

INTERNATIONAL SEMICONDUCTOR, INC.

500 mW SILICON PLANAR ZENER DIODES

ZENER VOLTAGES ARE GRADED ACCORDING TO THE INTERNATIONAL E-24 STANDARD.
Other voltage tolerances and higher Zener voltages are available on request.

MAXIMUM RATINGS *

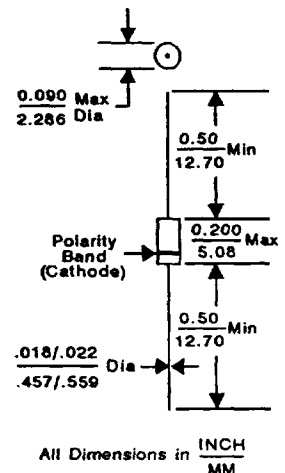
Operating Temperature:	-55 °C to +175 °C
Storage Temperature:	-55 °C to +175 °C
DC Power Dissipation:	500 mW at 25 °C
Power Derating:	3.33 mW/°C above 50 °C

ELECTRICAL CHARACTERISTICS @ 25 °C, unless otherwise specified

ISI TYPE NUMBER	ZENER VOLTAGE ¹ V _Z @ I _{ZT} = 5 mA		DYNAMIC IMPEDANCE I _Z = 5 mA f = 1 kHz		TEMP. COEFFICIENT OF ZENER VOLTAGE At I _Z = 5 mA		REVERSE LEAKAGE CURRENT				MAXIMUM ZENER ² CURRENT
	Min.	Max.	Max. Z _Z @ I _{ZT}	Max. Z _Z @ I _{ZT}	Min.	Max.	V _R	Max. I _R at T _{AMB} = 25°C	Max. I _R at T _{AMB} = 150°C	I _Z	
	V _{ec}	V _{ec}	Ohms	Ohms	a _Z %/°K	a _Z %/°K	Volts	nA	uA		mA
BZX55-C0V8	0.73	0.83	8	800	-0.25	-	-	10,000	50	-	-
BZX55-C2V7	2.5	2.9	85	800	-0.08	-0.08	1	4,000	40	135	135
BZX55-C3V0	2.8	3.2	85	800	-0.08	-0.08	1	2,000	40	125	125
BZX55-C3V3	3.1	3.5	85	800	-0.08	-0.05	1	2,000	40	115	115
BZX55-C3V6	3.4	3.9	85	800	-0.08	-0.04	1	2,000	40	105	105
BZX55-C3V9	3.7	4.1	85	800	-0.07	-0.03	1	1,000	20	95	95
BZX55-C4V3	4.0	4.6	75	800	-0.04	-0.01	1	500	10	90	90
BZX55-C4V7	4.4	5.0	60	800	-0.03	+0.01	1	100	2	85	85
BZX55-C5V1	4.8	5.4	35	550	-0.02	+0.05	1	100	2	80	80
BZX55-C5V6	5.2	6.0	25	450	-0.01	+0.06	1	100	2	70	70
BZX55-C6V2	5.8	6.6	10	200	0	+0.07	2	100	2	64	64
BZX55-C6V8	6.4	7.2	8	150	+0.01	+0.08	3	100	2	58	58
BZX55-C7V5	7.0	7.9	7	50	+0.01	+0.09	5	100	2	53	53
BZX55-C8V2	7.7	8.7	7	50	+0.01	+0.09	6	100	2	47	47
BZX55-C9V1	8.5	9.6	10	50	+0.02	+0.10	7	100	2	43	43
BZX55-C10	9.4	10.6	15	70	+0.03	+0.11	7.5	100	2	40	40
BZX55-C11	10.4	11.6	20	70	+0.03	+0.11	8.5	100	2	36	36
BZX55-C12	11.4	12.7	20	90	+0.03	+0.11	9	100	2	32	32
BZX55-C13	12.4	14.1	26	110	+0.03	+0.11	10	100	2	29	29
BZX55-C15	13.8	15.6	30	110	+0.03	+0.11	11	100	2	27	27
BZX55-C16	15.3	17.1	40	170	+0.03	+0.11	12	100	2	24	24
BZX55-C18	16.8	19.1	50	170	+0.03	+0.11	14	100	2	21	21
BZX55-C20	18.6	21.2	55	220	+0.03	+0.11	15	100	2	20	20
BZX55-C22	20.8	23.3	55	220	+0.03	+0.11	17	100	2	18	18
BZX55-C24	22.6	25.6	60	220	+0.04	+0.12	18	100	2	16	16
BZX55-C27	25.1	28.9	60	220	+0.04	+0.12	20	100	2	14	14
BZX55-C30	28	32	60	220	+0.04	+0.12	22	100	2	13	13
BZX55-C33	31	35	60	220	+0.04	+0.12	24	100	2	12	12
BZX55-C36	34	38	60	220	+0.04	+0.12	27	100	2	11	11
BZX55-C39	37	41	90	500	+0.04	+0.12	28	100	5	10	10
BZX55-C43	40	46	90	600	+0.04	+0.12	32	100	5	9.2	9.2
BZX55-C47	44	50	110	700	+0.04	+0.12	35	100	5	8.5	8.5
BZX55-C51	48	54	125	700	+0.04	+0.12	38	100	10	7.8	7.8

- NOTE 1. Tested with pulses - T_p = 20 ms.
2. Valid provided that leads are kept at ambient temperature at a distance of 8 mm from
3. The BZX55-C0V3 is a silicon diode with operation in the forward direction. Hence the parameters should be "F" instead of "Z". Connect the cathode lead to the negative po
4. at I_Z = 2.5 mA
5. at I_Z = 0.5 mA

BZX55-C0V8 thru BZX55-C51



DO-35

DESIGN DATA

CASE: Hermetically sealed
glass case DO-35 Outline.

LEAD MATERIAL: Copper
clad steel.

LEAD FINISH: Tin Plate

THERMAL RESISTANCE:
250 C/w (Typical)
junction to ambient

POLARITY: Diode to be
operated with the banded
(cathode) end positive
with respect to the
opposite end

WEIGHT: 0.2 Grams

MOUNTING POSITION: Any

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