

## ZENER DIODE

REVERSE VOLTAGE - 2.4 to 188 Volts

### FEATURES

- Small surface mounting type
- High reliability

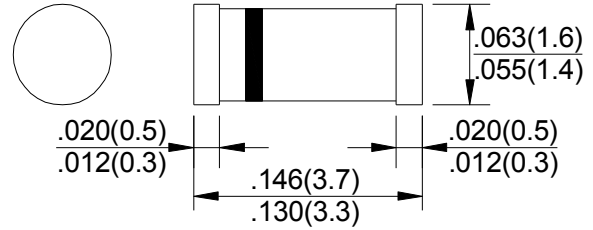
### APPLICATIONS

- Voltage stabilization

### CONSTRUCTION

- Silicon epitaxial planar

**DL - 35**



Dimensions in inches and (millimeters)

## ABSOLUTE MAXIMUM RATINGS

T<sub>J</sub>=25°C

Parameter	Test Conditions	Type	Symbol	Value	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				175°C	°C
Storage temperature range			T <sub>stg</sub>	-55 ~ +200	°C

## MAXIMUM THERMAL RESISTANCE

T<sub>J</sub>=25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	I=4mm TL=constant	R <sub>thJA</sub>	350	K/W

## ELECTRICAL CHARACTERISTICS

T<sub>J</sub>=25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I <sub>F</sub> =200mA		V <sub>F</sub>			1.5	V

FIG. 1 - THERMAL RESISTANCE VS. LEAD LENGTH

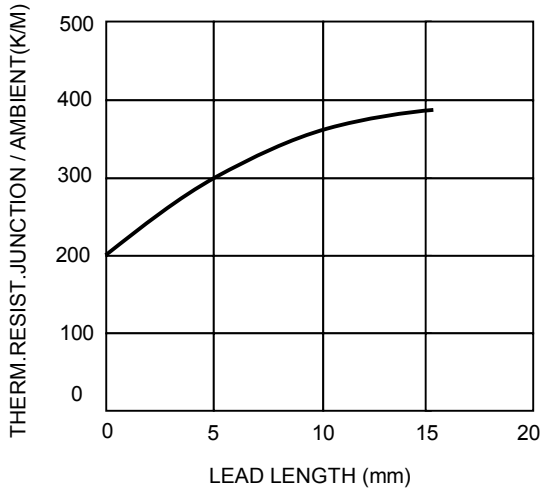


FIG. 2 - TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

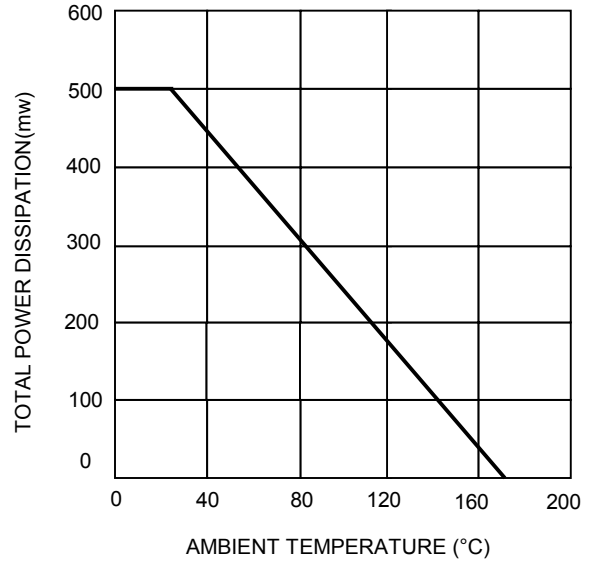


FIG. 3 - TYPICAL CHANGE OF WORKING VOLTAGE UNDER OPERATING CONDITIONS AT  $T_{amb}=25^{\circ}C$

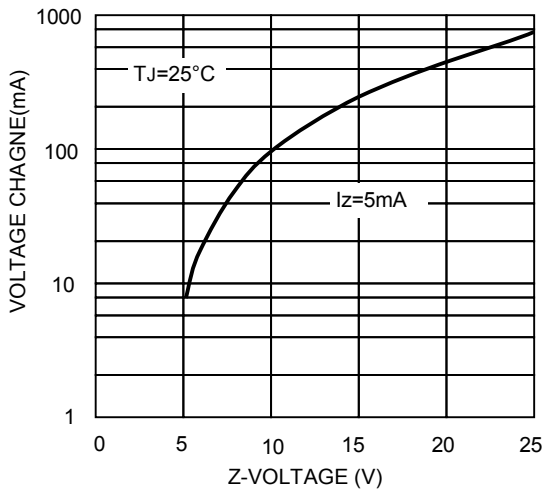


FIG. 4 - TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

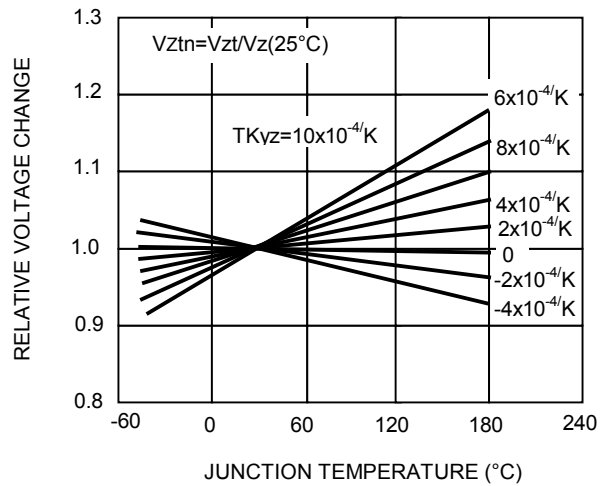


FIG. 5 - TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

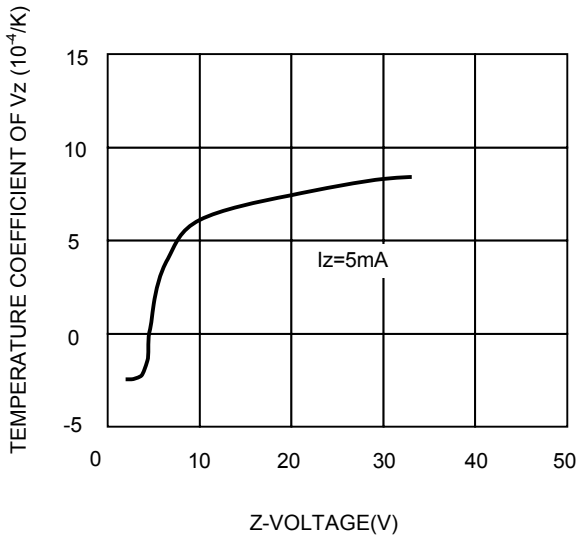


FIG. 6 - DIODE CAPACITANCE VS. Z-VOLTAGE

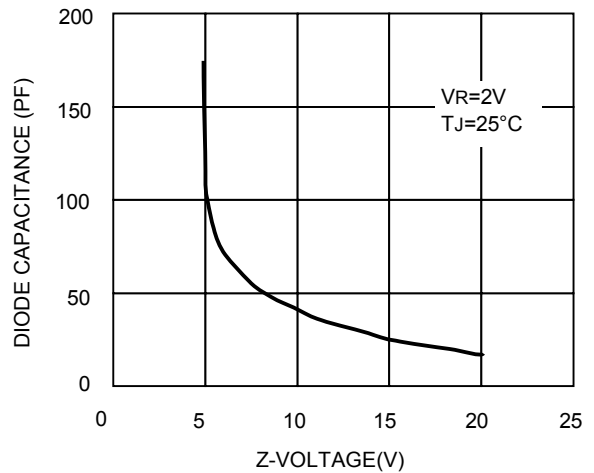


FIG.7 - FORWARD CURRENT VS. FORWARD VOLTAGE

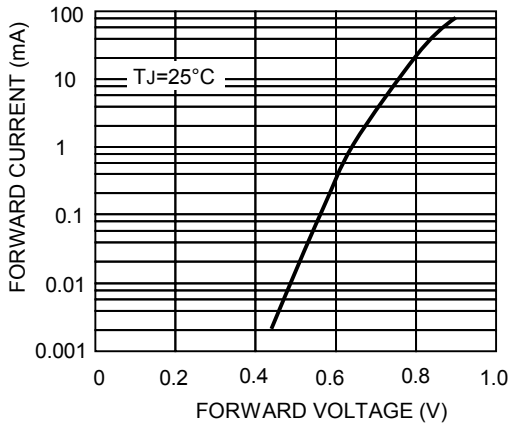


FIG.8 - Z-CURRENT VS. Z-VOLTAGE

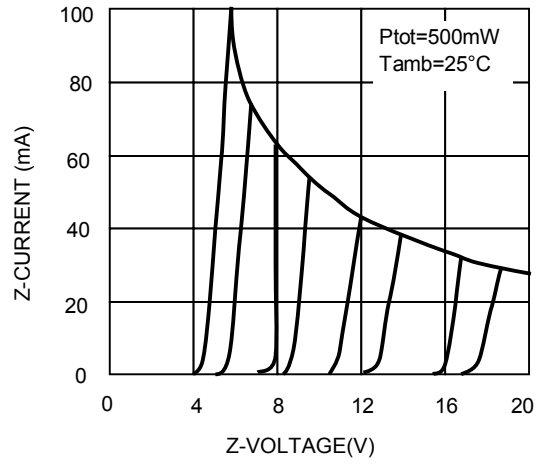


FIG.9 - Z-CURRENT VS. Z-VOLTAGE

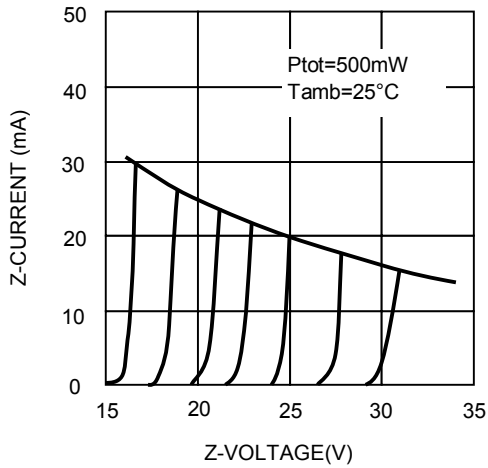


FIG.10 - DIFFERENTIAL Z-RESISTANCE  $V_z$  VS. Z-VOLTAGE

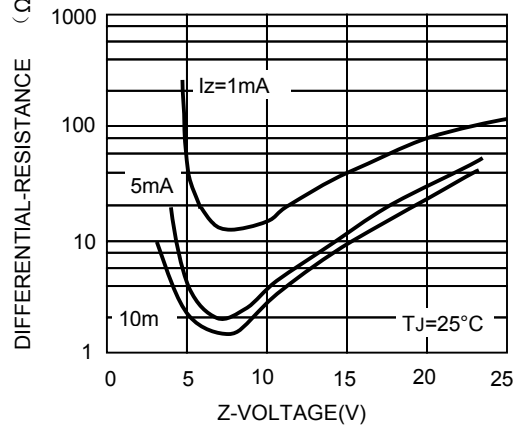
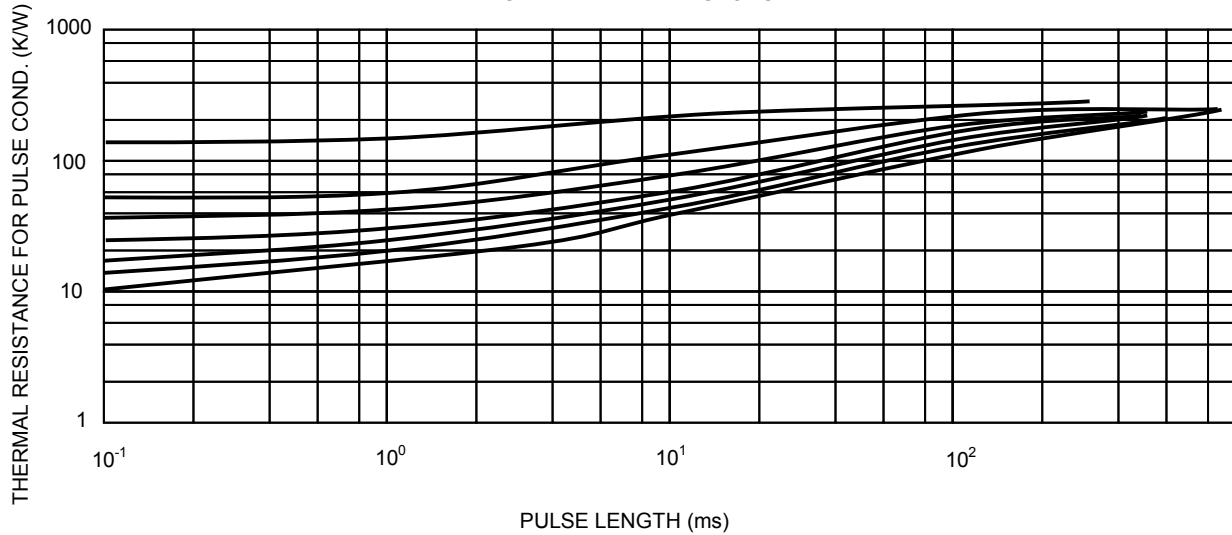


FIG.11 - THERMAL RESPONSE





# BZV55C SERIES

500mW ZENER DIODES/DO-35/DL-35(MINI MELF)

OPERATING AND STORAGE TEMPERATURE -55°C to +200°C

TYPE	Nominal Zener Voltage V <sub>Z</sub> @I <sub>ZT</sub>		Test Current I <sub>ZT</sub>	Maximum Zener Impedance		I <sub>ZK</sub>	Maximum Reverse Leakage Current		Maximum Surge Current	Maximum Regulation Current I <sub>ZM</sub>
				Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZK</sub>		I <sub>R</sub>	@ V <sub>R</sub>		
	Min	Max		mA	Ohms		Ohms	mA		
BZV55C2V4	2.28	2.56	5.0	85	600	1.0	50	1.0	- 0.085	155
BZV55C2V7	2.50	2.90	5.0	85	600	1.0	10	1.0	- 0.080	135
BZV55C3V0	2.80	3.20	5.0	85	600	1.0	4.0	1.0	- 0.075	125
BZV55C3V3	3.10	3.50	5.0	85	600	1.0	2.0	1.0	- 0.070	115
BZV55C3V6	3.40	3.80	5.0	85	600	1.0	2.0	1.0	- 0.065	105
BZV55C3V9	3.70	4.10	5.0	85	600	1.0	2.0	1.0	- 0.060	95
BZV55C4V3	4.00	4.60	5.0	75	600	1.0	1.0	1.0	±0.055	90
BZV55C4V7	4.40	5.00	5.0	60	600	1.0	0.5	1.0	±0.030	85
BZV55C5V1	4.80	5.40	5.0	35	550	1.0	0.1	1.0	±0.030	80
BZV55C5V6	5.20	6.00	5.0	25	450	1.0	0.1	1.0	+ 0.038	70
BZV55C6V2	5.80	6.60	5.0	10	200	1.0	0.1	2.0	+ 0.045	64
BZV55C6V8	6.40	7.20	5.0	8	150	1.0	0.1	3.0	+ 0.050	58
BZV55C7V5	7.00	7.90	5.0	7	50	1.0	0.1	5.0	+ 0.058	53
BZV55C8V2	7.70	8.70	5.0	7	50	1.0	0.1	6.2	+ 0.062	74
BZV55C9V1	8.50	9.60	5.0	10	50	1.0	0.1	6.8	+ 0.068	43
BZV55C10	9.40	10.6	5.0	15	70	1.0	0.1	7.5	+ 0.075	40
BZV55C11	10.4	11.6	5.0	20	70	1.0	0.1	8.2	+ 0.076	36
BZV55C12	11.4	12.7	5.0	20	90	1.0	0.1	9.1	+ 0.077	32
BZV55C13	12.4	14.1	5.0	26	110	1.0	0.1	10	+ 0.079	29
BZV55C15	13.8	15.6	5.0	30	110	1.0	0.1	11	+ 0.082	27
BZV55C16	15.3	17.1	5.0	40	170	1.0	0.1	12	+ 0.083	24
BZV55C18	16.8	19.1	5.0	50	170	1.0	0.1	13	+ 0.085	21
BZV55C20	18.8	21.2	5.0	55	220	1.0	0.1	15	+ 0.086	20
BZV55C22	20.8	23.3	5.0	55	220	1.0	0.1	16	+ 0.087	18
BZV55C24	22.8	25.6	5.0	80	220	1.0	0.1	18	+ 0.088	16
BZV55C27	25.1	28.9	5.0	80	220	1.0	0.1	20	+ 0.090	14
BZV55C30	28.0	32.0	5.0	80	220	1.0	0.1	22	+ 0.091	13
BZV55C33	31.0	35.0	5.0	80	220	1.0	0.1	24	+ 0.092	12
BZV55C36	34.0	38.0	5.0	80	220	1.0	0.1	27	+ 0.093	11
BZV55C39	37.0	41.0	2.5	90	500	0.5	0.1	30	+ 0.094	10
BZV55C43	40.0	46.0	2.5	90	600	0.5	0.1	33	+ 0.095	9.2
BZV55C47	44.0	50.0	2.5	110	700	0.5	0.1	36	+ 0.095	8.5
BZV55C51	48.0	54.0	2.5	125	700	0.5	0.1	39	+ 0.096	7.8
BZV55C56	52.0	60.0	2.5	135	1000	0.5	0.1	43	+ 0.096	7.0
BZV55C62	58.0	66.0	2.5	150	1000	0.5	0.1	47	+ 0.096	6.4
BZV55C68	64.0	72.0	2.5	200	1000	0.5	0.1	51	+ 0.096	5.9
BZV55C75	70.0	80.0	2.5	250	1500	0.5	0.1	56	+ 0.096	5.3
BZV55C82	77.0	87.0	2.5	300	2000	0.5	0.1	62	+ 0.096	4.8
BZV55C91	85.0	96.0	1.0	450	5000	0.1	0.1	68	+ 0.096	4.4
BZV55C100	94.0	106	1.0	450	5000	0.1	0.1	75	+ 0.096	4.0
BZV55C110	104	116	1.0	600	5000	0.1	0.1	82	+ 0.096	3.6
BZV55C120	114	127	1.0	800	5000	0.1	0.1	91	+ 0.096	3.3
BZV55C130	124	141	1.0	1000	5000	0.1	0.1	100	+ 0.096	3.0
BZV55C150	138	156	1.0	1200	5000	0.1	0.1	110	+ 0.096	2.6
BZV55C160	153	171	1.0	1500	5000	0.1	0.1	120	+ 0.096	2.5
BZV55C180	168	191	1.0	1800	5000	0.1	0.1	130	+ 0.096	2.2
BZV55C188	188	212	1.0	2000	5000	0.1	0.1	150	+ 0.096	2.0

NOTE: 1. Normal Tolerance ±5%.

2. "BZV..."Indicates MINI MELF Package.