Z02W2.0V~24V

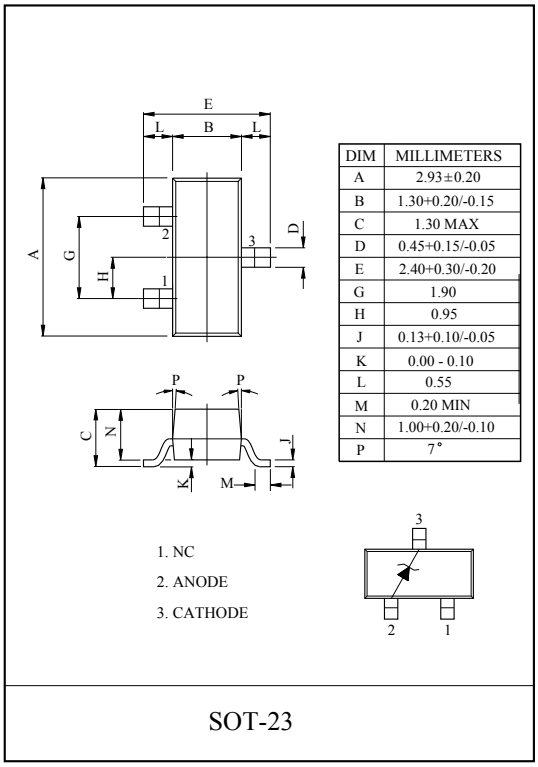
ZENER DIODE
SILICON EPITAXIAL PLANAR DIODE

CONSTANT VOLTAGE REGULATION APPLICATION.
REFERENCE VOLTAGE APPLICATION.

FEATURES

· Small Package : SOT-23

· Normal Voltage Tolerance About ±2.5%.



DIM	MILLIMETERS
A	2.93±0.20
B	1.30+0.20/-0.15
C	1.30 MAX
D	0.45+0.15/-0.05
E	2.40+0.30/-0.20
G	1.90
H	0.95
J	0.13+0.10/-0.05
K	0.00 - 0.10
L	0.55
M	0.20 MIN
N	1.00+0.20/-0.10
P	7°

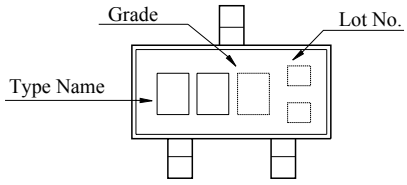
SOT-23

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~ 150	℃

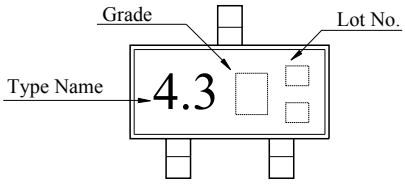
Marking

Example 1) 2.0V ~ 3.9V



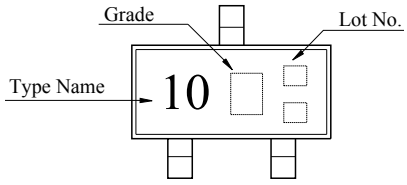
TYPE NAME : Z02W2.0V → 2A
Z02W2.2V → 2B
Z02W2.4V → 2C
Z02W2.7V → 2D
Z02W3.0V → 30
Z02W3.3V → 33
Z02W3.6V → 36
Z02W3.9V → 39

Example 2) 4.3V ~ 9.1V



Example : Z02W4.3V

Example 3) 10V ~ 24V



Example : Z02W10V

ELECTRICAL CHARACTERISTICS (Ta=25℃)

TYPE No.	Grade	Zener Voltage Vz (V)			Dynamic Impedance Zz (Ω)		KNEE Dynamic Impedance Zzk (Ω)		Reverse Current I_R (μA)	
		Min.	Max.	Iz (mA)	MAX.	Iz (mA)	MAX.	Iz (mA)	MAX.	V_R(V)
Z02W2.0V		1.85	2.15	5	100	5	1000	0.5	120	1.0
	X	1.85	2.05							
	Z	1.95	2.15							
Z02W2.2V		2.05	2.38	5	100	5	1000	0.5	120	1.0
	X	2.05	2.26							
	Z	2.16	2.38							
Z02W2.4V		2.28	2.60	5	100	5	1000	0.5	120	1.0
	X	2.28	2.50							
	Z	2.40	2.60							
Z02W2.7V		2.50	2.90	5	110	5	1000	0.5	120	1.0
	X	2.50	2.75							
	Z	2.65	2.90							
Z02W3.0V		2.80	3.20	5	120	5	1000	0.5	50	1.0
	X	2.80	3.05							
	Z	2.95	3.20							
Z02W3.3V		3.10	3.50	5	130	5	1000	0.5	20	1.0
	X	3.10	3.35							
	Z	3.25	3.50							
Z02W3.6V		3.40	3.80	5	130	5	1000	0.5	10	1.0
	X	3.40	3.65							
	Z	3.55	3.80							
Z02W3.9V		3.70	4.10	5	130	5	1000	0.5	10	1.0
	X	3.70	3.97							
	Z	3.87	4.10							
Z02W4.3V		4.00	4.50	5	130	5	1000	0.5	5	1.0
	X	4.00	4.23							
	Y	4.13	4.35							
	Z	4.25	4.50							
Z02W4.7V		4.40	4.90	5	120	5	1000	0.5	5	1.0
	X	4.40	4.63							
	Y	4.53	4.76							
	Z	4.66	4.90							
Z02W5.1V		4.80	5.40	5	70	5	1000	0.5	1	1.5
	X	4.80	5.07							
	Y	4.97	5.24							
	Z	5.14	5.40							

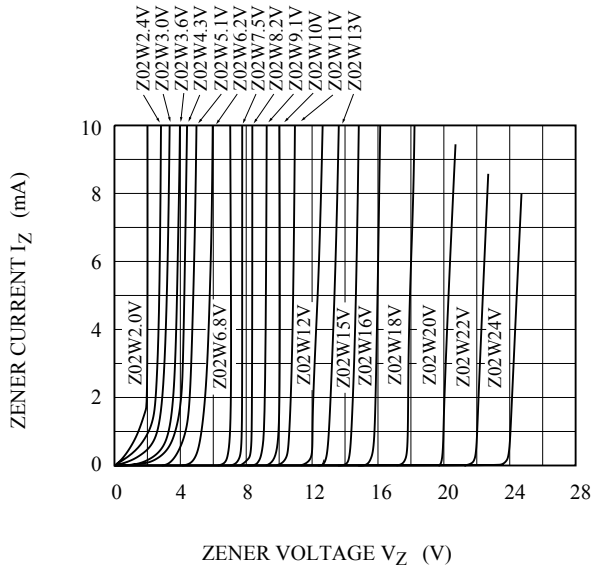
ELECTRICAL CHARACTERISTICS (Ta=25℃)

TYPE No.	Grade	Zener Voltage Vz (V)			Dynamic Impedance Zz (Ω)		KNEE Dynamic Impedance Zzk (Ω)		Reverse Current I_R(μA)	
		Min.	Max.	Iz (mA)	MAX.	Iz (mA)	MAX.	Iz (mA)	MAX.	V_R(V)
Z02W5.6V		5.30	6.00	5	40	5	900	0.5	1	2.5
	X	5.30	5.63							
	Y	5.43	5.81							
	Z	5.61	6.00							
Z02W6.2V		5.80	6.60	5	30	5	500	0.5	1	3.0
	X	5.80	6.20							
	Y	6.00	6.39							
	Z	6.19	6.60							
Z02W6.8V		6.40	7.20	5	25	5	150	0.5	0.5	5.0
	X	6.40	6.80							
	Y	6.60	7.02							
	Z	6.82	7.20							
Z02W7.5V		7.00	7.90	5	23	5	120	0.5	0.5	6.0
	X	7.00	7.43							
	Y	7.23	7.66							
	Z	7.46	7.90							
Z02W8.2V		7.70	8.70	5	20	5	120	0.5	0.5	6.5
	X	7.70	8.16							
	Y	7.96	8.43							
	Z	8.23	8.70							
Z02W9.1V		8.50	9.60	5	18	5	120	0.5	0.5	7.0
	X	8.50	9.00							
	Y	8.80	9.30							
	Z	9.10	9.60							
Z02W10V		9.40	10.60	5	15	5	120	0.5	0.5	8.0
	X	9.40	9.93							
	Y	9.73	10.26							
	Z	10.06	10.60							
Z02W11V		10.40	11.60	5	15	5	120	0.5	0.5	8.5
	X	10.40	10.98							
	Y	10.73	11.26							
	Z	11.06	11.60							
Z02W12V		11.40	12.60	5	15	5	110	0.5	0.5	9.0
	X	11.40	11.93							
	Y	11.73	12.26							
	Z	12.06	12.60							

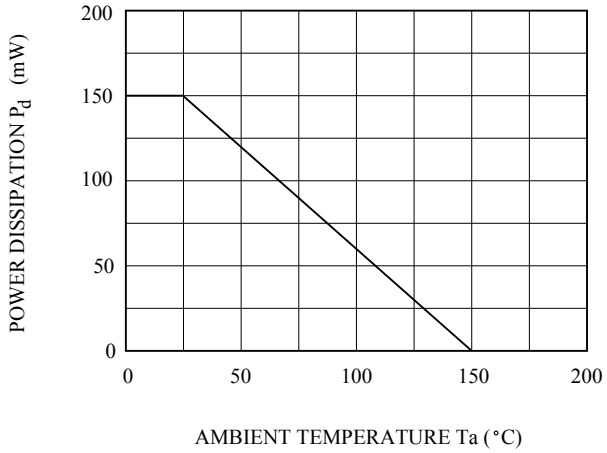
ELECTRICAL CHARACTERISTICS (Ta=25℃)

TYPE No.	Grade	Zener Voltage Vz (V)			Dynamic Impedance Zz (Ω)		KNEE Dynamic Impedance Zzk (Ω)		Reverse Current I_R(μA)	
		Min.	Max.	Iz (mA)	MAX.	Iz (mA)	MAX.	Iz (mA)	MAX.	V_R(V)
Z02W13V		12.40	14.10	5	15	5	110	0.5	0.5	10
	X	12.40	13.08							
	Y	12.88	13.57							
	Z	13.37	14.10							
Z02W15V		13.80	15.60	5	15	5	110	0.5	0.5	11
	X	13.80	14.63							
	Y	14.33	15.11							
	Z	14.81	15.60							
Z02W16V		15.30	17.10	5	18	5	150	0.5	0.5	12
	X	15.30	16.10							
	Y	15.80	16.60							
	Z	16.30	17.10							
Z02W18V		16.80	19.10	5	20	5	150	0.5	0.5	14
	X	16.80	17.76							
	Y	17.46	18.43							
	Z	18.13	19.10							
Z02W20V		18.80	21.20	5	25	5	200	0.5	0.5	15
	X	18.80	19.78							
	Y	19.48	20.46							
	Z	20.16	21.20							
Z02W22V		20.80	23.30	5	30	5	200	0.5	0.5	17
	X	20.80	21.88							
	Y	21.48	22.56							
	Z	22.16	23.30							
Z02W24V		22.80	25.60	5	40	5	200	0.5	0.5	19
	X	22.80	24.11							
	Y	23.61	24.92							
	Z	24.42	25.60							

I_Z - V_Z


Z02W2.4V
Z02W3.0V
Z02W3.6V
Z02W4.3V
Z02W5.1V
Z02W6.2V
Z02W7.5V
Z02W8.2V
Z02W9.1V
Z02W10V
Z02W11V
Z02W13V
Z02W2.0V
Z02W6.8V
Z02W12V
Z02W15V
Z02W16V
Z02W18V
Z02W20V
Z02W22V
Z02W24V
ZENER CURRENT I_Z (mA)
ZENER VOLTAGE V_Z (V)
0
2
4
6
8
10
0
4
8
12
16
20
24
28

P_d - Ta


POWER DISSIPATION P_d (mW)
AMBIENT TEMPERATURE Ta (°C)
0
50
100
150
200
0
50
100
150
200