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BZX79C2V4 THRU BZX79C33

Features

- Zener Voltage Range 2.4V to 33V
- Metallurgical Bonded Construction
- Double Slug Type Construction

500mW Silicon Zener Diodes

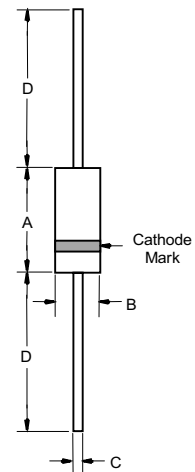
Mechanical Data

- Case: Double slug type, hermetically sealed glass
- Polarity: Cathode indicated by polarity band

Maximum Ratings*

	Symbol	Value	Units
Max. Steady State Power Dissipation at $T_L < 75^\circ\text{C}$, Lead Length=3/8"	P_D	500	mW
Derate above 75°C		4.0	mW/ $^\circ\text{C}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

DO-35



Electrical Characteristics @ 25°C Unless Otherwise Specified

	Symbol	Maximum	Unit
Max. Forward Voltage @ $I_F = 100\text{mA}$	V_F	1.5	V

NOTE:

- 1) Some part number series have lower JEDEC registered ratings.

DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

BZX79C2V4 thru BZX79C33

Electrical Characteristics ($T_i = 30^\circ\text{C}$ Unless Otherwise Noted, $V_F = 1.5\text{V Max}$ @ $I_F = 100\text{mA}$ for all types)

Device ⁽¹⁾	Device Marking	Zener Voltage ⁽²⁾				Z_{ZT} @ I_{ZT} ⁽³⁾ ($f=1.0\text{KHz}$)	Leakage Current		V_{BR}		C $V_Z=0, f=1.0\text{MHz}$
		V_Z (Volts)			@ I_{ZT}		I_R @ V_R		mV/ $^\circ\text{C}$		
		Min	Nom	Max	μA	Ohms	μA	Volts	Min	Max	pF
BZX79C2V4	79C2V4	2.28	2.4	2.52	5.0	100	100	1.0	-3.5	0	255
BZX79C2V7	79C2V7	2.57	2.7	2.84	5.0	100	75	1.0	-3.5	0	230
BZX79C3V0	79C3V0	2.85	3.0	3.15	5.0	95	50	1.0	-3.5	0	215
BZX79C3V3	79C3V3	3.14	3.3	3.47	5.0	95	25	1.0	-3.5	0	200
BZX79C3V6	79C3V6	3.42	3.6	3.78	5.0	90	15	1.0	-3.5	0	185
BZX79C3V9	79C3V9	3.71	3.9	4.10	5.0	90	10	1.0	-3.5	0.3	175
BZX79C4V7	79C4V7	4.47	4.7	4.94	5.0	80	3.0	2.0	-3.5	0.2	130
BZX79C5V1	79C5V1	4.85	5.1	5.36	5.0	60	2.0	2.0	-2.7	1.2	110
BZX79C5V6	79C5V6	5.32	5.6	5.88	5.0	40	1.0	2.0	-2.0	2.5	95
BZX79C6V2	79C6V2	5.89	6.2	6.51	5.0	10	3.0	4.0	0.4	3.7	90
BZX79C6V8	79C6V8	6.46	6.8	7.19	5.0	15	2.0	4.0	1.2	4.5	85
BZX79C7V5	79C7V5	7.13	7.5	7.88	5.0	15	1.0	5.0	2.5	5.3	80
BZX79C8V2	79C8V2	7.79	8.2	8.61	5.0	15	0.7	5.0	3.2	6.2	75
BZX79C10	79C10	9.5	10	10.5	5.0	20	0.2	7.0	4.5	8.0	70
BZX79C12	79C12	11.4	12	12.6	5.0	25	0.1	8.0	6.0	10	65
BZX79C15	79C15	14.25	15	15.75	5.0	30	0.05	10.5	9.2	13	55
BZX79C16	79C16	15.2	16	16.8	5.0	40	0.05	11.2	10.4	14	52
BZX79C18	79C18	17.1	18	18.9	5.0	45	0.05	12.6	12.9	16	47
BZX79C22	79C22	20.9	22	23.1	5.0	55	0.05	15.4	16.4	20	34
BZX79C24	79C24	22.8	24	25.2	5.0	70	0.05	16.8	18.4	22	33
BZX79C27	79C27	25.65	27	28.35	5.0	80	0.05	18.9	---	23.5	30
BZX79C30	79C30	28.5	30	31.5	5.0	80	0.05	21	---	26	27
BZX79C33	79C33	31.35	33	34.65	5.0	80	0.05	23.1	---	29	25

Note:

- 1) Tolerance and voltage designation
Tolerance designation- the type numbers listed have zener voltage min/max limits as shown.
- 2) Reverse zener voltage (V_Z) Measurement
Reverse zener voltage is measured under pulse conditions such that T_j is no more than 2°C above T_A
- 3) Zener impedance (Z_Z) derivation
 Z_{ZT} and Z_{ZK} are measured by dividing the ac voltage drop across the device by the ac current applied. The specified limits are for $I_Z(\text{ac})=0.1 I_Z(\text{dc})$ with the ac frequency=1.0KHz.

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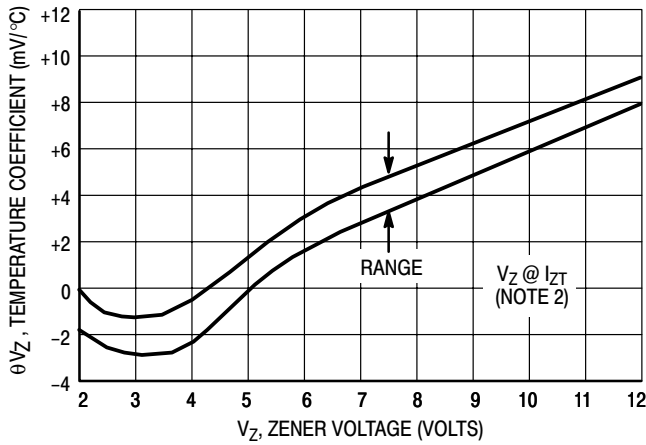


Figure 1a. Range for Units to 12 Volts

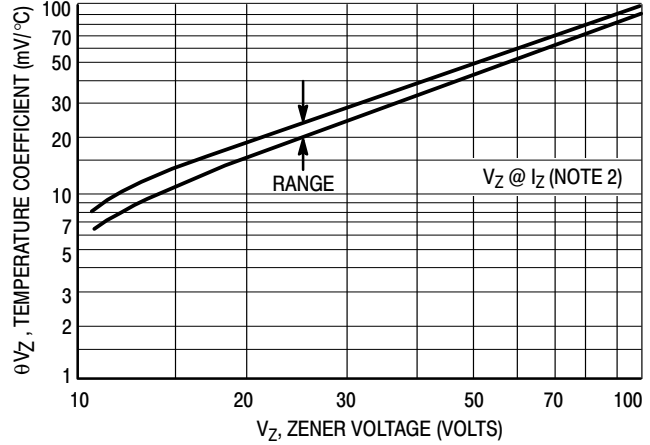


Figure 1b. Range for Units 12 to 100 Volts

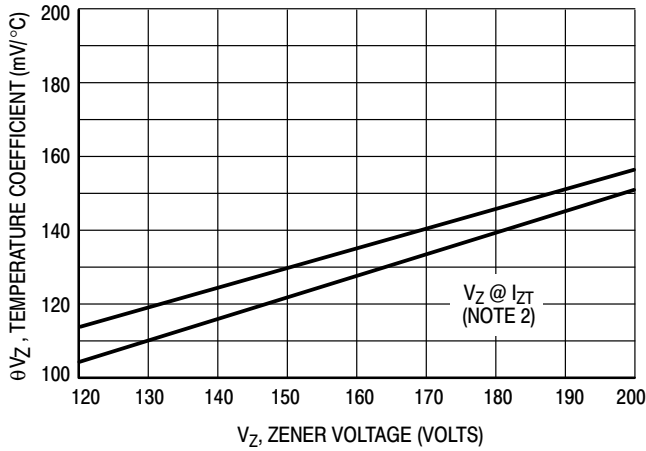


Figure 1c. Range for Units 120 to 200 Volts

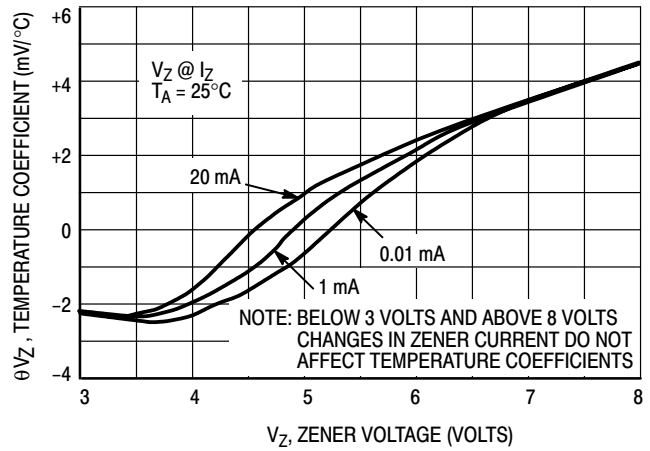


Figure 2. Effect of Zener Current

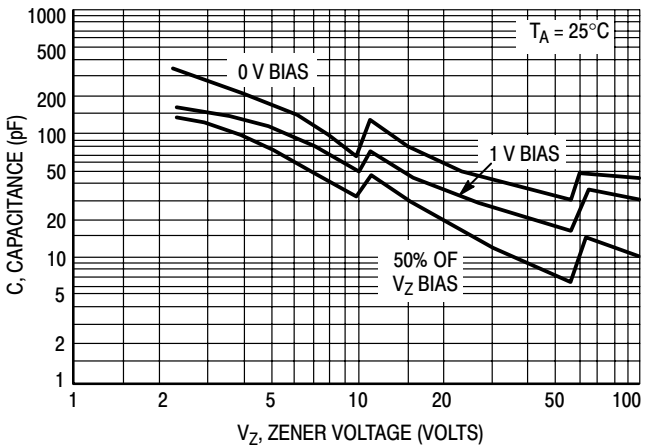


Figure 3a. Typical Capacitance 2.4–100 Volts

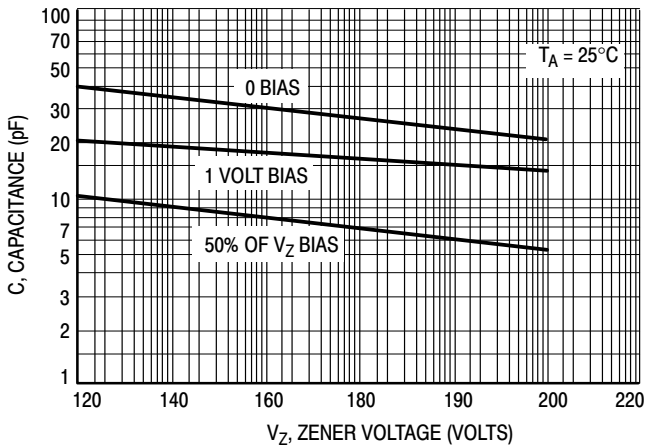


Figure 3b. Typical Capacitance 120–200 Volts

BZX79C2V4 thru BZX79C33

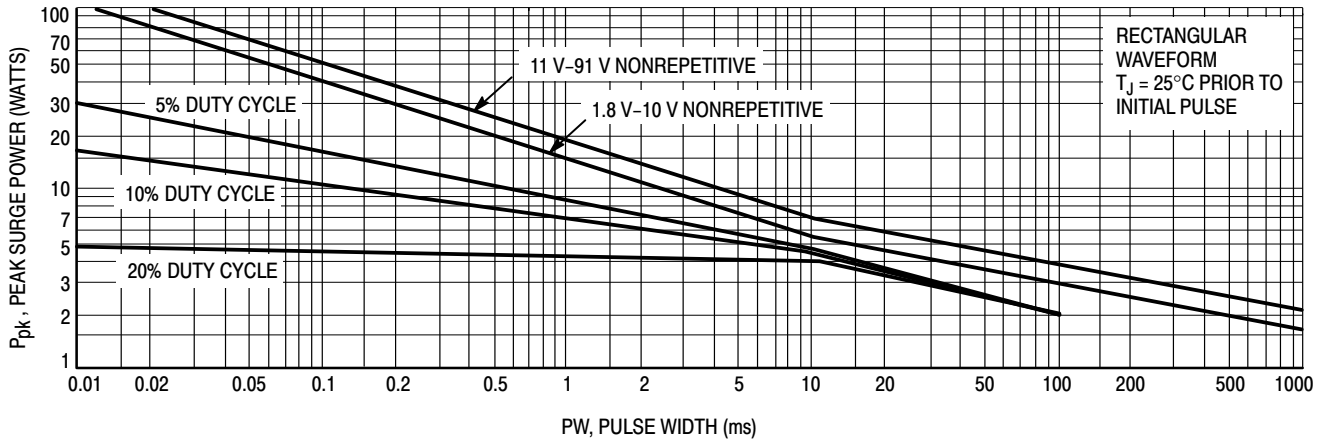


Figure 4a. Maximum Surge Power 1.8-91 Volts

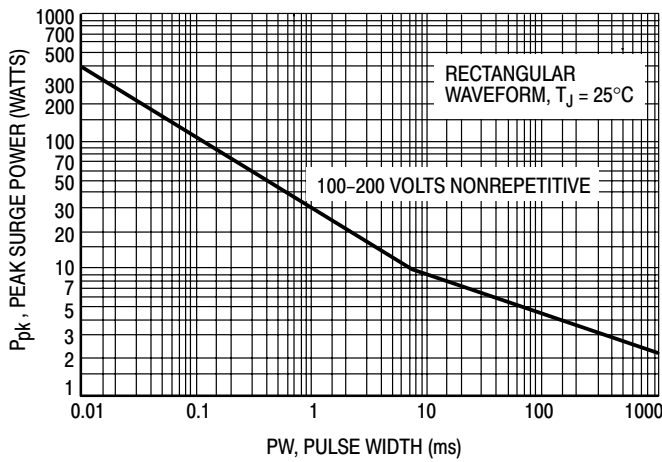


Figure 4b. Maximum Surge Power DO-204AH 100-200 Volts

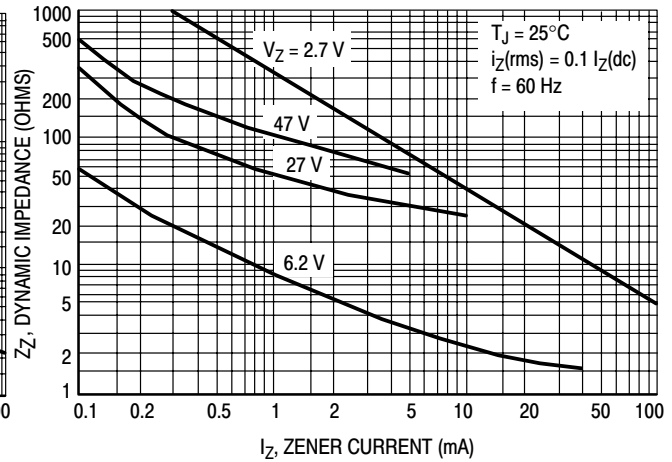


Figure 5 Effect of Zener Current on Zener Impedance

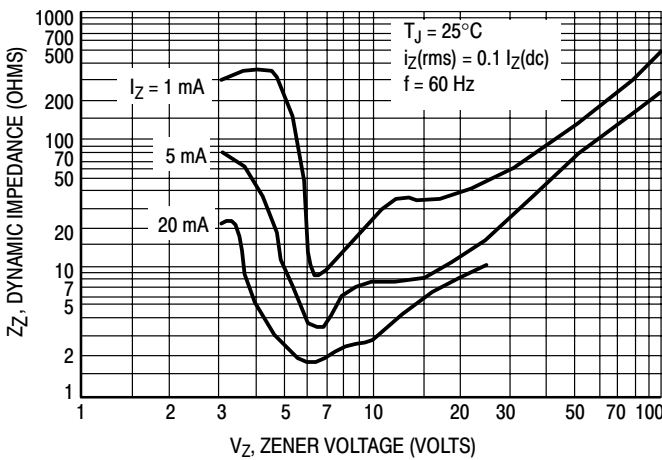


Figure 6. Effect of Zener Voltage on Zener Impedance

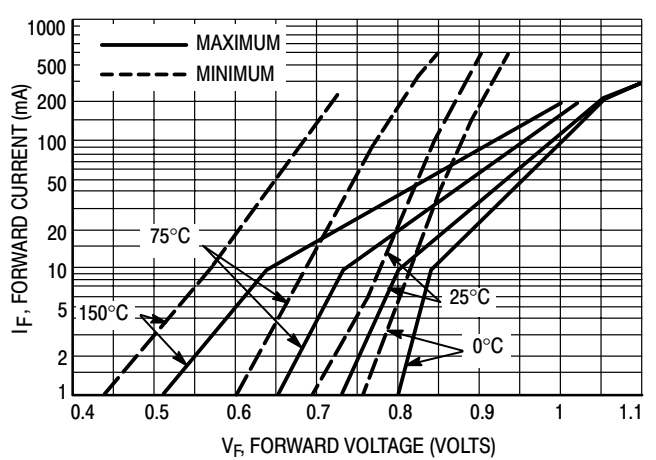


Figure 7. Typical Forward Characteristics