

TOSHIBA Zener Diode Silicon Epitaxial Type

# CRY62~CRZ47

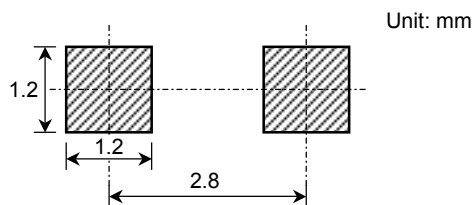
Use in Communication, Automation and  
Measurement Equipment  
Constant Voltage Regulation  
Transient Suppressors

- Average power dissipation:  $P = 0.7 \text{ W}$
- Zener voltage:  $V_Z = 6.2 \sim 47 \text{ V}$
- Suitable for compact assembly due to small surface-mount package  
"S-FLAT™" (Toshiba package name)

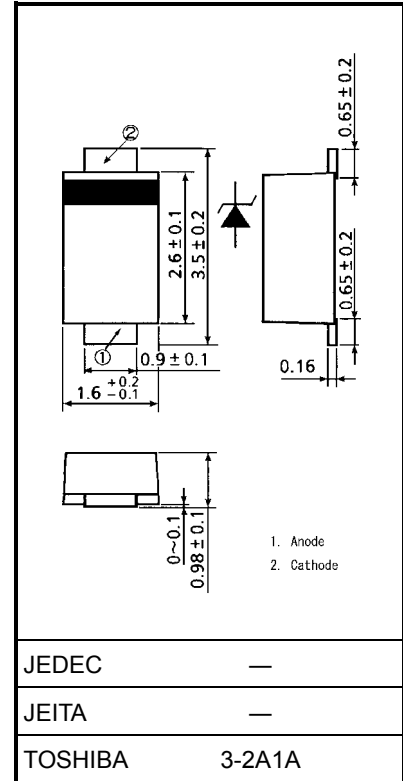
## Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Power dissipation	P	700	mW
Junction temperature	$T_j$	-40 ~ 150	°C
Storage temperature range	$T_{stg}$	-40 ~ 150	°C

## Standard Soldering Pad



Unit: mm

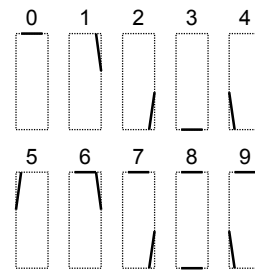
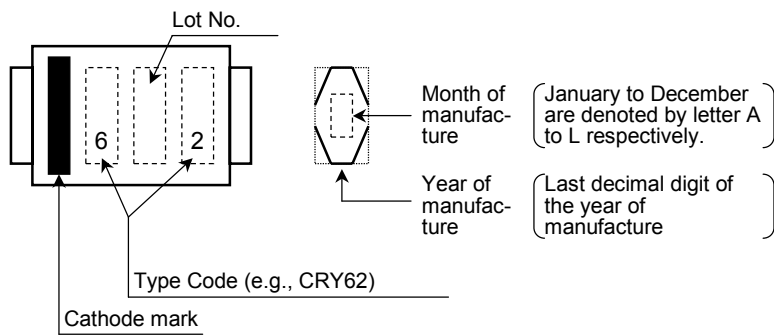


Weight: 0.013 g (typ.)

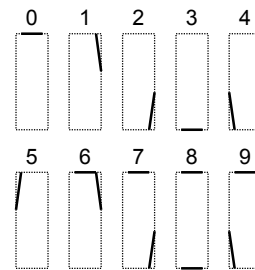
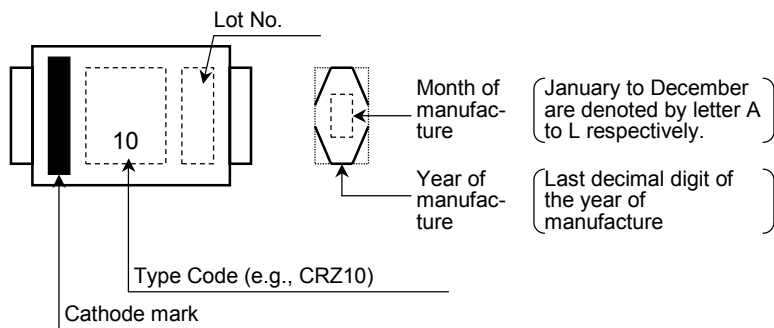
## Marking

## Following Indicates the Date of Manufacture

### CRY62~CRY91

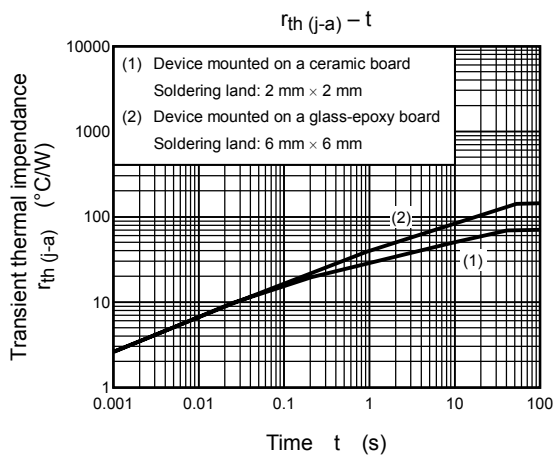
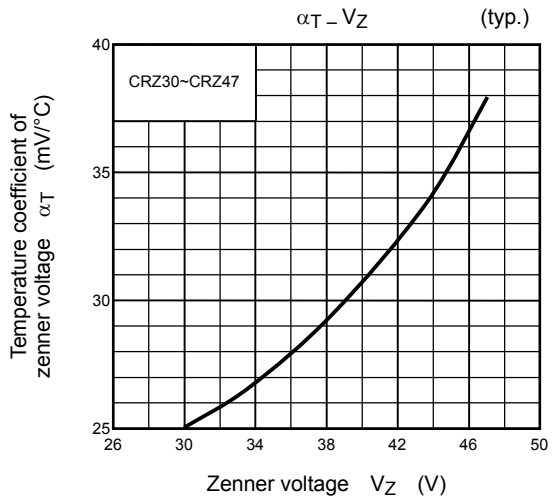
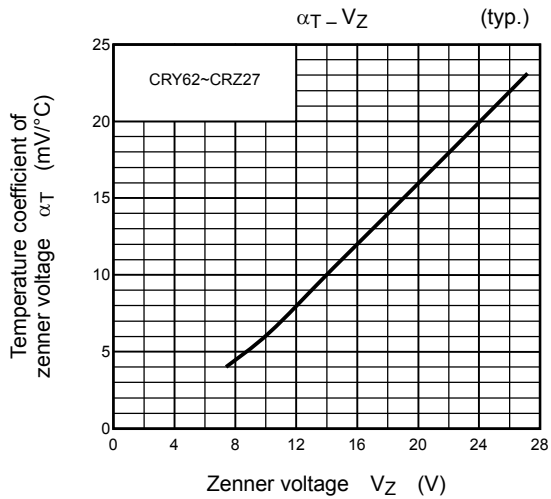
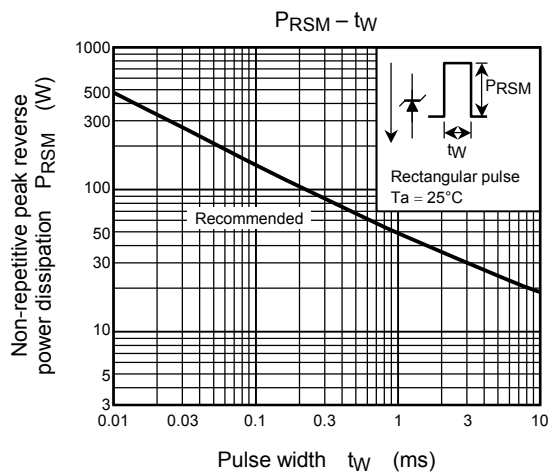
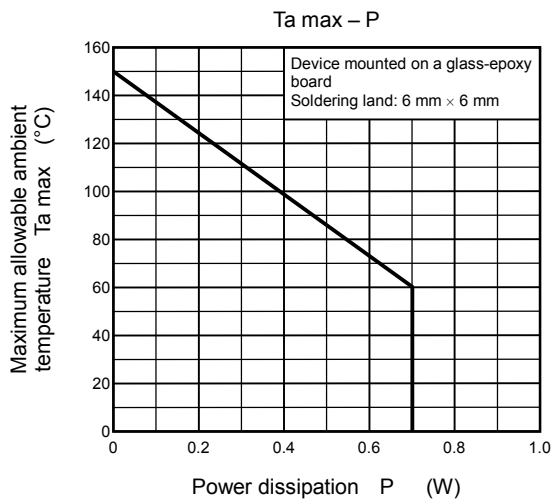


### CRZ10~CRZ47



## Electrical Characteristics (Ta = 25°C)

Product No.	Zener Voltage			Measurement Current I <sub>Z</sub> (mA)	Zener Impedance		Temperature Coefficient of Zener Voltage α <sub>T</sub> (mV / °C)		Forward Voltage		Reverse Current	
	V <sub>Z</sub> (V)		r <sub>d</sub> (Ω)		Measurement Current I <sub>Z</sub> (mA)	V <sub>F</sub> (V)	Measurement Current I <sub>F</sub> (A)	I <sub>R</sub> (μA)	Measurement Voltage V <sub>R</sub> (V)			
	Min	Typ.		Max						Max	Typ.	Max
CRY62	5.6	6.2	6.8	10	60	10	2	3	1.0	0.2	10	3.0
CRY68	6.2	6.8	7.4	10	60	10	3	4	1.0	0.2	10	3.0
CRY75	6.8	7.5	8.3	10	30	10	4	5	1.0	0.2	10	4.5
CRY82	7.4	8.2	9.0	10	30	10	4	6	1.0	0.2	10	4.9
CRY91	8.2	9.1	10.0	10	30	10	5	8	1.0	0.2	10	5.5
CRZ10	9.0	10.0	11.0	10	30	10	6	9	1.0	0.2	10	6.0
CRZ11	9.9	11.0	12.1	10	30	10	7	11	1.0	0.2	10	7.0
CRZ12	10.8	12.0	13.2	10	30	10	8	13	1.0	0.2	10	8.0
CRZ13	11.7	13.0	14.3	10	30	10	9	14	1.0	0.2	10	9.0
CRZ15	13.5	15.0	16.5	10	30	10	11	17	1.0	0.2	10	10.0
CRZ16	14.4	16.0	17.6	10	30	10	12	19	1.0	0.2	10	11.0
CRZ18	16.2	18.0	19.8	10	30	10	14	23	1.0	0.2	10	13.0
CRZ20	18.0	20.0	22.0	10	30	10	16	26	1.0	0.2	10	14.0
CRZ22	19.8	22.0	24.2	10	30	10	18	28	1.0	0.2	10	16.0
CRZ24	21.6	24.0	26.4	10	30	10	20	32	1.0	0.2	10	17.0
CRZ27	24.3	27.0	29.7	10	30	10	23	36	1.0	0.2	10	19.0
CRZ30	27.0	30.0	33.0	10	30	10	25	40	1.0	0.2	10	21.0
CRZ33	29.7	33.0	36.3	10	30	10	26	41	1.0	0.2	10	26.4
CRZ36	32.4	36.0	39.6	9	30	9	28	45	1.0	0.2	10	28.8
CRZ39	35.1	39.0	42.9	8	35	8	30	48	1.0	0.2	10	31.2
CRZ43	38.7	43.0	47.3	7	40	7	33	53	1.0	0.2	10	34.4
CRZ47	42.3	47.0	51.7	6	65	6	38	60	1.0	0.2	10	37.6



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