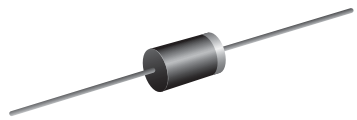
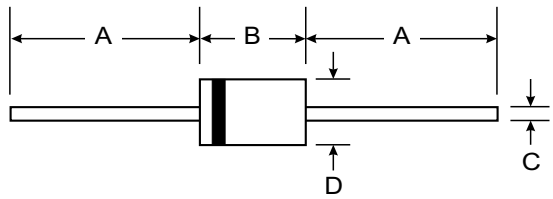
BZW03C6V8 - BZW03C270

AXIAL LEADED SILICON ZENER DIODES

VOLTAGE RANGE: 6.8 - 270V
POWER: 6.0Watts





DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Features

- Complete Voltage Range 6.8 to 270 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

RoHS COMPLIANT

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Test condition	Symbol	Value	Unit
Power dissipation	l = 10 mm, T_L = 25 °C	P_{diss}	6.0	W
	T_{amb} = 45 °C	P_{diss}	1.85	W
Repetitive peak reverse power dissipation		P_{ZRM}	20	W
Non repetitive peak surge power dissipation	t_p = 100 µs, T_j = 25 °C	P_{ZSM}	1000	W
Junction temperature		T_j	175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C
Junction ambient	l = 25 mm, T_L = constant	R_{thJA}	30	K/W
	on PC board with spacing 37.5 mm	R_{thJA}	70	K/W

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 1 A	V_F			1.2	V

TYPE	Zener Voltage Range			Dynamic Resistance		Test Current	Temperature Coefficient of Zener Voltage		Reverse Leakage Current		Clamping		Stand off	
	V_Z@ I_Z			r_{zj} and TK_{VZ}@I_Z		I_Z	TC_{VZ} @ I_{ZT}		I_R@ V_R		$V_{(CL)R}$[1] @ I_{RMS}		I_R @ V_R[2]	
	V			Ω		mA	%/K		μA	V	V	A	μA	V
	min	typ	max	typ	max		min	max	max		max		max	
BZW03C6V8	6.4	6.8	7.2	0.7	1.5	175	0	0.07	2000	5.1	10.3	48.5	4000	5.6
BZW03C7V5	7.0	7.5	7.9	0.7	1.5	175	0	0.07	1500	5.6	11.3	44.2	3000	6.2
BZW03C8V2	7.7	8.2	8.7	0.8	1.5	150	0.03	0.08	1200	6.2	12.3	40.6	2400	6.8
BZW03C9V1	8.5	9.1	9.6	0.9	2	150	0.03	0.08	40	6.8	13.3	37.6	100	7.5
BZW03C10	9.4	10	10.6	1	2	125	0.05	0.09	20	7.5	14.8	34	40	8.2
BZW03C11	10.4	11	11.6	1.1	2.5	125	0.05	0.1	15	8.2	15.7	31.8	30	9.1
BZW03C12	11.4	12	12.7	1.1	2.5	100	0.05	0.1	10	9.1	17.0	29.4	20	10
BZW03C13	12.4	14	14.1	1.2	2.5	100	0.05	0.1	4	10	18.9	26.4	10	11
BZW03C15	13.8	15	15.6	1.2	2.5	75	0.05	0.1	2	11	20.9	23.9	10	12
BZW03C16	15.3	16	17.1	1.3	2.5	75	0.06	0.11	2	12	22.9	21.8	10	13
BZW03C18	16.8	18	19.1	1.3	2.5	65	0.06	0.11	2	13	25.6	19.5	10	15
BZW03C20	18.8	20	21.2	1.5	3	65	0.06	0.11	2	15	28.4	17.6	10	16
BZW03C22	20.8	22	23.3	1.6	3.5	50	0.06	0.11	2	16	31.0	16.1	10	18
BZW03C24	22.8	24	25.6	1.8	3.5	50	0.06	0.11	2	18	33.8	14.8	10	20
BZW03C27	25.1	27	28.9	2.5	5	50	0.06	0.11	2	20	38.1	13.1	10	22
BZW03C30	28	30	32	4	8	40	0.06	0.11	2	22	42.2	11.8	10	24
BZW03C33	31	33	35	5	10	40	0.06	0.11	2	24	46.2	10.8	10	27
BZW03C36	34	36	38	6	11	30	0.06	0.11	2	27	50.1	10	10	30
BZW03C39	37	39	41	7	14	30	0.06	0.11	2	30	54.1	9.2	10	33
BZW03C43	40	43	46	10	20	30	0.07	0.12	2	33	60.7	8.2	10	36
BZW03C47	44	47	50	12	25	25	0.07	0.12	2	36	65.5	7.6	10	39
BZW03C51	48	51	54	14	27	25	0.07	0.12	2	39	70.8	7.0	10	43
BZW03C56	52	56	60	18	35	20	0.07	0.12	2	43	78.6	6.3	10	47
BZW03C62	58	62	66	20	42	20	0.08	0.13	2	47	86.5	5.8	10	51
BZW03C68	64	68	72	22	44	20	0.08	0.13	2	51	94.4	5.3	10	56
BZW03C75	70	75	79	25	45	20	0.08	0.13	2	56	103.5	4.8	10	62
BZW03C82	77	82	87	30	65	15	0.08	0.13	2	62	114	4.3	10	68
BZW03C91	85	91	96	40	75	15	0.09	0.13	2	68	126	3.9	10	75
BZW03C100	94	100	106	45	90	12	0.09	0.13	2	75	139	3.6	10	82
BZW03C110	104	110	116	65	125	12	0.09	0.13	2	82	152	3.3	10	91
BZW03C120	114	120	127	90	170	10	0.09	0.13	2	91	167	3.0	10	100
BZW03C130	124	130	141	100	190	10	0.09	0.13	2	100	185	2.7	10	110
BZW03C150	138	150	156	150	330	8	0.09	0.13	2	110	204	2.4	10	120
BZW03C160	153	160	171	180	350	8	0.09	0.13	2	120	224	2.2	10	130
BZW03C180	168	180	191	210	430	5	0.09	0.13	2	130	249	2.0	10	150
BZW03C200	188	200	212	250	500	5	0.09	0.13	2	150	276	1.8	10	160
BZW03C220	208	220	233	350	700	5	0.09	0.13	2	160	305	1.6	10	180
BZW03C240	228	240	256	450	900	5	0.09	0.13	2	180	336	1.5	10	200
BZW03C270	251	270	289	600	1200	5	0.09	0.13	2	200	380	1.3	10	220

[1] Exp. falling pulse, t_p = 500 μs down to 37 %

[2] Stand-off reverse voltage = recommended supply voltage