

SANYO**DZD2.0 to 24**

Silicon Planar Type

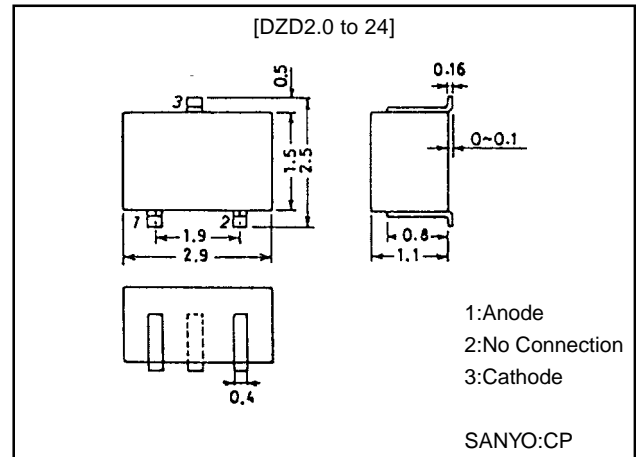
0.2W Zener Diodes**Features**

- Reference voltage use.
- Voltage regulators use.
- Power dissipation : P=200mW.
- Voltage range : $\pm 2.5\%$ subdivided.
- High reliability due to planar type.
- Ideally suited for use in hybrid ICs because of ultra small package.

Package Dimensions

unit:mm

1148A

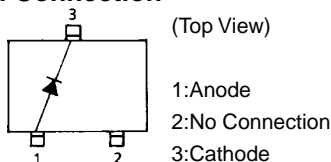
**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Power Dissipation	P		200	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Zener voltage VZ will be subdivided into X, Y, Z at your request.

Type No.	Zener Characteristics								Reverse Current	
	Zener Voltage V _Z [V]*					Dynamic Resistance r _d [Ω] f=1kHz		Test Current	I _R	Test Voltage V _R
	min	max	Sub-division	min	max	typ	max	[mA]		
DZD2.0	1.85	2.15	X	1.85	2.05	60	100	5	120	1.0
			Z	1.95	2.15	60	100	5		
DZD2.2	2.05	2.38	X	2.05	2.26	65	100	5	120	1.0
			Z	2.16	2.38	65	100	5		
DZD2.4	2.28	2.60	X	2.28	2.50	70	100	5	120	1.0
			Z	2.40	2.60	70	100	5		
DZD2.7	2.50	2.90	X	2.50	2.75	80	110	5	120	1.0
			Z	2.65	2.90	80	110	5		
DZD3.0	2.80	3.20	X	2.80	3.05	85	120	5	50	1.0
			Z	2.95	3.20	85	120	5		
DZD3.3	3.10	3.50	X	3.10	3.35	90	130	5	20	1.0
			Z	3.25	3.50	90	130	5		

Electrical Connection

Continued on next page.

* : t=30ms

DZD2.0 to 24

Continued from preceding page.

Electrical Characteristics at Ta = 25°C

Zener voltage VZ will be subdivided into X, Y, Z at your request.

Type No.	Zener Characteristics							Reverse Current		
	Zener Voltage V _Z [V]*					Dynamic Resistance r _d [Ω] f=1kHz		Test Current	I _R	Test Voltage V _R
	min	max	Sub- division	min	max	typ	max			
								[mA]	[μA]	[V]
DZD3.6	3.40	3.80	X	3.40	3.65	90	130	5	10	1.0
			Z	3.55	3.80	90	130	5	10	1.0
DZD3.9	3.70	4.10	X	3.70	3.97	85	130	5	10	1.0
			Z	3.87	4.10	85	130	5	10	1.0
DZD4.3	4.00	4.50	X	4.00	4.23	80	130	5	5	1.0
			Y	4.13	4.35	80	130	5	5	1.0
			Z	4.25	4.50	80	130	5	5	1.0
DZD4.7	4.40	4.90	X	4.40	4.63	60	120	5	5	1.0
			Y	4.53	4.76	60	120	5	5	1.0
			Z	4.66	4.90	60	120	5	5	1.0
DZD5.1	4.80	5.40	X	4.80	5.07	35	70	5	1.0	1.5
			Y	4.97	5.24	35	70	5	1.0	1.5
			Z	5.14	5.40	35	70	5	1.0	1.5
DZD5.6	5.30	6.00	X	5.30	5.63	15	40	5	1.0	2.5
			Y	5.43	5.81	15	40	5	1.0	2.5
			Z	5.61	6.00	15	40	5	1.0	2.5
DZD6.2	5.80	6.60	X	5.80	6.20	8.0	30	5	1.0	3.0
			Y	6.00	6.39	8.0	30	5	1.0	3.0
			Z	6.19	6.60	8.0	30	5	1.0	3.0
DZD6.8	6.40	7.20	X	6.40	6.80	7.0	25	5	0.5	5.0
			Y	6.60	7.02	7.0	25	5	0.5	5.0
			Z	6.82	7.20	7.0	25	5	0.5	5.0
DZD7.5	7.00	7.90	X	7.00	7.43	6.8	23	5	0.5	6.0
			Y	7.23	7.66	6.8	23	5	0.5	6.0
			Z	7.46	7.90	6.8	23	5	0.5	6.0
DZD8.2	7.70	8.70	X	7.70	8.16	5.0	20	5	0.5	6.5
			Y	7.96	8.43	5.0	20	5	0.5	6.5
			Z	8.23	8.70	5.0	20	5	0.5	6.5
DZD9.1	8.50	9.60	X	8.50	9.00	4.0	18	5	0.5	7.0
			Y	8.80	9.30	4.0	18	5	0.5	7.0
			Z	9.10	9.60	4.0	18	5	0.5	7.0
DZD10	9.40	10.60	X	9.40	9.93	4.0	15	5	0.5	8.0
			Y	9.73	10.26	4.0	15	5	0.5	8.0
			Z	10.06	11.60	4.0	15	5	0.5	8.0
DZD11	10.40	11.60	X	10.40	10.98	4.0	15	5	0.5	8.5
			Y	10.73	11.26	4.0	15	5	0.5	8.5
			Z	11.06	11.60	4.0	15	5	0.5	8.5
DZD12	11.40	12.60	X	11.40	11.93	3.0	15	5	0.5	9.0
			Y	11.73	12.26	3.0	15	5	0.5	9.0
			Z	12.06	12.60	3.0	15	5	0.5	9.0
DZD13	12.40	14.10	X	12.40	13.08	3.0	15	5	0.5	10.0
			Y	12.88	13.57	3.0	15	5	0.5	10.0
			Z	13.37	14.10	3.0	15	5	0.5	10.0
DZD15	13.80	15.60	X	13.80	14.63	3.0	15	5	0.5	11.0
			Y	14.33	15.11	3.0	15	5	0.5	11.0
			Z	14.81	15.60	3.0	15	5	0.5	11.0
DZD16	15.30	17.10	X	15.30	16.10	3.0	18	5	0.5	12.0
			Y	15.80	16.60	3.0	18	5	0.5	12.0
			Z	16.30	17.10	3.0	18	5	0.5	12.0

* : t=30ms

Continued on next page.

DZD2.0 to 24

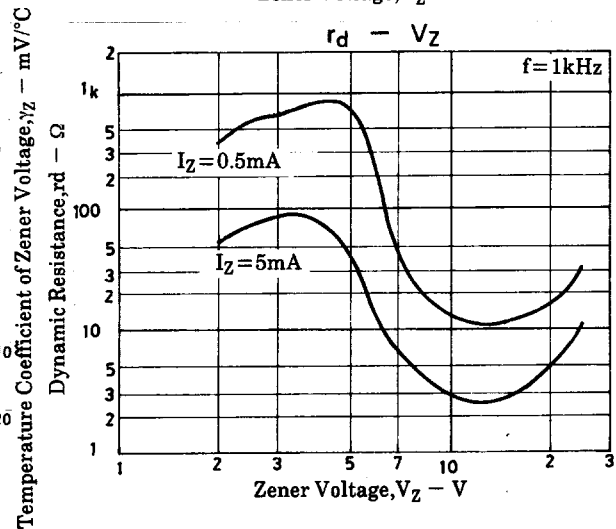
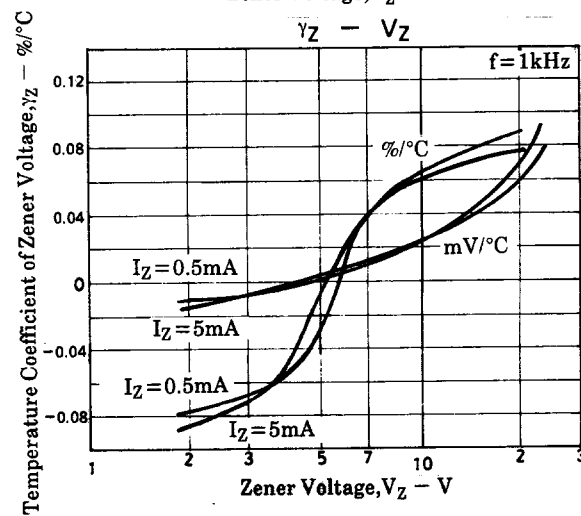
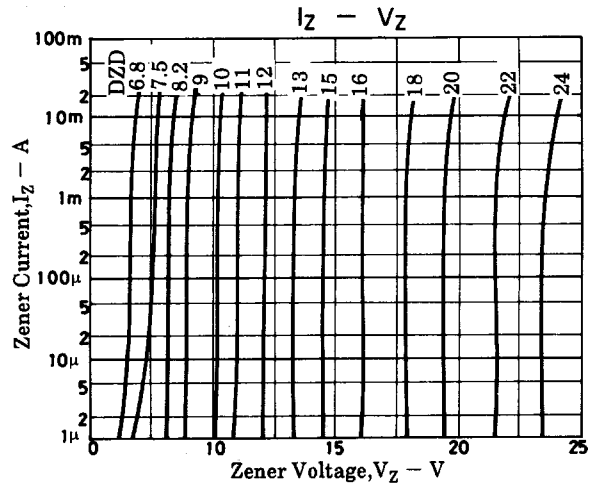
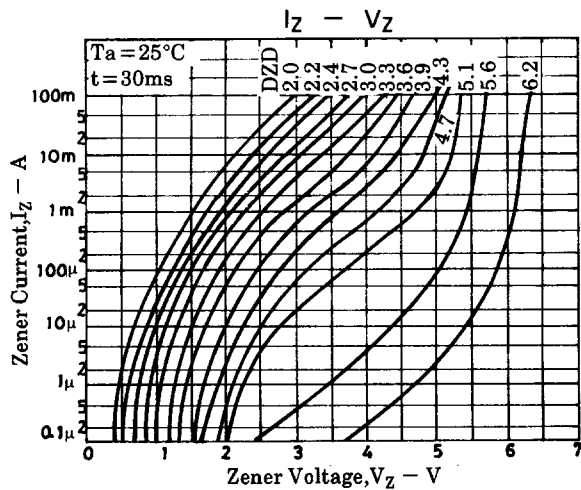
Continued from preceding page.

Electrical Characteristics at Ta = 25°C

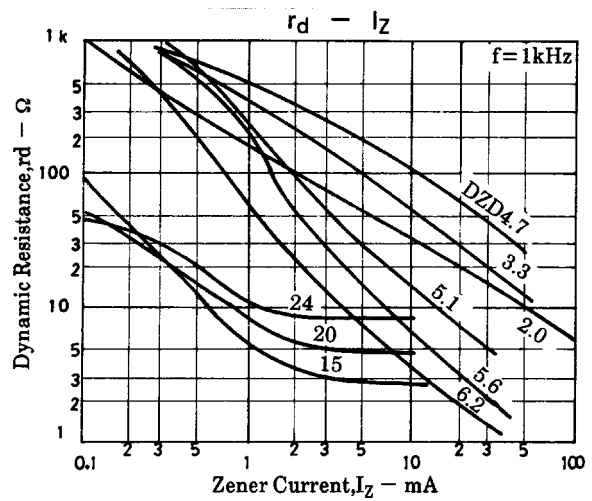
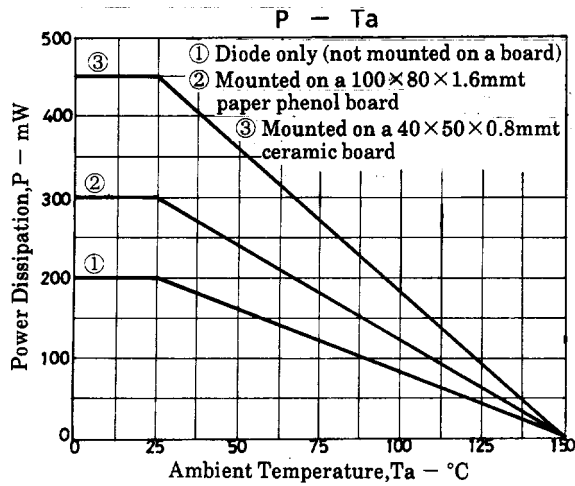
Zener voltage VZ will be subdivided into X, Y, Z at your request.

Type No.	Zener Characteristics								Reverse Current	
	Zener Voltage V _Z [V]*					Dynamic Resistance r _d [Ω] f=1kHz		Test Current	I _R	Test Voltage V _R
	min	max	Sub-division	min	max	typ	max	[mA]		
									μA	[V]
DZD18	16.80	19.10	X	16.80	17.76	4.0	20	5	0.5	14.0
			Y	17.46	18.43	4.0	20	5	0.5	14.0
			Z	18.13	19.10	4.0	20	5	0.5	14.0
DZD20	18.80	21.20	X	18.80	19.78	5.0	25	5	0.5	15.0
			Y	19.48	20.46	5.0	25	5	0.5	15.0
			Z	20.16	21.20	5.0	25	5	0.5	15.0
DZD22	20.80	23.30	X	20.80	21.88	6.0	30	5	0.5	17.0
			Y	21.48	22.56	6.0	30	5	0.5	17.0
			Z	22.16	23.30	6.0	30	5	0.5	17.0
DZD24	22.80	25.60	X	22.80	24.11	8.0	40	5	0.5	19.0
			Y	23.61	24.92	8.0	40	5	0.5	19.0
			Z	24.42	25.60	8.0	40	5	0.5	19.0

*: t=30ms



DZD2.0 to 24



■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of July, 1998. Specifications and information herein are subject to change without notice.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.