @ I <sub>zT</sub>	Z <sub>ZT</sub> @ I <sub>zT</sub>		I <sub>R</sub>	@ V <sub>R</sub>		
			mA	Ω	Ω	mA	μA	Volts	mA	mA
BZV55C30	28	32	5	80	220	1	0.1	22	+0.091	13
BZV55C39	37	41	2.5	90	500	0.5	0.1	30	+0.094	10
BZV55C62	58	66	2.5	150	1000	0.5	0.1	47	+0.096	6.4
BZV55C75	70	80	2.5	250	1500	0.5	0.1	56	+0.096	5.3
BZV55C2V4	2.28	2.56	5	85	600	1	50	1	-0.085	155
BZV55C2V7	2.5	2.9	5	85	600	1	10	1	-0.08	135

### Note:

1. Normal Tolerance ±5%.
2. "BZV..." Indicates MINI MELF Package.

## Ratings and Characteristic Curves

FIG. 1 - THERMAL RESISTANCE VS. LEAD LENGTH

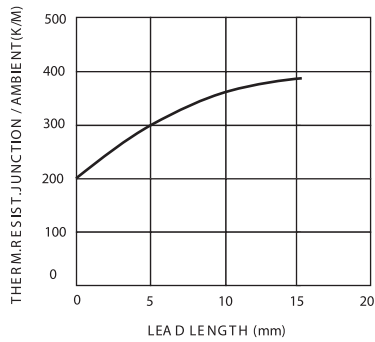


FIG. 2 - TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

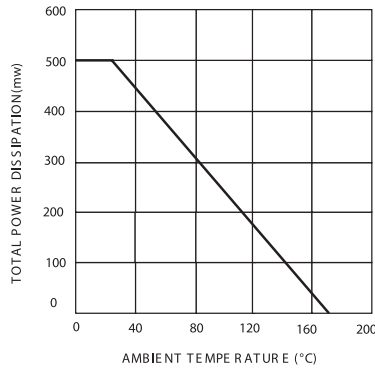


FIG. 3 - TYPICAL CHANGE OF WORKING VOLTAGE UNDER OPERATING CONDITIONS AT  $T_{amb}=25^{\circ}C$

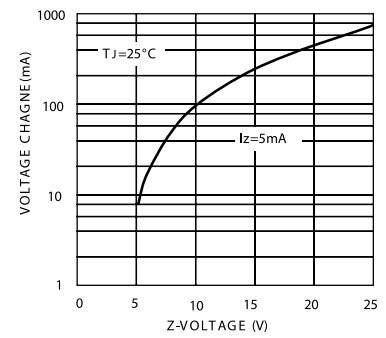


FIG. 4 - TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

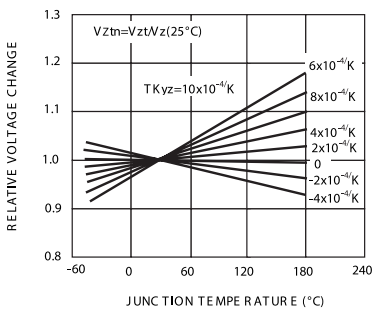


FIG. 5 - TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

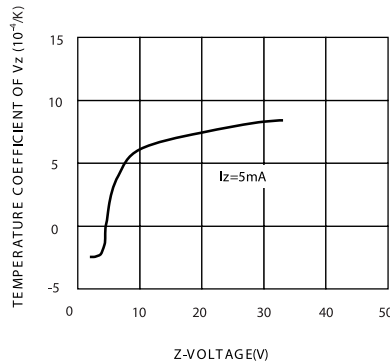


FIG. 6 - DIODE CAPACITANCE VS. Z-VOLTAGE

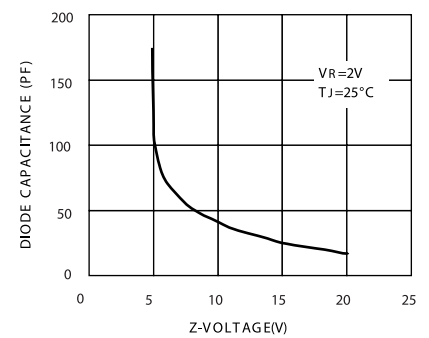


FIG. 7 - FORWARD CURRENT VS. FORWARD VOLTAGE

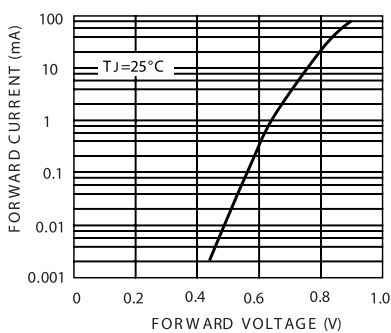


FIG. 8 - Z-CURRENT VS. Z-VOLTAGE

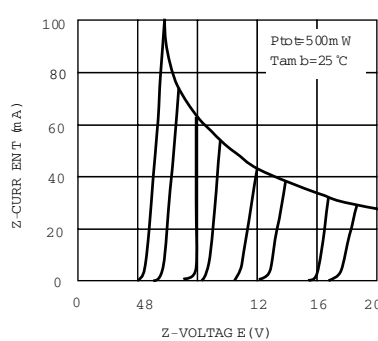
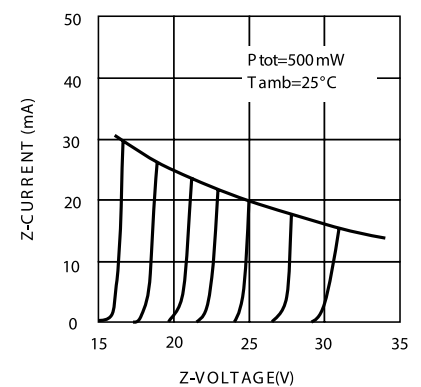
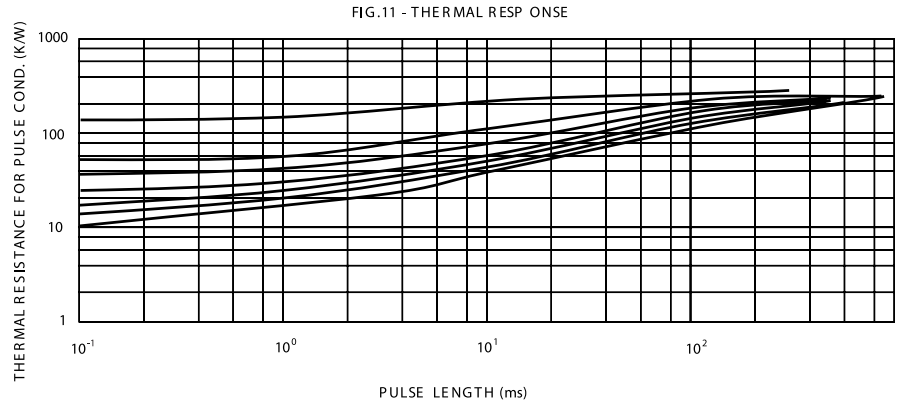
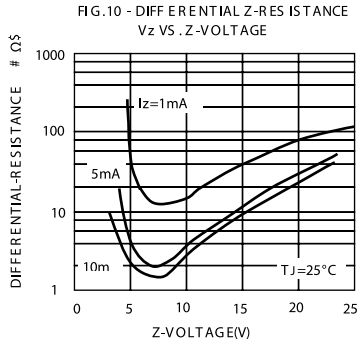


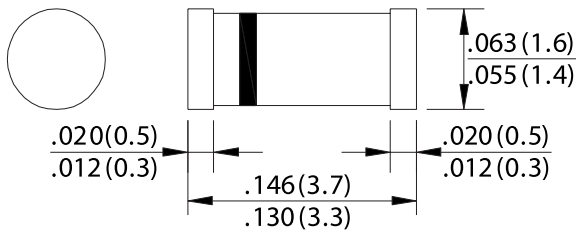
FIG. 9 - Z-CURRENT VS. Z-VOLTAGE





### Dimensions:

**DL - 35**



Dimensions : Inches (Millimetres)

### Part Number Table

Description	Part Number
Diode, Zener, 0.5W 30V, DL-35	BZV55C30
Diode, Zener, 0.5W 39V, DL-35	BZV55C39
Diode, Zener, 0.5W 62V, DL-35	BZV55C62
Diode, Zener, 0.5W 75V, DL-35	BZV55C75
Diode, Zener, 0.5W 2.4V, DL-35	BZV55C2V4
Diode, Zener, 0.5W 2.7V, DL-35	BZV55C2V7

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