TOSHIBA ZENER DIODE SILICON DIFFUSED TYPE

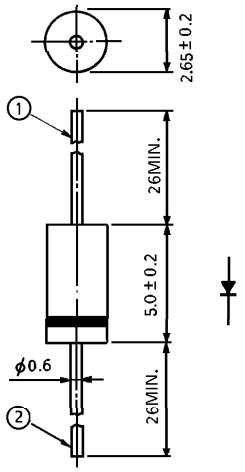
1AZ6.8~1AZ330

CONSTANT VOLTAGE REGULATION

TRANSIENT SUPPRESSORS

- Average Power Dissipation : P=1.0W
- Zener Voltage : V_Z=6.8~330V
- Withstand Hard Environment
- Plastic Mold Package
- Can be used for an automatic mounting machine

Unit in mm



1. ANODE
2. CATHODE

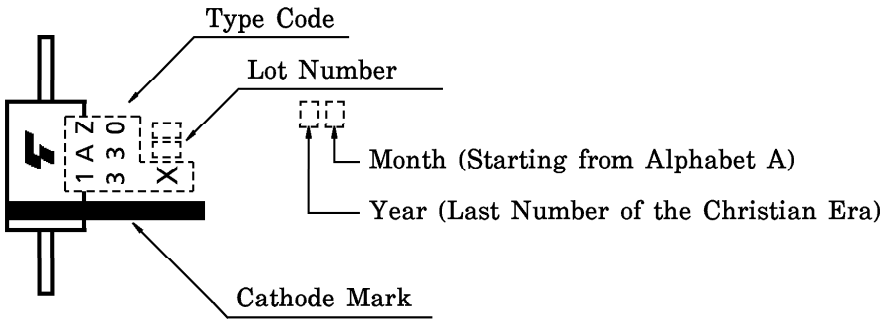
JEDEC	—
EIAJ	—
TOSHIBA	3-3E1A

Weight : 0.23g

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



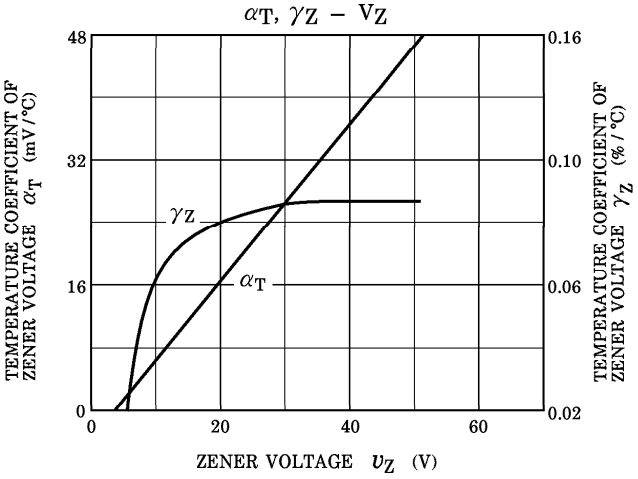
Color : Silver

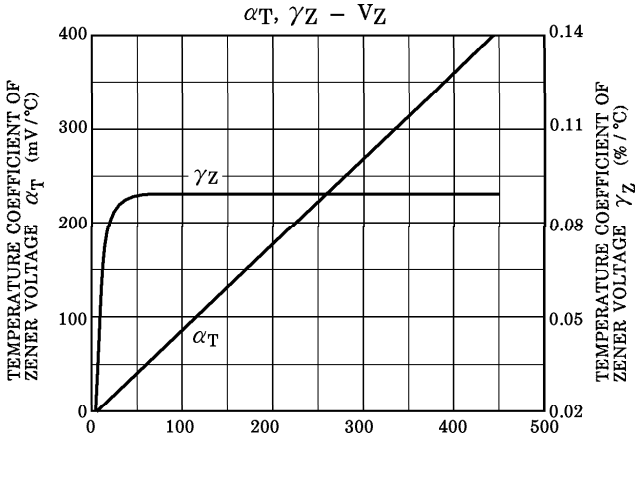
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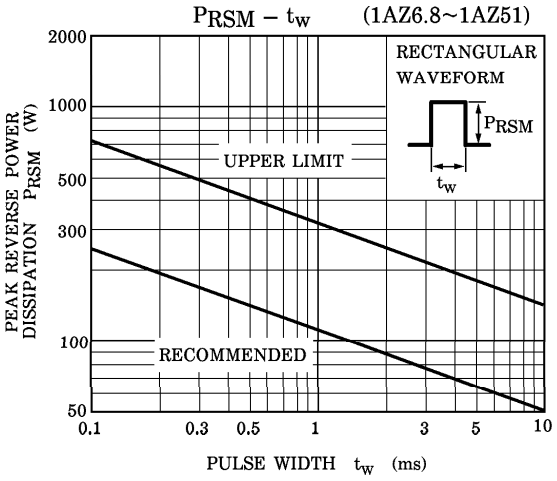
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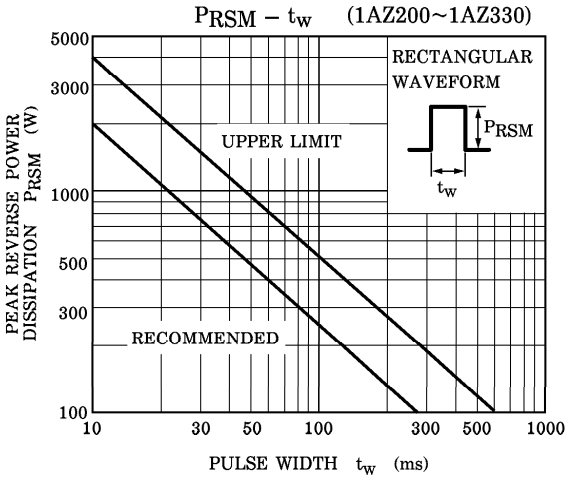
TYPE *	ZENER CHARACTERISTICS					TEMPERATURE COEFFICIENT OF ZENER VOLTAGE		FORWARD VOLTAGE		REVERSE CURRENT	
	ZENER VOLTAGE V_Z (V)			ZENER IMPEDANCE r_d (Ω)	MEASUREMENT CURRENT	α_T (mV/°C)		V_F (V)	MEASUREMENT CURRENT	I_R (μA)	MEASUREMENT VOLTAGE
	MIN.	TYP.	MAX.	MAX.	I_Z (mA)	TYP.	MAX.	MAX.	I_F (A)	MAX.	V_R (V)
1AZ6.8	6.2	6.8	7.4	60	10	3	4	1.2	0.2	10	3.0
1AZ7.5	6.8	7.5	8.3	30	10	4	5	1.2	0.2	10	4.5
1AZ8.2	7.4	8.2	9.1	30	10	4	6	1.2	0.2	10	4.9
1AZ9.1	8.2	9.1	10.1	30	10	5	8	1.2	0.2	10	5.5
1AZ10	9.0	10	11.0	30	10	6	9	1.2	0.2	10	6.0
1AZ11	9.9	11	12.1	30	10	7	11	1.2	0.2	10	7.0
1AZ12	10.8	12	13.2	30	10	8	13	1.2	0.2	10	8.0
1AZ13	11.7	13	14.3	30	10	9	14	1.2	0.2	10	9.0
1AZ15	13.5	15	16.5	30	10	11	17	1.2	0.2	10	10.0
1AZ16	14.4	16	17.6	30	10	12	19	1.2	0.2	10	11.0
1AZ18	16.2	18	19.8	30	10	14	23	1.2	0.2	10	13.0
1AZ20	18.0	20	22.0	30	10	16	26	1.2	0.2	10	14.0
1AZ22	19.8	22	24.2	30	10	18	28	1.2	0.2	10	16.0
1AZ24	21.6	24	26.4	30	10	20	32	1.2	0.2	10	17.0
1AZ27	24.3	27	29.7	30	10	23	36	1.2	0.2	10	19.0
1AZ30	27.0	30	33.0	30	10	25	40	1.2	0.2	10	21.0
1AZ33	29.7	33	36.3	30	10	26	41	1.2	0.2	10	26.4
1AZ36	32.4	36	39.6	30	9	28	45	1.2	0.2	10	28.8
1AZ47	42.3	47	51.7	65	6	38	60	1.2	0.2	10	37.6
1AZ51	45.9	51	56.1	65	6	43	68	1.2	0.2	10	40.8
※ 1AZ200	180	200	220	500	1.5	170	269	1.2	0.2	10	160
※ 1AZ220	198	220	242	5000	0.5	200	309	1.2	0.2	10	176
※ 1AZ220－Y	210	220	230			200	309				176
※ 1AZ220－Z	220	230	240			207	320				184
※ 1AZ240	216	240	264	5000	0.5	215	343	1.2	0.2	10	192
※ 1AZ240－Y	230	240	250			215	325				216
※ 1AZ240－Z	240	250	260			225	338				225
※ 1AZ270	243	270	297	5000	0.5	243	385	1.2	0.2	10	216
※ 1AZ270－X	250	260	270			221	350				234
※ 1AZ270－Y	260	270	280			228	362				243
※ 1AZ270－Z	270	280	290			236	374				252
※ 1AZ300	270	300	330	5000	0.5	270	428	1.2	0.2	10	240
※ 1AZ300－X	280	290	300			244	388				261
※ 1AZ300－Y	290	300	310			253	402				270
※ 1AZ300－Z	300	310	320			261	415				279
※ 1AZ330	297	330	363	5000	0.5	296	470	1.2	0.2	10	264
※ 1AZ330－X	310	320	330			270	428				288
※ 1AZ330－Y	320	330	340			278	441				297
※ 1AZ330－Z	330	340	350			287	455				306

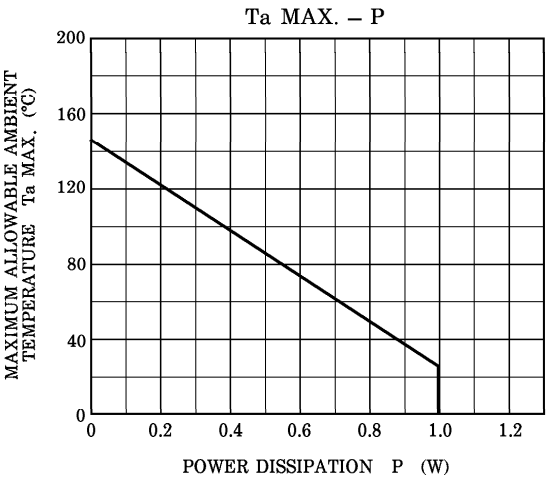
※ Made by order

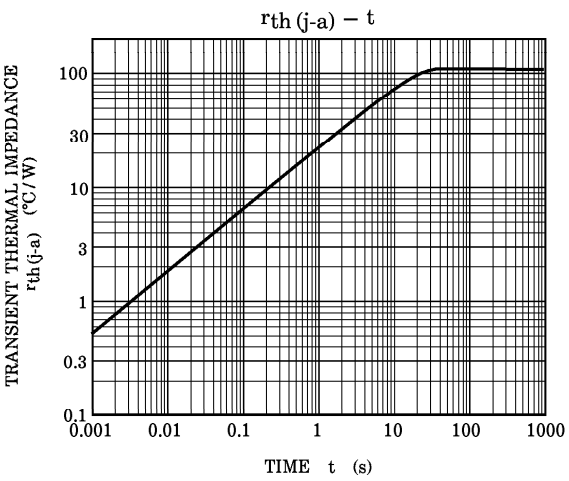

αT, γZ – VZ
TEMPERATURE COEFFICIENT OF ZENER VOLTAGE αT (mV/°C)
TEMPERATURE COEFFICIENT OF ZENER VOLTAGE γZ (%/°C)
γZ
αT
ZENER VOLTAGE VZ (V)


αT, γZ – VZ
TEMPERATURE COEFFICIENT OF ZENER VOLTAGE αT (mV/°C)
TEMPERATURE COEFFICIENT OF ZENER VOLTAGE γZ (%/°C)
γZ
αT


PRSM – tw (1AZ6.8~1AZ51)
PEAK REVERSE POWER DISSIPATION PRSM (W)
RECTANGULAR WAVEFORM
PRSM
tw
UPPER LIMIT
RECOMMENDED
PULSE WIDTH tw (ms)


PRSM – tw (1AZ200~1AZ330)
PEAK REVERSE POWER DISSIPATION PRSM (W)
RECTANGULAR WAVEFORM
PRSM
tw
UPPER LIMIT
RECOMMENDED
PULSE WIDTH tw (ms)


Ta MAX. – P
MAXIMUM ALLOWABLE AMBIENT TEMPERATURE Ta MAX. (°C)
POWER DISSIPATION P (W)


rth (j-a) – t
TRANSIENT THERMAL IMPEDANCE rth (j-a) (°C/W)
TIME t (s)