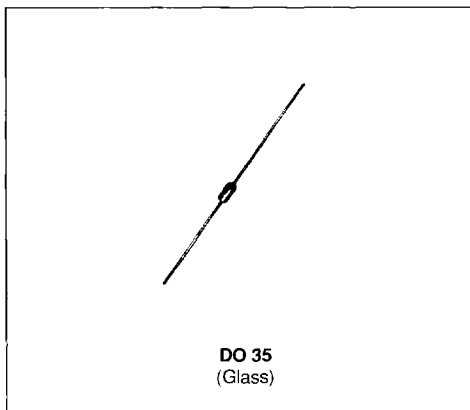


ZENER DIODES

- LARGE VOLTAGE RANGE : 0.8V TO 200V
- DOUBLE SLUG TYPE CONSTRUCTION
- PRO ELECTRON REGISTRATION
- CECC FOR TYPES : 2.7V TO 62V (level quality assessment : L)


DESCRIPTION

500mW hermetically sealed glass silicon Zener diodes.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation*	$T_{amb} = 50^{\circ}\text{C}$	0.5	W
I_{ZM}	Continuous Reverse Current	$T_{amb} = 50^{\circ}\text{C}$	See page 2	mA
T_{stg} T_j	Storage and Junction Temperature Range		- 65 to 175 - 55 to 175	$^{\circ}\text{C}$
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case		230	$^{\circ}\text{C}$

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient*	250	$^{\circ}\text{C}/\text{W}$

* On infinite heatsink with 4mm lead length.

BZX 55 C 0V8 → 200

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise specified)

Types	V _{ZT} /I _{ZT} (1)		r _{ZT} /I _{ZT} (1)	I _{ZT} (1)	r _{ZK} /I _{ZK}	∞ V _Z		I _R /V _R T _{amb} 25°C 150°C		V _R	I _{ZM} T _{amb} 50°C	
	min	max	max	(mA)	max	min	max	max	max	(V)	(mA)	
	(V)		(Ω)		(Ω) (mA)	(10 ⁻⁴ °C)		(μA)				
BZX 55 C 0V8 (2)	0.73	0.83	8	5	600	1						
BZX 55 C 2V4	2.28	2.56	85	5	600	1	-8	-6	50	100	1	155
• Δ BZX 55 C 2V7	2.5	2.9	85	5	600	1	-8	-6	10	50	1	135
• Δ BZX 55 C 3V0	2.8	3.2	85	5	600	1	-8	-6	4	40	1	125
P • Δ BZX 55 V 3V3	3.1	3.5	85	5	600	1	-8	-5	2	40	1	115
P • Δ BZX 55 C 3V6	3.4	3.8	85	5	600	1	-8	-4	2	40	1	105
P • Δ BZX 55 C 3V9	3.7	4.1	85	5	600	1	-7	-3	2	40	1	95
P • Δ BZX 55 C 4V3	4.0	4.6	75	5	600	1	-4	-1	1	20	1	90
P • Δ BZX 55 C 4V7	4.4	5.0	60	5	600	1	-3	1	0.5	10	1	85
P • Δ BZX 55 C 5V1	4.8	5.4	35	5	550	1	-2	5	0.1	2	1	80
P • Δ BZX 55 C 5V6	5.2	6.0	25	5	450	1	-1	6	0.1	2	1	70
P • Δ BZX 55 C 6V2	5.8	6.6	10	5	200	1	0	7	0.1	2	2	64
P • Δ BZX 55 C 6V8	6.4	7.2	8	5	150	1	1	8	0.1	2	3	58
P • Δ BZX 55 C 7V5	7.0	7.9	7	5	50	1	1	9	0.1	2	5	53
P • Δ BZX 55 C 8V2	7.7	8.7	7	5	50	1	1	9	0.1	2	6.2	47
P • Δ BZX 55 C 9V1	8.5	9.6	10	5	50	1	2	10	0.1	2	6.8	43
P • Δ BZX 55 C 10	9.4	10.6	15	5	70	1	3	11	0.1	2	7.5	40
• Δ BZX 55 C 11	10.4	11.6	20	5	70	1	3	11	0.1	2	8.2	36
P • Δ BZX 55 C 12	11.4	12.7	20	5	90	1	3	11	0.1	2	9.1	32
• Δ BZX 55 C 13	12.4	14.1	26	5	110	1	3	11	0.1	2	10	29
P • Δ BZX 55 C 15	13.8	15.6	30	5	110	1	3	11	0.1	2	11	27
• Δ BZX 55 C 16	15.3	17.1	40	5	170	1	3	11	0.1	2	12	24
P • Δ BZX 55 C 18	16.8	19.1	50	5	170	1	3	11	0.1	2	13	21
P • Δ BZX 55 C 20	18.8	21.2	55	5	220	1	3	11	0.1	2	15	20
P • Δ BZX 55 C 22	20.8	23.3	55	5	220	1	3	11	0.1	2	16	18
P • Δ BZX 55 C 24	22.8	25.6	80	5	220	1	4	12	0.1	2	18	16
P • Δ BZX 55 C 27	25.1	28.9	80	5	220	1	4	12	0.1	2	20	14
• Δ BZX 55 C 30	28	32	80	5	220	1	4	12	0.1	2	22	13
P • Δ BZX 55 C 33	31	35	80	5	220	1	4	12	0.1	2	24	12
• Δ BZX 55 C 36	34	38	80	5	220	1	4	12	0.1	2	27	11
• Δ BZX 55 C 39	37	41	90	2.5	500	0.5	4	12	0.1	5	30	10
• Δ BZX 55 C 43	40	46	90	2.5	600	0.5	4	12	0.1	5	33	9.2
• Δ BZX 55 C 47	44	50	110	2.5	700	0.5	4	12	0.1	5	36	8.5
• Δ BZX 55 C 51	48	54	125	2.5	700	0.5	4	12	0.1	10	39	7.8
• Δ BZX 55 C 56	52	60	135	2.5	1000	0.5	4	12	0.1	10	43	7.0
• Δ BZX 55 C 62	58	66	150	2.5	1000	0.5	4	12	0.1	10	47	6.4
• BZX 55 C 68	64	72	200	2.5	1000	0.5	4	12	0.1	10	51	5.9
• BZX 55 C 75	70	80	250	2.5	1500	0.5	4	12	0.1	10	56	5.3
• BZX 55 C 82	77	87	300	2.5	2000	0.5	4	12	0.1	10	62	4.8
• BZX 55 C 91	85	96	450	1	5000	0.1	4	12	0.1	10	68	4.4
BZX 55 C 100	94	106	450	1	5000	0.1	4	12	0.1	10	75	4.0
BZX 55 C 110	104	116	600	1	5000	0.1	4	12	0.1	10	82	3.6
BZX 55 C 120	114	127	800	1	5000	0.1	4	12	0.1	10	91	3.3
BZX 55 C 130	124	141	1000	1	5000	0.1	4	12	0.1	10	100	3.0
BZX 55 C 150	138	156	1200	1	5000	0.1	4	12	0.1	10	110	2.6
BZX 55 C 160	153	171	1500	1	5000	0.1	4	12	0.1	10	120	2.5
BZX 55 C 180	168	191	1800	1	5000	0.1	4	12	0.1	10	130	2.2
BZX 55 C 200	188	212	2000	1	5000	0.1	4	12	0.1	10	150	2.0

(1) Pulse test : 20ms ≤ t_p ≤ 50ms δ < 2%

(2) The BZX 55 C 0V8 is a diode used with a positive bias. The lead which is marked by a ring should be connected to the negative terminal of the current source.

Δ : Devices under CCO/CECC.

• : Esa qualified product.

P : Preferred voltages.

The regulation voltages are defined according to the E24 series.

Tight tolerances on preferred voltages only : BZX 55 B : ± 2% - BZX 55 A : ± 1%.

Forward voltage drop : V_F ≤ 1.5V (T_{amb} = 5°C, I_F = 200mA)

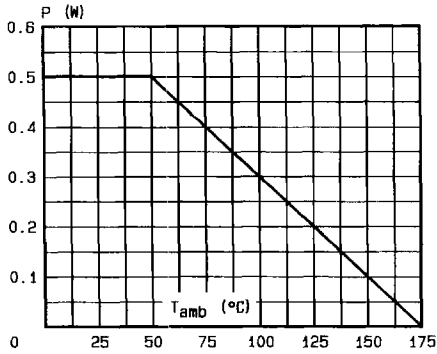


Fig.1 - Power dissipation versus ambient temperature on infinite heatsink.

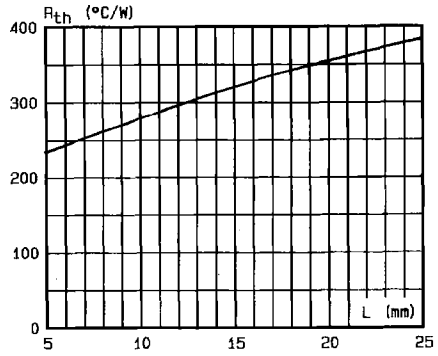


Fig.2 - Thermal resistance versus lead length on infinite heatsink.

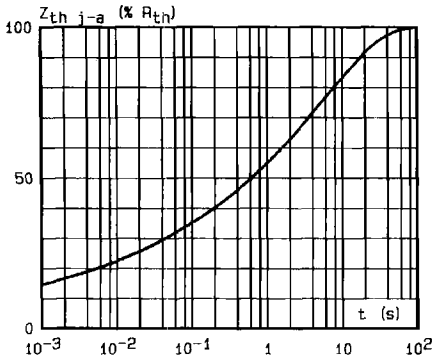


Fig.3 - Transient thermal impedance junction-ambient versus pulse duration.

INFINITE HEATSINK

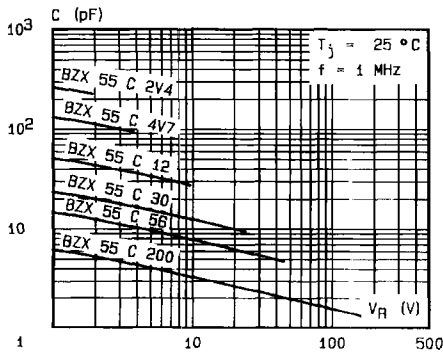
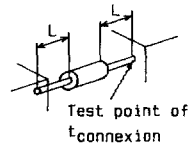


Fig.4 - Capacitance versus reverse applied voltage.

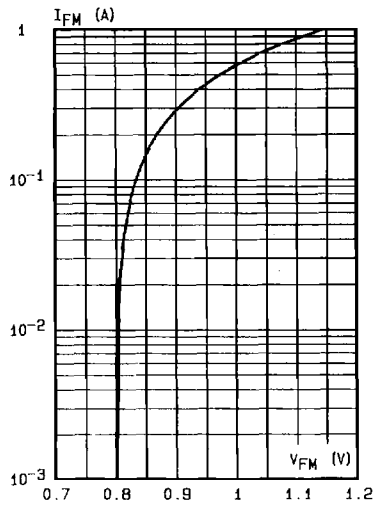


Fig.5 - Peak forward current versus peak forward voltage drop (typical values).

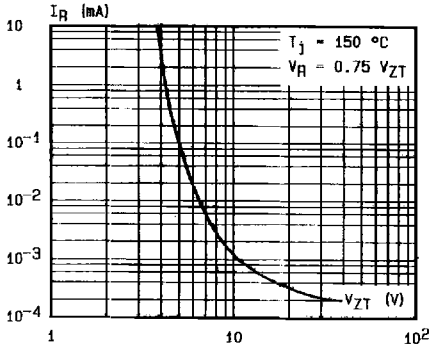


Fig.6 - Reverse current versus regulation voltage (maximum values).

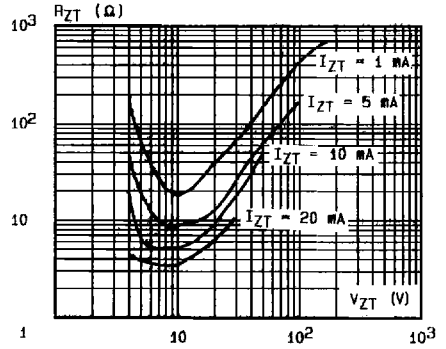
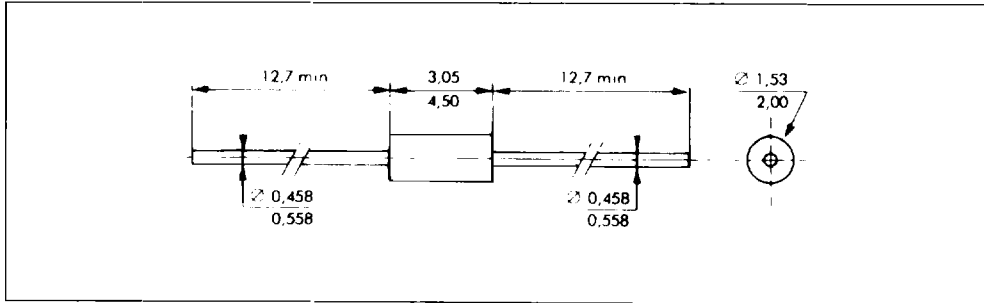


Fig.7 - Differential resistance versus regulation voltage (maximum values).

PACKAGE MECHANICAL DATA

DO 35 Glass



Cooling method : by convection and conduction
 Marking : clear ring at cathode end.
 Weight : 0.15g