

9097250 TOSHIBA (DISCRETE/OPTO)

67C 09387

D T-11-13

**1Z33 ~ 1Z390**

Silicon Diffused Type

Zener Diode

Toshiba Zener Diode 1Z390 series are designed for surge voltage suppressors to protect the voltage sensitive electronics devices in damage of destruction by high voltage transient.

**FEATURES:**

- . Average Power Dissipation :  $P=1W$
- . Peak Reverse Power Dissipation : PRSM=200W at  $t_w=200\mu s$
- . Zener Voltage :  $V_Z=33\sim 390V$
- . Tolerance of Zener Voltage ( $V_Z$ ) :  $\pm 10\%$
- . Plastic Mold Package

**MAXIMUM RATINGS ( $T_a=25^\circ C$ )**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Dissipation	P	1	W
Maximum(Peak) Zener Current	$I_{ZM}$	(Note 1)	-
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-40~150	$^\circ C$

Note 1 : See electrical characteristics

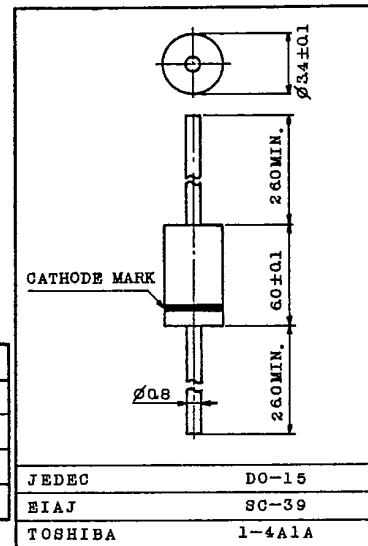
2 : Soldering : 5mm is the minimum to be kept between case and soldering part.

3 : Lead Bending : 5mm is the minimum to be kept between case and lead bending point.

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

TYPE	ZENER VOLTAGE $V_Z @ I_Z$ (V)			ZENER CURRENT $I_Z$ (mA)	ZENER IMPEDANCE $r_d @ I_Z$ ( $\Omega$ )	REVERSE CURRENT $I_R @ V_R$ ( $\mu A$ )	REVERSE VOLTAGE $V_R$ (V)	FORWARD VOLTAGE $V_F @ I_F$ (V)	FORWARD CURRENT $I_F$ (A)
	MIN.	TYP.	MAX.						
1Z33	29.7	33	36.3	10	30	10	26.4	1.2	0.2
1Z36	32.4	36	39.6	9	30	10	28.8	1.2	0.2
1Z47	42.3	47	51.7	6	65	10	37.6	1.2	0.2
1Z51	45.9	51	56.1	6	65	10	40.8	1.2	0.2
1Z68	61.2	68	74.8	4	120	10	54.4	1.2	0.2
1Z75	67.5	75	82.5	4	150	10	60	1.2	0.2
1Z82	73.8	82	90.2	3	170	10	65.6	1.2	0.2
1Z100	90	100	110	3	300	10	80	1.2	0.2
1Z110	99	110	121	3	300	10	88	1.2	0.2
1Z150	135	150	165	2	450	10	120	1.2	0.2
1Z180	162	180	198	1.5	500	10	144	1.2	0.2
1Z330	297	330	363	1.0	5000	10	264	1.2	0.2
1Z390	351	390	429	0.5	10000	10	312	1.2	0.2

Unit in mm

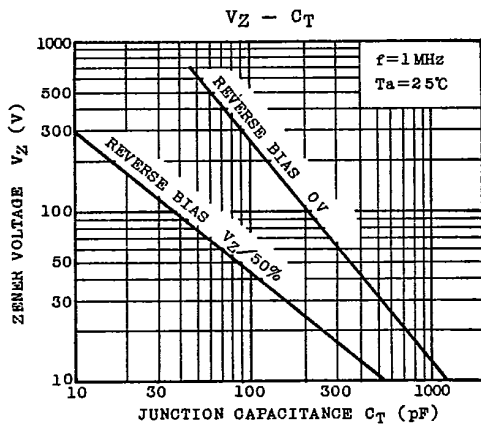
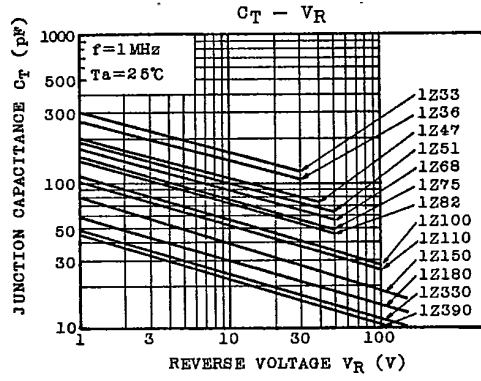
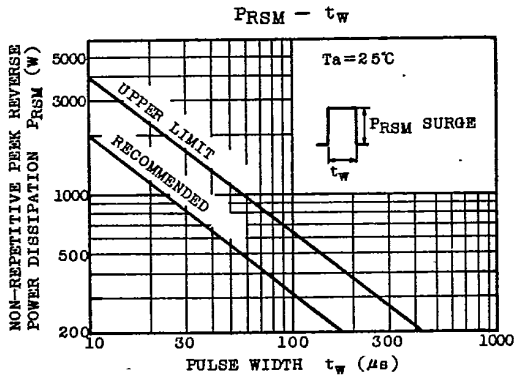


Weight : 0.424g

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TOSHIBA CORPORATION