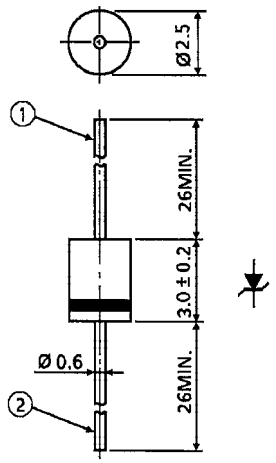
TENTATIVE TOSHIBA ZENER DIODE SILICON DIFFUSED TYPE

1ZC12~1ZC120

CONSTANT VOLTAGE REGULATION
TELEPHONE, PRINTER USES

- Average Power Dissipation : P = 1.0W
- Zener Voltage : V_Z = 12~120 V
- Tolerance of Zener Voltage (V_Z) : ±10%
- Plastic Mold Package

Unit: mm



1. ANODE
2. CATHODE

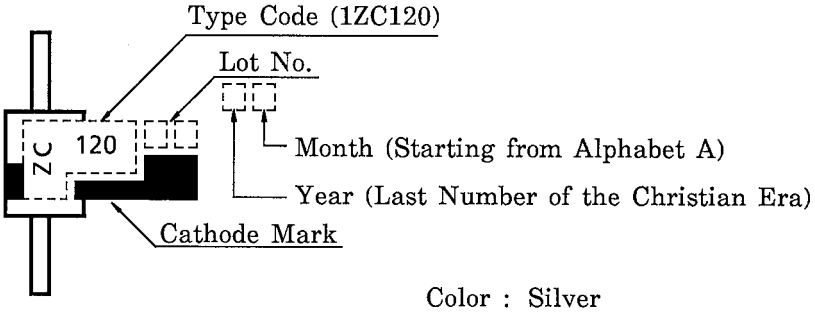
JEDEC	—
EIAJ	—
TOSHIBA	3−3F2A

Weight: 0.18g (Typ.)

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Dissipation	P	1.0	W
Junction Temperature	T_j	−40~150	°C
Storage Temperature Range	T_{stg}	−40~150	°C

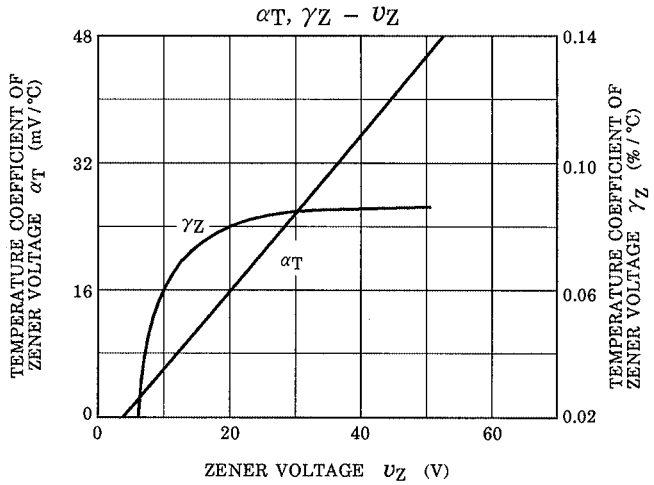
MARKING

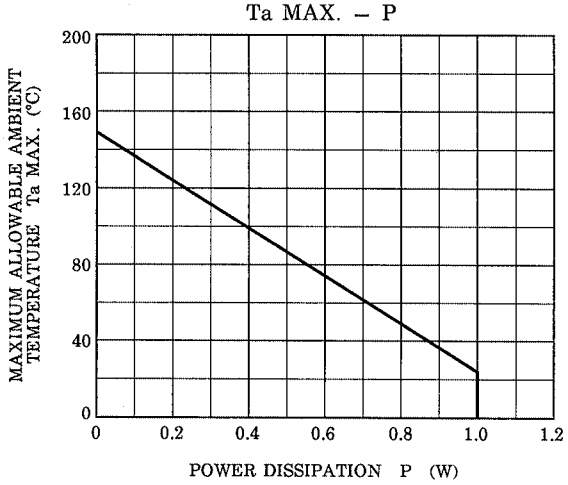


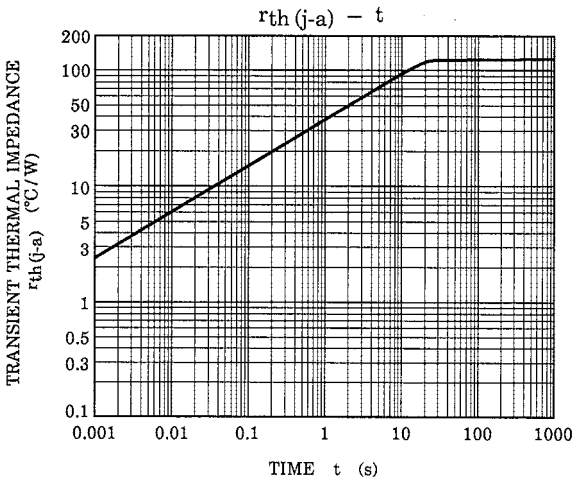
Color : Silver

ELECTRICAL CHARACTERISTICS (Ta=25°C)

TYPE	ZENER CHARACTERISTICS					TEMPERATURE COEFFICIENT OF ZENER VOLTAGE α_T (mV / °C)		FORWARD VOLTAGE		REVERSE CURRENT	
	ZENER VOLTAGE V_Z (V)			ZENER IMPEDANCE r_d (Ω)	MEASUREMENT CURRENT I_Z (mA)			V_F (V)	MEASUREMENT CURRENT I_F (A)	I_R (μA)	MEASUREMENT VOLTAGE V_R (V)
	MIN.	TYP.	MAX.	MAX.		TYP.	MAX.	MAX.		MAX	
1ZC12	10.8	12	13.2	30	10	8	13	1.2	0.2	10	8.0
1ZC13	11.7	13	14.3	30	10	9	14	1.2	0.2	10	9.0
1ZC15	13.5	15	16.5	30	10	11	17	1.2	0.2	10	10.0
1ZC16	14.4	16	17.6	30	10	12	19	1.2	0.2	10	11.0
1ZC18	16.2	18	19.8	30	10	14	23	1.2	0.2	10	13.0
1ZC20	18.0	20	22.0	30	10	16	26	1.2	0.2	10	14.0
1ZC22	19.8	22	24.2	30	10	18	28	1.2	0.2	10	16.0
1ZC24	21.6	24	26.4	30	10	20	32	1.2	0.2	10	17.0
1ZC27	24.3	27	29.7	30	10	23	36	1.2	0.2	10	19.0
1ZC30	27.0	30	33.0	30	10	25	40	1.2	0.2	10	21.0
1ZC33	29.7	33	36.3	30	10	26	41	1.2	0.2	10	26.4
1ZC36	32.4	36	39.6	30	9	28	45	1.2	0.2	10	28.8
1ZC39	35.1	39	42.9	35	8	30	48	1.2	0.2	10	31.2
1ZC43	38.7	43	47.3	40	7	33	53	1.2	0.2	10	34.4
1ZC47	42.3	47	51.7	65	6	38	60	1.2	0.2	10	37.6
1ZC51	45.9	51	56.1	65	6	43	68	1.2	0.2	10	40.8
1ZC56	50.4	56	61.6	85	5	48	77	1.2	0.2	10	44.8
1ZC62	55.8	62	68.2	105	5	53	85	1.2	0.2	10	49.6
1ZC68	61.2	68	74.8	120	4	57	90	1.2	0.2	10	54.4
1ZC75	67.5	75	82.5	150	4	66	104	1.2	0.2	10	60.0
1ZC82	73.8	82	90.2	170	3	71	113	1.2	0.2	10	65.4
1ZC91	81.9	91	100.1	240	3	79	127	1.2	0.2	10	72.8
1ZC100	90.0	100	110.0	300	3	87	138	1.2	0.2	10	80.0
1ZC110	99.0	110	121.0	300	3	96	152	1.2	0.2	10	88.0
1ZC120	108.0	120	132.0	350	2.5	106	171	1.2	0.2	10	96.0


αT, γZ – υZ
TEMPERATURE COEFFICIENT OF ZENER VOLTAGE αT (mV/°C)
TEMPERATURE COEFFICIENT OF ZENER VOLTAGE γZ (%/°C)
48
32
16
0
0.14
0.10
0.06
0.02
γZ
αT
0
20
40
60
ZENER VOLTAGE υZ (V)


Ta MAX. – P
MAXIMUM ALLOWABLE AMBIENT TEMPERATURE Ta MAX. (°C)
200
160
120
80
40
0
0
0.2
0.4
0.6
0.8
1.0
1.2
POWER DISSIPATION P (W)


rth (j-a) – t
TRANSIENT THERMAL IMPEDANCE rth (j-a) (°C/W)
200
100
50
30
10
5
3
1
0.5
0.3
0.1
0.001
0.01
0.1
1
10
100
1000
TIME t (s)

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000707EAA

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