ZENER DIODES

V_Z : 6.2 -- 270 V

POWER DISSIPATION: 1.3W

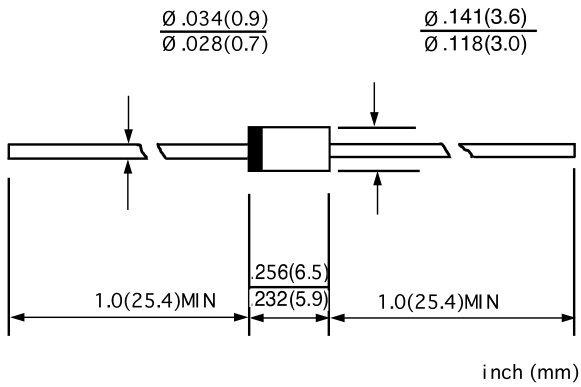
FEATURES

- ◇ Glass passivated junction
- ◇ Hermetically sealed package
- ◇ Clamping time in picoseconds

MECHANICAL DATA

- ◇ Case:JEDEC DO-15
- ◇ Terminals: Axial leads solderable per MIL-STD-202,Method 208
- ◇ Polarity: Color band denotes cathods end
- ◇ Weight: 0.014 ounces,0.39 grams
- ◇ Mounting position: any

DO -- 15



Maximum Ratings and Thermal Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Power dissipation at T_A=25℃	P_{tot}	1.3	W
Forward voltage @I_F=0.5A	V_F	1.2	V
Maximum thermal resistance junction to ambient (Note 1)	$R_{\theta JA}$	100	℃/W
Peak reverse power dissipation tp=100μs square wave	P_{ZSM}	600	W
Junction temperature	T_J	175	℃
Storage temperature range	T_{STG}	-65 to +175	℃

Note:1.On PC board with spacing 25mm

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ELECTRICAL CHARACTERISTICS

Type	Zener Voltage Range(2)			Dynamic Resistance		Test Current	Temperature Coefficient of Zener Voltage		Reverse Leakage Current		Clamping		Stand-off	
	V_Z@I_{ZT}			r_{zj}@I_{ZT}, f=1kH_Z		I_{ZT}	α_{VZ}@I_{ZT}		I_R@V_R		$V_{(CL)R}$ 1) @ I_{RMS}		I_R@V_R 2)	
	V			Ω		m A	%/K		μ A	V	V	A	μ A	V
	Min.	Typ.	Max.	Typ.	Max.		Min.	Max.	Max.		Max.		Max.	
BZT03C6V2	5.8	6.2	6.6	1.0	2.0	100	0	0.07	1500	4.7	9.3	34	3000	5.1
BZT03C6V8	6.4	6.8	7.2	1.0	2.0	100	0	0.07	1000	5.1	10.2	31	2000	5.6
BZT03C7V5	7.0	7.5	7.9	1.0	2.0	100	0	0.07	750	5.6	11.3	26.5	1500	6.2
BZT03C8V2	7.7	8.2	8.7	1.0	2.0	100	0.03	0.08	600	6.2	12.3	24.4	1200	6.8
BZT03C9V1	8.5	9.1	9.6	2.0	4.0	50	0.03	0.08	20	6.8	13.3	22.7	50	7.5
BZT03C10	9.4	10	10.6	2.0	4.0	50	0.05	0.09	10	7.5	14.8	20.3	20	8.2
BZT03C11	10.4	11	11.6	4.0	7.0	50	0.05	0.10	4.0	8.2	15.7	19.1	5.0	9.1
BZT03C12	11.4	12	12.7	4.0	7.0	50	0.05	0.10	3.0	9.1	17.0	17.7	5.0	10
BZT03C13	12.4	13	14.1	5.0	10	50	0.05	0.10	2.0	10	18.9	15.9	5.0	11
BZT03C15	13.8	15	15.6	5.0	10	50	0.05	0.10	1.0	11	20.9	14.4	5.0	12
BZT03C16	15.3	16	17.1	6.0	15	25	0.06	0.11	1.0	12	22.9	13.1	5.0	13
BZT03C18	16.8	18	19.1	6.0	15	25	0.06	0.11	1.0	13	25.6	11.7	5.0	15
BZT03C20	18.8	20	21.2	6.0	15	25	0.06	0.11	1.0	15	28.4	10.6	5.0	16
BZT03C22	20.8	22	23.3	6.0	15	25	0.06	0.11	1.0	16	31.0	9.7	5.0	18
BZT03C24	22.8	24	25.6	7.0	15	25	0.06	0.11	1.0	18	33.8	8.9	5.0	20
BZT03C27	25.1	27	28.9	7.0	15	25	0.06	0.11	1.0	20	38.1	7.9	5.0	22
BZT03C30	28	30	32	8.0	15	25	0.06	0.11	1.0	22	42.2	7.1	5.0	24
BZT03C33	31	33	35	8.0	15	25	0.06	0.11	1.0	24	46.2	6.5	5.0	27
BZT03C36	34	36	38	21	40	10	0.06	0.11	1.0	27	50.1	6.0	5.0	30
BZT03C39	37	39	41	21	40	10	0.06	0.11	1.0	30	54.1	5.5	5.0	33
BZT03C43	40	43	46	24	45	10	0.07	0.12	1.0	33	60.7	4.9	5.0	36
BZT03C47	44	47	50	24	45	10	0.07	0.12	1.0	36	65.5	4.6	5.0	39
BZT03C51	48	51	54	25	60	10	0.07	0.12	1.0	39	70.8	4.2	5.0	43
BZT03C56	52	56	60	25	60	10	0.07	0.12	1.0	43	78.6	3.8	5.0	47
BZT03C62	58	62	66	25	80	10	0.08	0.13	1.0	47	86.5	3.5	5.0	51
BZT03C68	64	68	72	25	80	10	0.08	0.13	1.0	51	94.4	3.2	5.0	56
BZT03C75	70	75	79	30	100	10	0.08	0.13	1.0	56	103.5	2.9	5.0	62
BZT03C82	77	82	87	30	100	10	0.08	0.13	1.0	62	114	2.6	5.0	68
BZT03C91	85	91	96	60	200	5.0	0.09	0.13	1.0	68	126	2.4	5.0	75
BZT03C100	94	100	106	60	200	5.0	0.09	0.13	1.0	75	139	2.2	5.0	82
BZT03C110	104	110	116	80	250	5.0	0.09	0.13	1.0	82	152	2.0	5.0	91
BZT03C120	114	120	127	80	250	5.0	0.09	0.13	1.0	91	167	1.8	5.0	100
BZT03C130	124	130	141	110	300	5.0	0.09	0.13	1.0	100	185	1.6	5.0	110
BZT03C150	138	150	156	130	300	5.0	0.09	0.13	1.0	110	204	1.5	5.0	120
BZT03C160	153	160	171	150	350	5.0	0.09	0.13	1.0	120	224	1.3	5.0	130
BZT03C180	168	180	191	180	400	5.0	0.09	0.13	1.0	130	249	1.2	5.0	150
BZT03C200	188	200	212	200	500	5.0	0.09	0.13	1.0	150	276	1.1	5.0	160
BZT03C220	208	220	233	350	750	2.0	0.09	0.13	1.0	160	305	1.0	5.0	180
BZT03C240	228	240	256	400	850	2.0	0.09	0.13	1.0	180	336	0.9	5.0	200
BZT03C270	251	270	289	450	1000	2.0	0.09	0.13	1.0	200	380	0.8	5.0	220

(1)10/1000 exp.falling pulse tp=1000μs down to 50%

(2)Stand-off voltage=recommended suplly voltage.

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ELECTRICAL CHARACTERISTICS

Type	Zener Voltage Range[2]			Dynamic Resistance		Test Current	Temperature Coefficient of Zener Voltage		Reverse Leakage Current		Clamping		Stand-off	
	V_Z@I_{ZT}			r_{zj}@I_{ZT}, f=1kH_Z		I_{ZT}	α_{VZ}@I_{ZT}		I_R@V_R		$V_{(CL)R}$[1] @ I_{RMS}		I_R@V_R[2]	
	V			Ω		m A	%/K		μ A	V	V	A	μ A	V
	Min	Typ.	Max	Typ	Max		Min	Max	Max		Max		Max	
BZT03D6V2	5.6	6.2	6.8	1.0	2.0	100	0	0.07	1500	4.4	9.5	34	3000	4.8
BZT03D6V8	6.1	6.8	7.5	1.0	2.0	100	0	0.07	1000	4.8	10.5	31	2000	5.3
BZT03D7V5	6.75	7.5	8.25	1.0	2.0	100	0	0.07	750	5.3	11.6	26.5	1500	5.9
BZT03D8V2	7.4	8.2	9	1.0	2.0	100	0.03	0.08	600	5.9	12.6	24.4	1200	6.5
BZT03D9V1	8.2	9.1	10	2.0	4.0	50	0.03	0.08	20	6.5	13.7	22.7	50	7.1
BZT03D10	9	10	11	2.0	4.0	50	0.05	0.09	10	7.1	15.2	20.3	20	7.9
BZT03D11	9.9	11	12.1	4.0	7.0	50	0.05	0.10	4.0	7.9	16.2	19.1	5.0	8.6
BZT03D12	10.8	12	13.2	4.0	7.0	50	0.05	0.10	3.0	8.6	17.5	17.7	5.0	9.3
BZT03D13	11.7	13	14.3	5.0	10	50	0.05	0.10	2.0	9.3	19.1	15.9	5.0	10.6
BZT03D15	13.5	15	16.5	5.0	10	50	0.05	0.10	1.0	10.6	21.8	14.4	5.0	11.6
BZT03D16	14.4	16	17.6	6.0	15	25	0.06	0.11	1.0	11.6	23.4	13.1	5.0	12.6
BZT03D18	16.2	18	19.8	6.0	15	25	0.06	0.11	1.0	12.6	26.3	11.7	5.0	14.4
BZT03D20	18.0	20	22.0	6.0	15	25	0.06	0.11	1.0	14.4	29.2	10.6	5.0	15.8
BZT03D22	29.8	22	24.2	6.0	15	25	0.06	0.11	1.0	15.8	31.9	9.7	5.0	17.2
BZT03D24	21.6	24	26.4	7.0	15	25	0.06	0.11	1.0	17.2	34.6	8.9	5.0	19.4
BZT03D27	24.3	27	29.7	7.0	15	25	0.06	0.11	1.0	19.4	39	7.9	5.0	21.5
BZT03D30	27.0	30	33.0	8.0	15	25	0.06	0.11	1.0	21.5	43.5	7.1	5.0	23.5
BZT03D33	29.7	33	36.3	8.0	15	25	0.06	0.11	1.0	23.5	47.5	6.5	5.0	25.8
BZT03D36	32.4	36	39.6	21	40	10	0.06	0.11	1.0	25.8	51.5	6.0	5.0	28
BZT03D39	35.1	39	42.9	21	40	10	0.06	0.11	1.0	28	56	5.5	5.0	31
BZT03D43	38.7	43	47.3	24	45	10	0.07	0.12	1.0	31	62	4.9	5.0	33.5
BZT03D47	42.3	47	51.7	24	45	10	0.07	0.12	1.0	33.5	67.5	4.6	5.0	36.5
BZT03D51	45.9	51	56.1	25	60	10	0.07	0.12	1.0	36.5	73	4.2	5.0	40
BZT03D56	50.4	56	61.6	25	60	10	0.07	0.12	1.0	40	81	3.8	5.0	44.5
BZT03D62	55.8	62	68.2	25	80	10	0.08	0.13	1.0	44.5	89	3.5	5.0	49
BZT03D68	61.2	68	74.8	25	80	10	0.08	0.13	1.0	49	97	3.2	5.0	54
BZT03D75	67.5	75	82.5	30	100	10	0.08	0.13	1.0	54	107	2.9	5.0	59
BZT03D82	73.8	82	90.2	30	100	10	0.08	0.13	1.0	59	117	2.6	5.0	65
BZT03D91	81.9	91	100	60	200	5.0	0.09	0.13	1.0	65	130	2.4	5.0	71
BZT03D100	90	100	110	60	200	5.0	0.09	0.13	1.0	71	143	2.2	5.0	79
BZT03D110	99	110	121	80	250	5.0	0.09	0.13	1.0	79	157	2.0	5.0	86
BZT03D120	108	120	132	80	250	5.0	0.09	0.13	1.0	86	172	1.8	5.0	93
BZT03D130	117	130	143	110	300	5.0	0.09	0.13	1.0	93	187	1.6	5.0	106
BZT03D150	135	150	165	130	300	5.0	0.09	0.13	1.0	106	213	1.5	5.0	116
BZT03D160	144	160	176	150	350	5.0	0.09	0.13	1.0	116	229	1.3	5.0	126
BZT03D180	162	180	198	180	400	5.0	0.09	0.13	1.0	126	256	1.2	5.0	144
BZT03D200	180	200	220	200	500	5.0	0.09	0.13	1.0	144	284	1.1	5.0	158
BZT03D220	198	220	242	350	750	2.0	0.09	0.13	1.0	158	314	1.0	5.0	172
BZT03D240	216	240	264	400	850	2.0	0.09	0.13	1.0	172	364	0.9	5.0	194
BZT03D270	243	270	297	450	1000	2.0	0.09	0.13	1.0	194	388	0.8	5.0	215

[1]10/1000 exp.falling pulse tp=1000μs down to 50%

[2]Stand-off voltage=recommended suplly voltage.

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FIG.1 -- BREAKDOWN CHARACTERISTICS

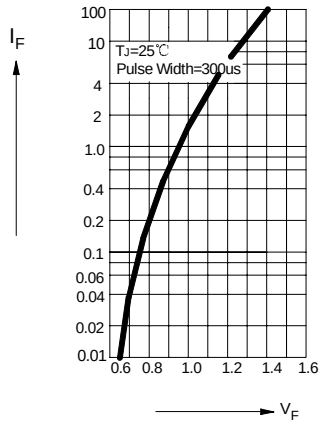


FIG.2 -- ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

